Item No. 23
Town of Atherton

CITY COUNCIL STAFF REPORT – REGULAR AGENDA

TO: **HONORABLE MAYOR AND CITY COUNCIL**

FROM: **MICHAEL KASHIWAGI, COMMUNITY SERVICES DIRECTOR**
STEVE TYLER, PUBLIC WORKS SUPERINTENDENT

DATE: **JULY 19, 2017**

SUBJECT: **REVIEW CALTRAIN PCEP TREE AVOIDANCE MINIMIZATION AND REPLACEMENT PLAN AND PROVIDE STAFF WITH DIRECTION**

RECOMMENDATION

Following a presentation from Caltrain, review Caltrain PCEP Tree Avoidance Minimization and Replacement Plan and Provide Staff with Direction.

BACKGROUND

As part of the plan for electrification of the Caltrain tracks through Atherton, Caltrain has forwarded us their plan for wire placement and the plan for necessary tree removals. Upon Caltrain's latest rendition of this plan, most of the tree removals in the Town have been abandoned. This is due to Caltrain engineering finding ways to place the overhead wire system in the center of the corridor between the tracks instead of along the outside edge(s).

ANALYSIS

One place Caltrain could not do this was between Watkins Ave. S to the Atherton border with Menlo Park. In this area, Caltrain plans show the wires to be moved to the E side of the tracks (where the corridor borders Holbrook-Palmer Park). With this alignment, it will be necessary to remove nine (9) park trees and three (3) trees on the Caltrain side of the fence. All of these removals are Coast Live Oaks, Valley Oaks or American Elm trees.

Along with the removals, four (4) trees will need to be pruned back "severely" or by over 25%.

Staff walked the area with Caltrain's Arborist Ryan Gilpin. Together, we were able to mark all of the trees of concern as follows:

- Red ribbon – Tree's described for removal
- Orange ribbon – Tree's described with severe pruning >25%

- Yellow ribbon – Tree's described with lighter pruning needs <25%

Caltrain's plan calls for providing the Town 20 replacement trees for use in the Park to make up for these removals. By moving the wiring configuration, Caltrain has managed to find it unnecessary to remove any other private trees in the Town. It will still be necessary to remove 19 trees from the Caltrain corridor (Caltrain ROW). Totals for all tree work are:

- Trees removed 28
- Tree's Pruned >25% 58
- Trees pruned <25% 140

POLICY FOCUS

The City Council's policy discussion should revolve around the need for these removals, specifically, why could the tracks not be moved to the center in the area between Watkins and Menlo Park thereby saving 9 park trees. Also, should Caltrain not deem the center of the tracks appropriate for the wires, where should the Town stand as far as allowing these removals to take place (Caltrain has no easement in the private park).

FISCAL IMPACT

None.

PUBLIC NOTICE

Public notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting in print and electronically. Information about the project is also disseminated via the Town's electronic News Flash and Atherton Online. There are approximately 1,200 subscribers to the Town's electronic News Flash publications. Subscribers include residents as well as stakeholders – to include, but be not limited to, media outlets, school districts, Menlo Park Fire District, service provides (water, power, and sewer), and regional elected officials.

ATTACHMENTS

- Caltrans PCEP update June 14, 2017

CalMod

PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

MEMORANDUM

Date: June 14, 2017

To: Michael Kashiwagi, City of Atherton

From: Stacy Cocke, Caltrain Modernization Program Principal Planner

Re: PCEP Tree Avoidance Minimization and Replacement Plan

PURPOSE AND CONTEXT

The purpose of this memorandum is to facilitate coordination between the Peninsula Corridor Joint Powers Board (JPB) and the City of Atherton (City) regarding tree impacts and replacement related to the Peninsula Corridor Electrification Project (PCEP or Project). Construction of the Project, described in more detail below, will require removal and pruning of vegetation near PCEP's new electrified overhead contact system (OCS) to maintain a safe and reliable system. This memorandum provides a brief project description, JPB's approach to mitigating tree impacts, an overview of the proposed work related to tree removal and pruning in Atherton, and the schedule for this work.

PROJECT DESCRIPTION

The JPB owns and operates Caltrain commuter rail service. The PCEP is a part of a program to modernize the operation of the Caltrain rail corridor. The PCEP will electrify and upgrade the performance, operating efficiency, capacity, safety and reliability of Caltrain's commuter rail service by allowing Caltrain to operate quieter, cleaner, more frequent, and/or faster train service to more riders. Increased capacity and improved service will help Caltrain meet increasing ridership demand and alleviate local and regional traffic congestion.

The Project consists of electrifying the Caltrain corridor between the 4th and King Street Station in San Francisco to approximately one mile south of the Tamien Station in San Jose to allow for the conversion of the Caltrain commuter fleet from diesel trains to electric multiple units (EMUs). The Project will require the installation of approximately 130 to 140 single-track miles of OCS for the distribution of electrical power to the electric rolling stock. The OCS will be powered from a supply system consisting of two traction power substations, one switching station, and seven paralleling stations located along the corridor. Additional Project features required for electrification include overbridge protection structures, at grade crossing warning devices, and replacement of the current rolling stock. The PCEP is scheduled to be operational by 2020/2021.

To allow electric vehicles to operate in the Caltrain corridor, an overhead contact wire system will be installed. A vegetation clearance zone (called the electrical safety zone or ESZ) has been established from the centerline of the railway tracks outward to ensure electrical safety. The

distance from the railway outside track centerlines to the outer edge of the ESZ will vary depending on the type of poles that can be used in different locations. For side poles and multi-track portals, the edge of the ESZ would be approximately 18 feet from the outside track centerline. Where center poles can be used, the ESZ would be approximately 16 feet from the outside track centerline. Where two-track cantilevers are used, the ESZ would be 18 feet from the outside track centerline on the side with the pole and 16 feet on the opposite side.[1] In certain areas with site-specific concerns such as curves, signal equipment, access or other concerns, the ESZ may vary and could be up to 24 feet wide from the centerline of the outer track. Figure 1 shows the structural and vegetation clearance zones relative to the track and OCS pole alignment.

TREE MITIGATION APPROACH

As defined by the JPB-certified Final Environmental Impact Report (EIR), the JPB will compensate for tree removal and pruning in the ESZ by planting replacement trees in areas outside of the ESZ. Replacement ratios for tree removal and replacement in JPB, City/County, and private properties are governed by the JPB-adopted Mitigation Monitoring and Reporting Plan.[2] Proposed replacement ratios are listed below.

- 1:1 replacement for any non-riparian tree in JPB right-of-way (ROW)
- City/County replacement ratio for trees being removed on public or private property (in Atherton a replacement ratio of 3:1 is used for heritage[3] trees and 1:1 for non-heritage trees)
- 1:1 replacement for any tree pruned over 25%[4]
- No replacement for any tree pruned under 25%

Replacement ratios for pruning and removal of riparian (adjacent to rivers or streams) trees were established as part of the Project's permits from the California Department of Fish and Wildlife (CDFW) and San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB).[5] The Project will implement the following replacement ratios to compensate for tree removal and pruning of riparian species:

- 6:1 replacement for any riparian oaks removed

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[1] In the Draft Environmental Impact Report (EIR) (JPB 2014), the ESZ was assumed to be up to 24 feet (up to 12 feet to the OCS pole alignment + 2 feet for the width of the pole + 10 feet for the vegetation clearance). With refined design, the ESZ in the Final EIR (JPB 2014) was reduced and was assumed to be up to 21 feet (up to 11 feet to the OCS pole alignment + 10 feet for the vegetation clearance), thereby reducing the number of potentially impacted trees. Implementation of mitigation in the EIR to examine different pole options and configuration has resulted in reducing the ESZ even further.

[2] The Tree Avoidance, Minimization and Replacement Plan is included in the Mitigation Monitoring and Reporting Program in Mitigation Measure Biology-5 ("Bio-5"):
http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Electrification+Documents/MMRP.pdf

[3] Per Chapter 8.10 (*Removal and Damage to Heritage Trees*) of the Atherton Municipal Code, heritgage trees include: 1) a tree, located in the tree preservation area, or a native oak tree (Quercus lobata, Quercus agrifolia or Quercus douglasii) located anywhere on a lot, which has a trunk circumference of forty-eight inches (approximately 15 inches diameter) or more, when measured forty-eight inches above the natural grade, and 2) a tree so designated by the city council, based upon findings that the particular tree is unique and of importance to the public due to its unusual age, appearance, location or other factors. Heritage trees shall not include Bailey acacia, green wattle, black acacia, or tree of heaven.

[4] Trees pruned over 25% will remain in place and will not be removed. A replacement tree will also be planted.

[5] No riparian trees will be impacted in Atherton.

- 3:1 replacement for any other native riparian species removed
- 1:1 replacement for any non-native riparian species removed
- 1:1 replacement for any riparian species pruned over 25%

The JPB will also be responsible for providing maintenance and monitoring of all replaced trees to assure their survival and/or remedial replacement in case they do not survive.

All replaced trees will be maintained for a minimum of 5 years either by JPB or the property owner, if they choose to maintain the replacement tree. With the consent of the property owner, JPB will maintain replacement trees on private or public property. The trees under JPB responsibility will be monitored on an annual basis by a professional arborist. If, at the end of 5 years, the tree is considered successfully established, then no further maintenance is required by the JPB. A professional arborist shall make the determination as to planting success. The JPB will be directly responsible for continued maintenance of all trees within the JPB ROW, including maintaining the vegetation clearance for the ESZ.

OVERVIEW OF WORK IN ATHERTON

As shown in Table 1, 332 trees were assessed in Atherton. Of these, 71 are in the JPB ROW, 27 are on public property, and 234 are on private property.

With the current PCEP 35% design, of the 332 trees assessed, 106 trees will not be impacted, 140 will be pruned less than 25%, 58 will be pruned more than 25%, and 28 will be removed.[6] Note that these determinations are based on the Project's preliminary design and may change during Project implementation (only minor modifications are anticipated). Should these tree impact determinations change, the JPB will provide a final count of trees removed/pruned and consult with the City if any trees outside the JPB ROW require pruning or removal. The City requires permits for removal or damage[7] to any heritage tree on private or public property. Based on the tree impacts above, ten tree permits are anticipated to be required for the removal of four heritage trees and the pruning greater than 25% of six heritage trees.

Per the requirements of the EIR, a total of 94 trees will be planted to mitigate for the 86 trees removed or pruned greater than 25% in Atherton (Table 1).

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[6] It should be noted that with further design refinements, the number of trees impacted in Atherton has reduced since release of the PCEP Draft EIR (assumed 142 trees removed and 206 trees pruned) and certification of the Final EIR (assumed 60 trees removed and 262 trees pruned).

[7] Chapter 8.10 (*Removal of and Damage to Heritage Trees*) defines damage as "any action, in the judgment of the building official or town arborist, which will cause damage to its health including, by way of example, but not limited to, excess pruning, topping, cutting, girdling, poisoning, over-watering, unauthorized relocation or transportation of a tree, or trenching, excavating, altering the grade, compaction or paving near the tree." For the purposes of this plan, pruning greater than 25% constitutes damage, while pruning less than 25% does not.

Table 1. Replacement Trees in Atherton

	Trees Impacted	Replacement Ratio	Replacement Trees
JPB ROW			
Tree Preserved	22	n/a	n/a
Tree Removed	19	1:1	19
Tree Pruned >25%	8	1:1	8
Tree Pruned <25%	22	n/a	n/a
Subtotal	*71*	-	*27*
Public Property			
Tree Preserved	2	n/a	n/a
Heritage[a] Tree Removed	4	3:1	12
Non-Heritage Tree Removed	5	1:1	5
Heritage[a] Tree Pruned >25%	0	1:1	0
Non-Heritgage Tree Pruned >25%	5	1:1	5
Tree Pruned <25%	11	n/a	n/a
Subtotal	*27*	-	*22*
Private Property			
Tree Preserved	82	n/a	n/a
Heritgage[a] Tree Removed	0	3:1	0
Non-Heritage Tree Removed	0	1:1	0
Heritage[a] Tree Pruned >25%	6	1:1	6
Non-Heritage Tree Pruned >25%	39	1:1	39
Tree Pruned <25%	107	n/a	n/a
Subtotal	*234*	-	*45*
Total			
Tree Preserved	106	n/a	n/a
Heritage[a] Tree Removed	4	-	12
Non-Heritage Tree Removed	24	-	24
Heritage[a] Tree Pruned >25%	6	-	6
Non-Heritage Tree Pruned >25%	52	-	52
Tree Pruned <25%	140	n/a	n/a
Total	***332***	**-**	***94***

Notes:

[a] Per Chapter 8.10 (*Removal and Damage to Heritage Trees*) of the Atherton Municipal Code, heritgage trees include: 1) a tree, located in the tree preservation area, or a native oak tree (Quercus lobata, Quercus agrifolia or Quercus douglasii) located anywhere on a lot, which has a trunk circumference of forty-eight inches (approximately 15 inches diameter) or more, when measured forty-eight inches above the natural grade, and 2) a tree so designated by the city council, based upon findings that the particular tree is unique and of importance to the public due to its unusual age, appearance, location or other factors. Heritage trees shall not include Bailey acacia, green wattle, black acacia, or tree of heaven.

SCHEDULE

Tree removal in Atherton is anticipated to occur in Summer 2017. Replacement tree planting is anticipated to occur when construction of the OCS poles is complete. The JPB will initiate coordination with affected property owners in prior to pruning, removal, and tree replacement.

Attachments:

1. Vegetation Clearance for the PCEP
2. Tree Impacts in Atherton
3. Atherton Tree Replacement Plan
4. Property Owner Notification Memo

ATTACHMENT 1

Vegetation Clearance in the Electrical Safety Zone

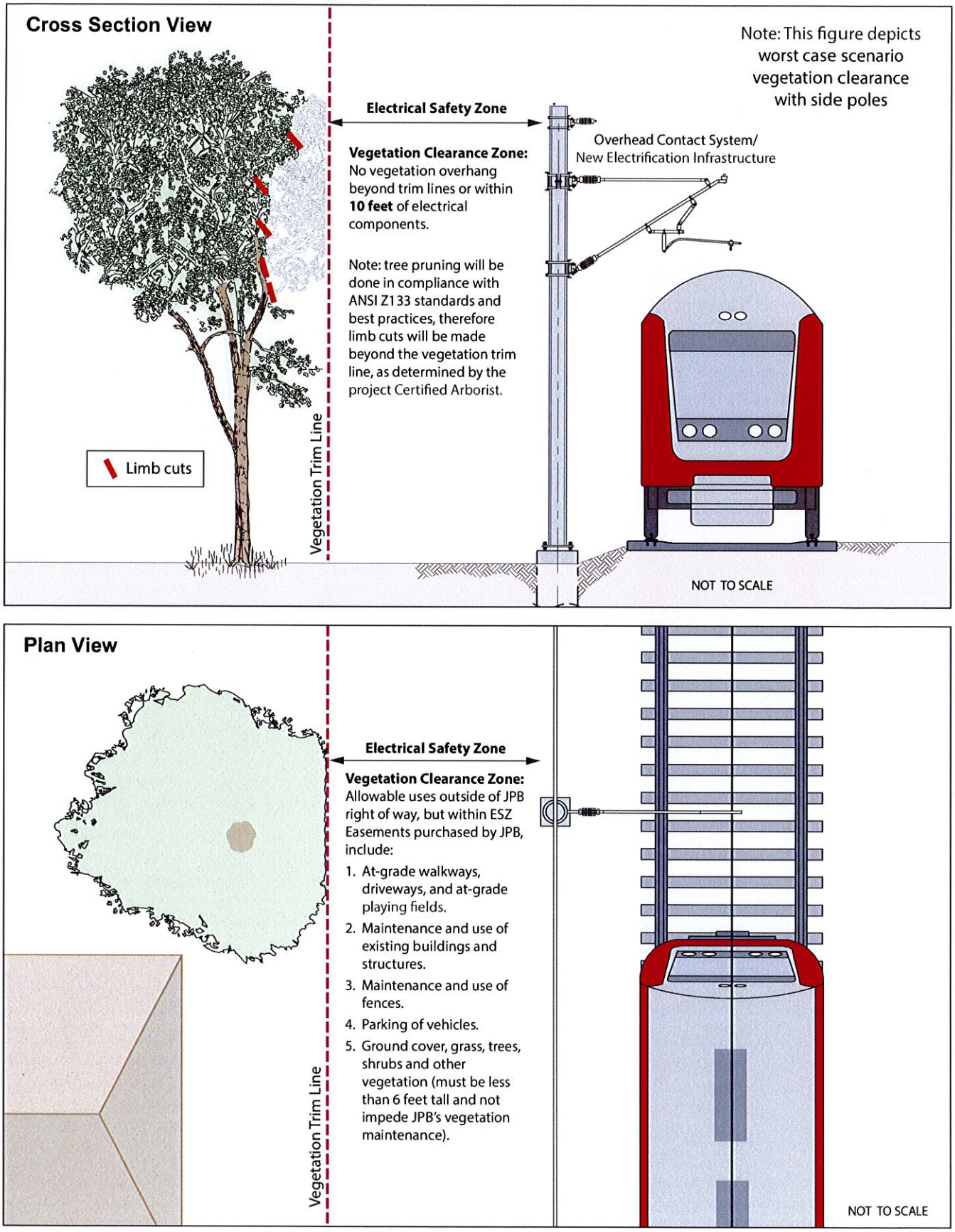


Figure 1
Vegetation Clearance in Electrical Safety Zone
Peninsula Corridor Electrification Project

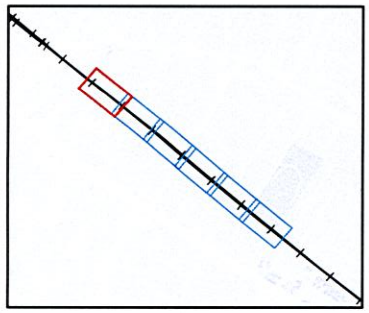
ATTACHMENT 2

Tree Impacts in Atherton

- Tree Impacts within JPB Right-of-Way
- Tree Impacts within Public Right-of-Way
- Tree impacts on Private Property

JPB Trees - Atherton							
Mile Post	**Tree #**	**Species**	**Diameter* (in)**	**Owner**	**Remove**	**Prune**	**Mitigate**
27.25	3602	Bailey acacia	13	JPB	No	< 25%	No
27.25	3604	Valley oak	16,14	JPB	No	< 25%	No
27.25	3605	Coast live oak	15	JPB	No	< 25%	No
27.25	3606	Coast live oak	11	JPB	No	< 25%	No
27.25	3608	Coast live oak	6	JPB	No	≥ 25%	**Yes**
27.25	3609	Coast live oak	23	JPB	No	≥ 25%	**Yes**
27.25	3610	Coast live oak	16	JPB	No	≥ 25%	**Yes**
27.3	3612	Coast live oak	6	JPB	No	< 25%	No
27.3	3613	Coast live oak	8	JPB	No	< 25%	No
27.35	3622	Bailey acacia	13	JPB	No	< 25%	No
27.35	3623	Coast live oak	13,12	JPB	No	< 25%	No
27.35	3624	Coast live oak	11	JPB	Yes	NA	**Yes**
27.35	3625	Coast live oak	14	JPB	No	< 25%	No
27.35	3626	Coast live oak	14	JPB	No	≥ 25%	**Yes**
27.45	3556	Coast live oak	12	JPB	No	< 25%	No
27.45	3557	Coast live oak	20	JPB	No	< 25%	No
27.45	3558	Valley oak	12	JPB	No	≥ 25%	**Yes**
27.5	3538	Monterey pine	36	JPB	Yes	NA	**Yes**
27.5	3551	Coast live oak	24,24	JPB	No	≥ 25%	**Yes**
27.5	3553	Coast live oak	18	JPB	No	< 25%	No
27.5	3554	Coast live oak	16	JPB	No	< 25%	No
27.5	3635	Coast redwood	13	JPB	No	< 25%	No
27.5	3637	Coast live oak	36	JPB	No	< 25%	No
27.5	3638	Coast redwood	26	JPB	No	< 25%	No
27.5	3640	Coast redwood	17,4	JPB	No	< 25%	No
27.5	3641	Coast redwood	16	JPB	No	< 25%	No
27.5	3642	Coast redwood	22	JPB	No	< 25%	No
27.5	3643	Coast redwood	17	JPB	No	< 25%	No
27.55	3655	Monterey pine	24	JPB	Yes	NA	**Yes**
27.65	3487	Coast live oak	8,6	JPB	Yes	NA	**Yes**
27.65	3489	Coast live oak	6	JPB	Yes	NA	**Yes**
27.65	3497	Coast live oak	8	JPB	Yes	NA	**Yes**
27.7	3433	Coast live oak	24	JPB	Yes	NA	**Yes**
27.7	3434	Coast live oak	30	JPB	Yes	NA	**Yes**
27.7	3438	Monterey pine	26	JPB	Yes	NA	**Yes**
27.7	3443	Sweetgum	14	JPB	No	< 25%	No
27.7	3447	Coast live oak	9	JPB	No	< 25%	No
27.7	3458	Tarata	8,7,7	JPB	Yes	NA	**Yes**
27.7	3460	Tarata	8	JPB	Yes	NA	**Yes**
27.75	3421	Coast live oak	20	JPB	Yes	NA	**Yes**
27.75	3427	Silver dollar gum	14	JPB	Yes	NA	**Yes**
27.8	3404	Monterey pine	12	JPB	Yes	NA	**Yes**
27.95	3368	Valley oak	18	JPB	No	≥ 25%	**Yes**
27.95	3377	Valley oak	28	JPB	No	≥ 25%	**Yes**
27.95	3380	Valley oak	16	JPB	Yes	NA	**Yes**
27.95	3383	Valley oak	22	JPB	Yes	NA	**Yes**

Mile Post	Tree #	Species	Diameter* (in)	Owner	Remove	Prune	Mitigate
28	3286	Coast live oak	16	JPB	Yes	NA	**Yes**
28	3287	California black walnut	14,13,9	JPB	Yes	NA	**Yes**
28	3288	Coast live oak	9	JPB	Yes	NA	**Yes**
* Multiple diameters are reported for trees with multiple trunks/stems.							



Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

Notes:
1. Trees identified based on Hort Science assessment.
2. Tree impacts based on preliminary design (April 2015); subject to change. Maps indicate impacts to trees based on the April 2015 overhead contact system (OCS) design and associated electrical safety zone (ESZ), which vary based on different OCS designs.
3.Tree locations are approximate due to GPS error (typically less than 5 feet discrepancy).

PCEP Tree Impact Maps
Page 1 of 6
Joint Powers Board ROW
Atherton, San Mateo County

N

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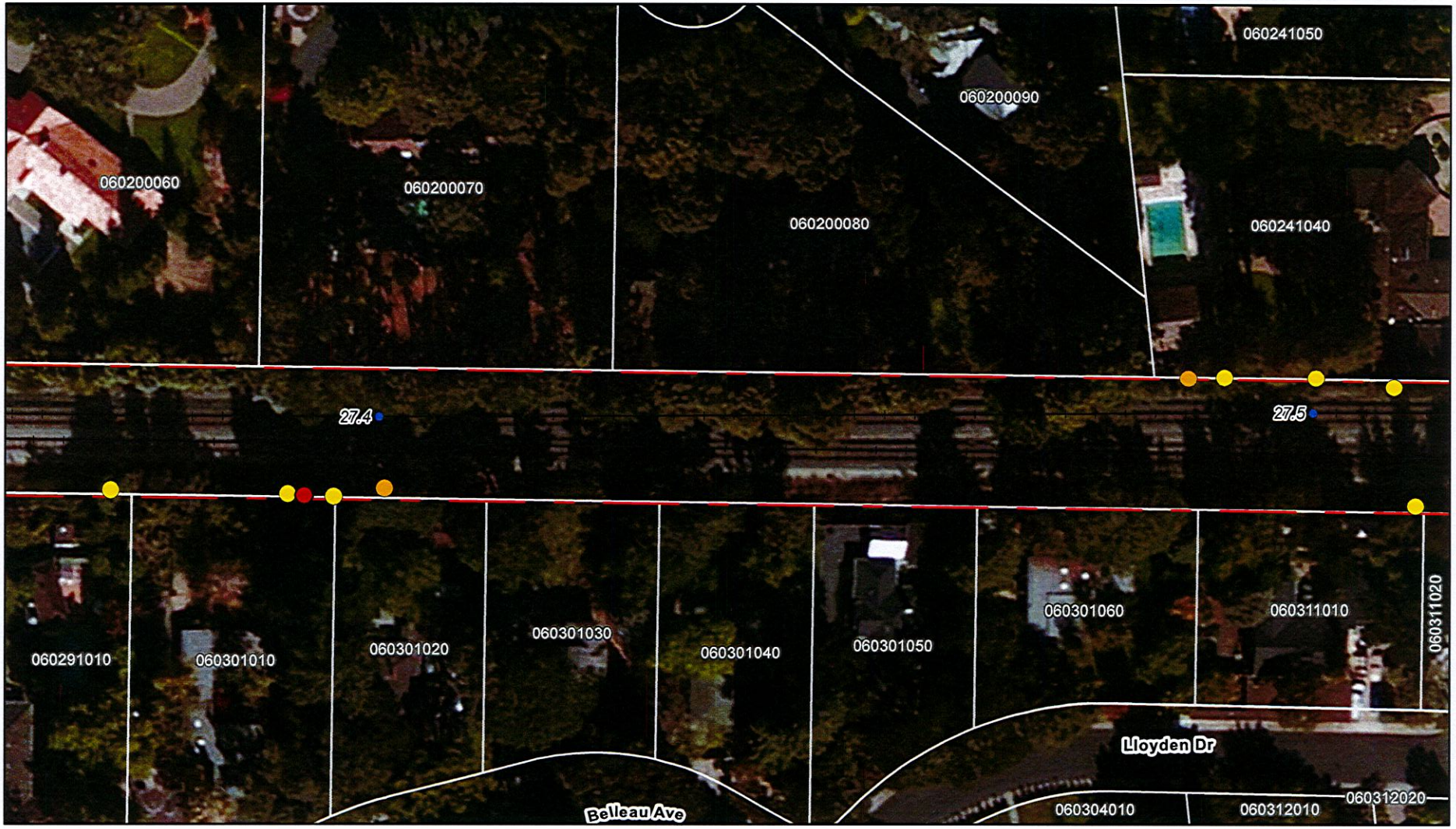

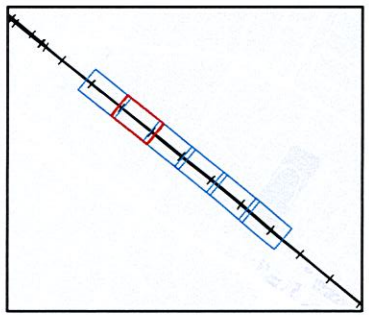

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Joint Powers Board ROW
Atherton, San Mateo County

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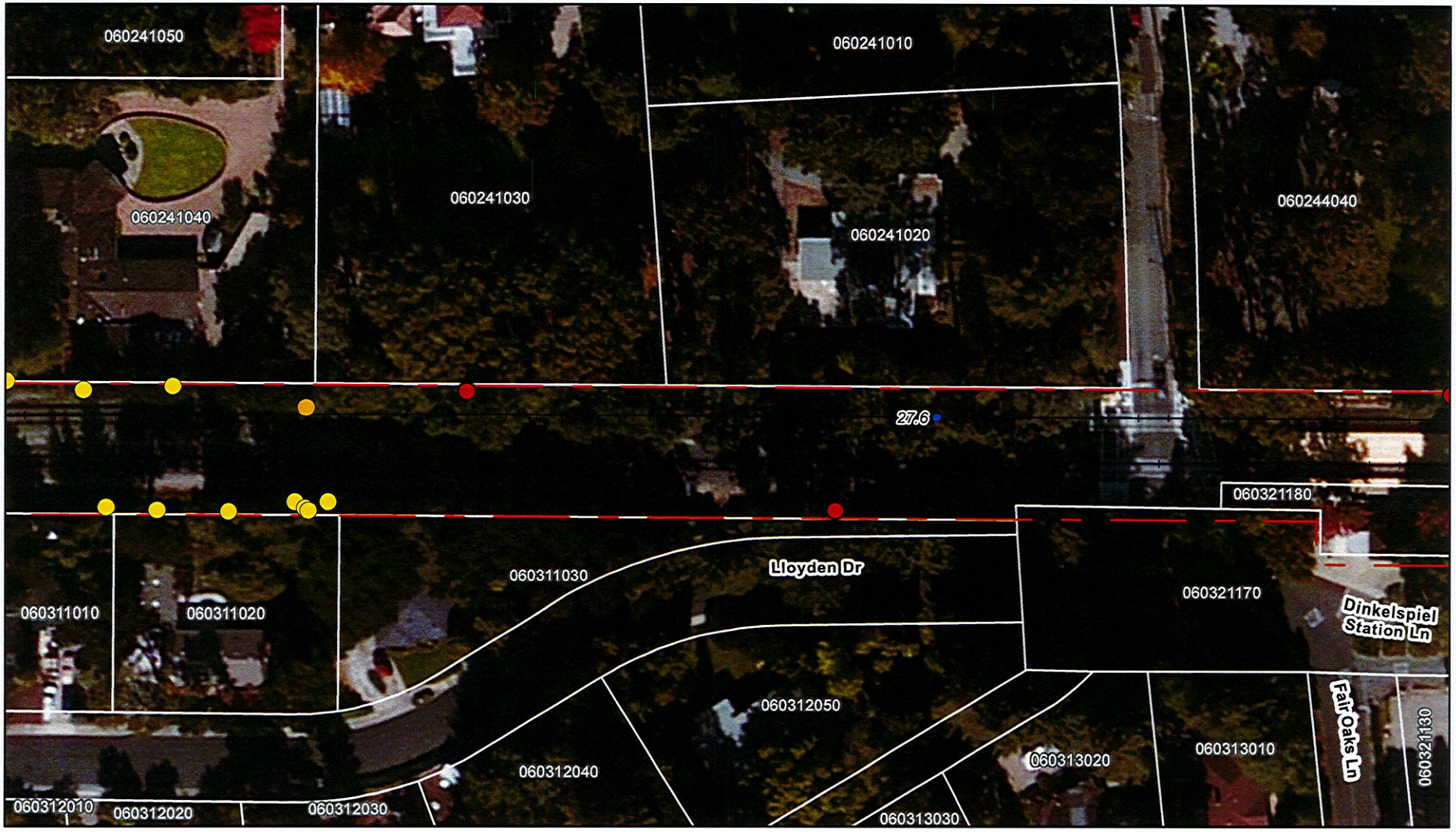

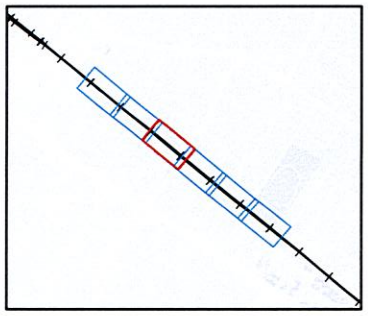

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Atherton, San Mateo County

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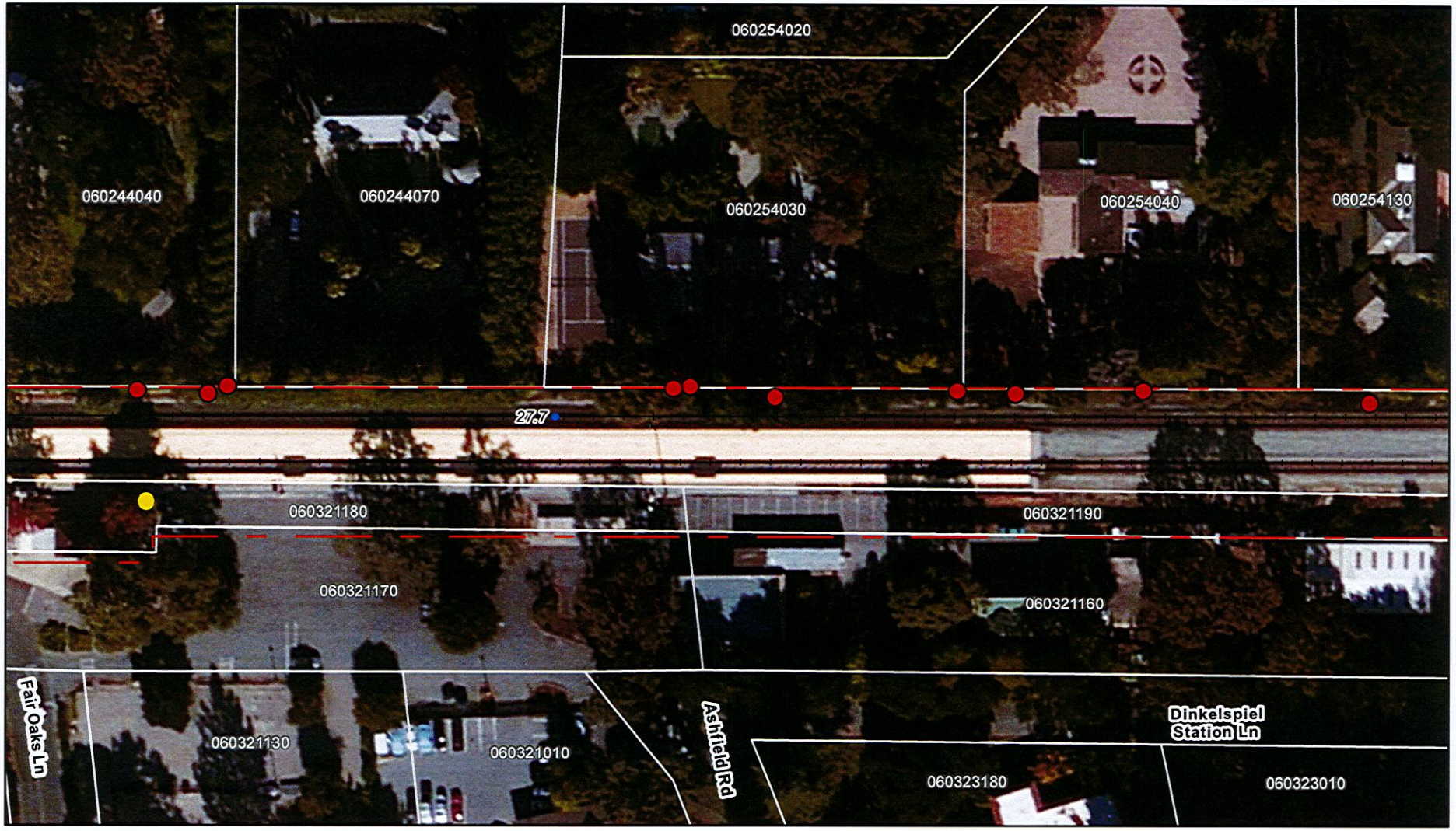

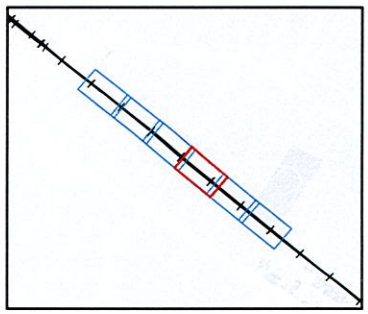

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PCEP Tree Impact Maps
Page 4 of 6
Joint Powers Board ROW
Atherton, San Mateo County

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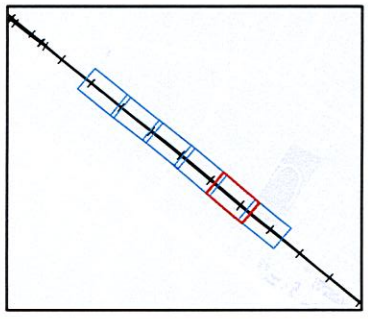

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Joint Powers Board ROW
Atherton, San Mateo County

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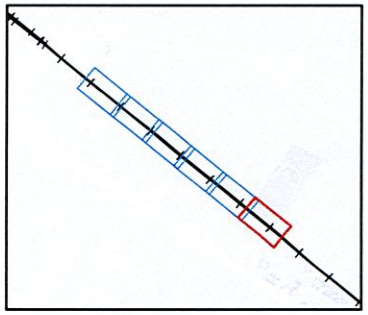

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Atherton, San Mateo County

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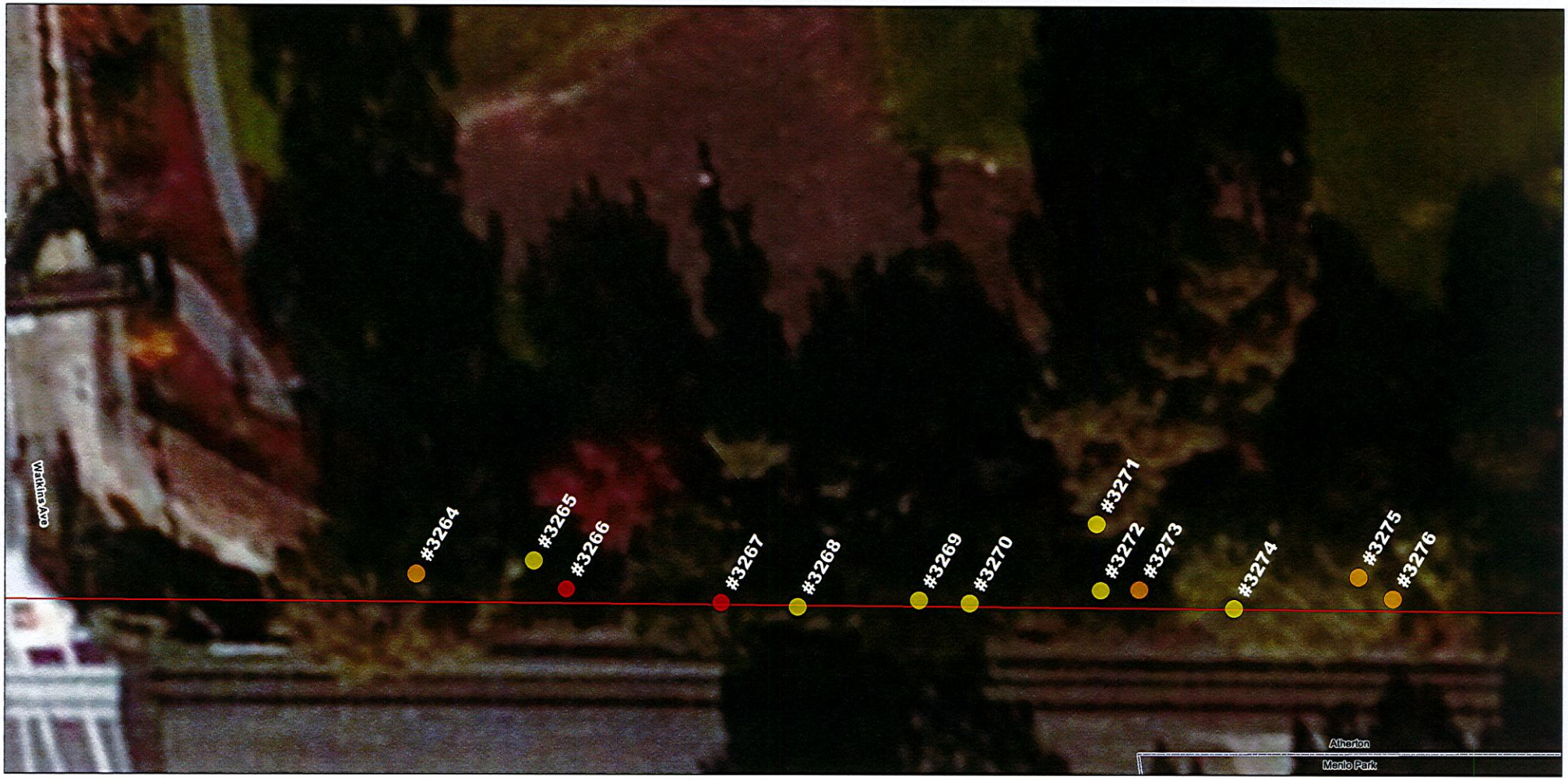

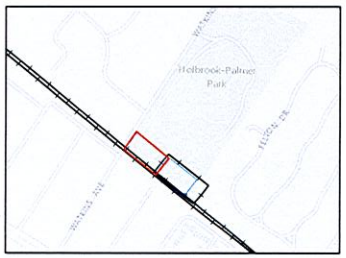

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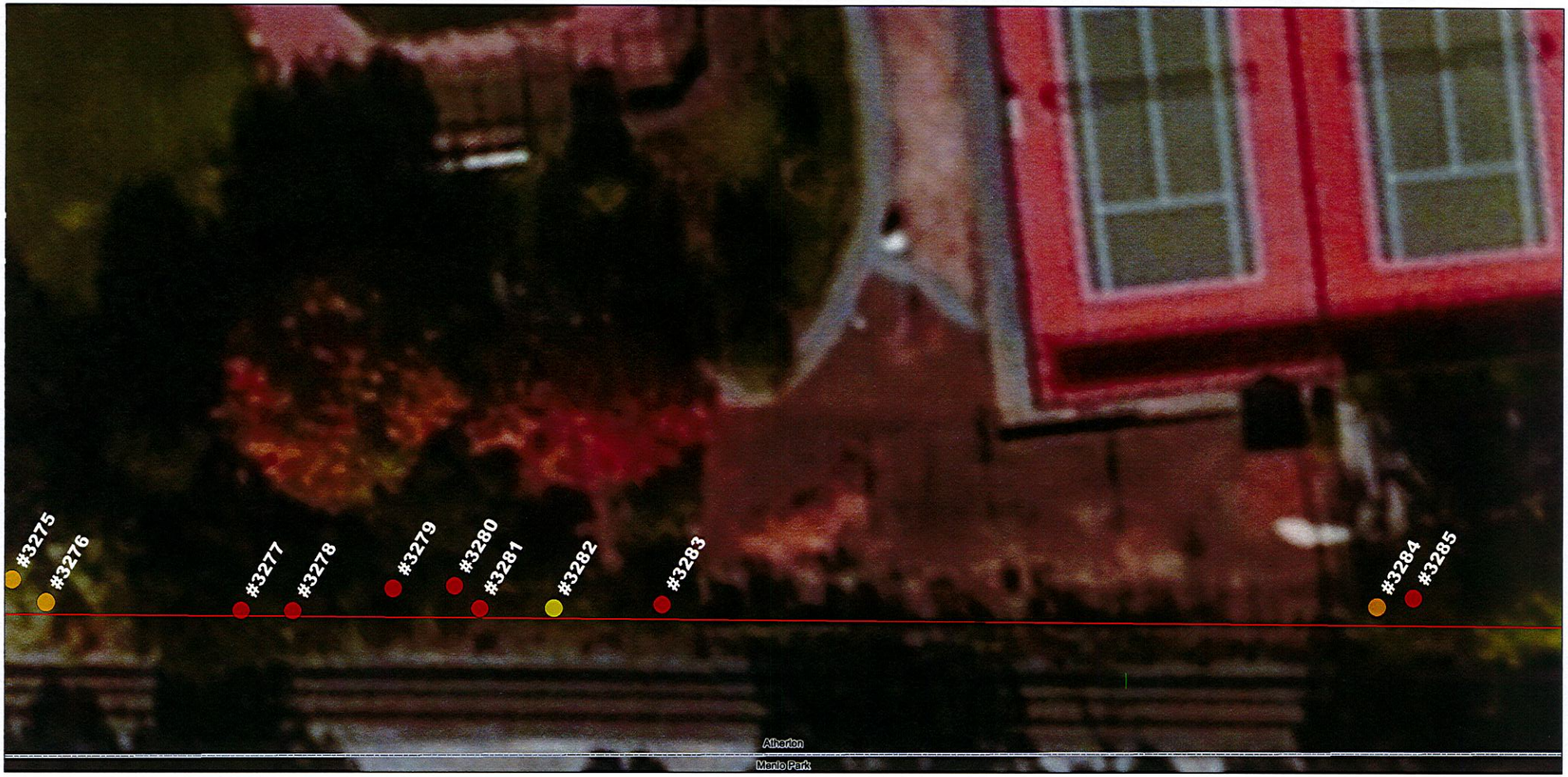
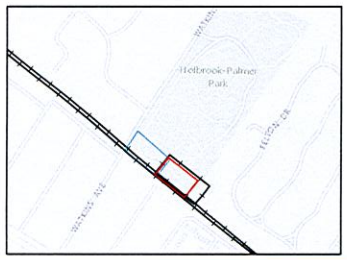
PCEP Tree Impacts on Holbrook-Palmer Park
Page 1 of 2
Public Right of Way
Atherton, San Mateo County

N

0 15 30 Feet





Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

Notes:
1. Trees identified based on Hort Science assessment.
2. Tree impacts based on preliminary design (April 2015); subject to change. Maps indicate impacts to trees based on the April 2015 overhead contact system (OCS) design and associated electrical safety zone (ESZ), which vary based on different OCS designs.
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PCEP Tree Impacts on Holbrook-Palmer Park
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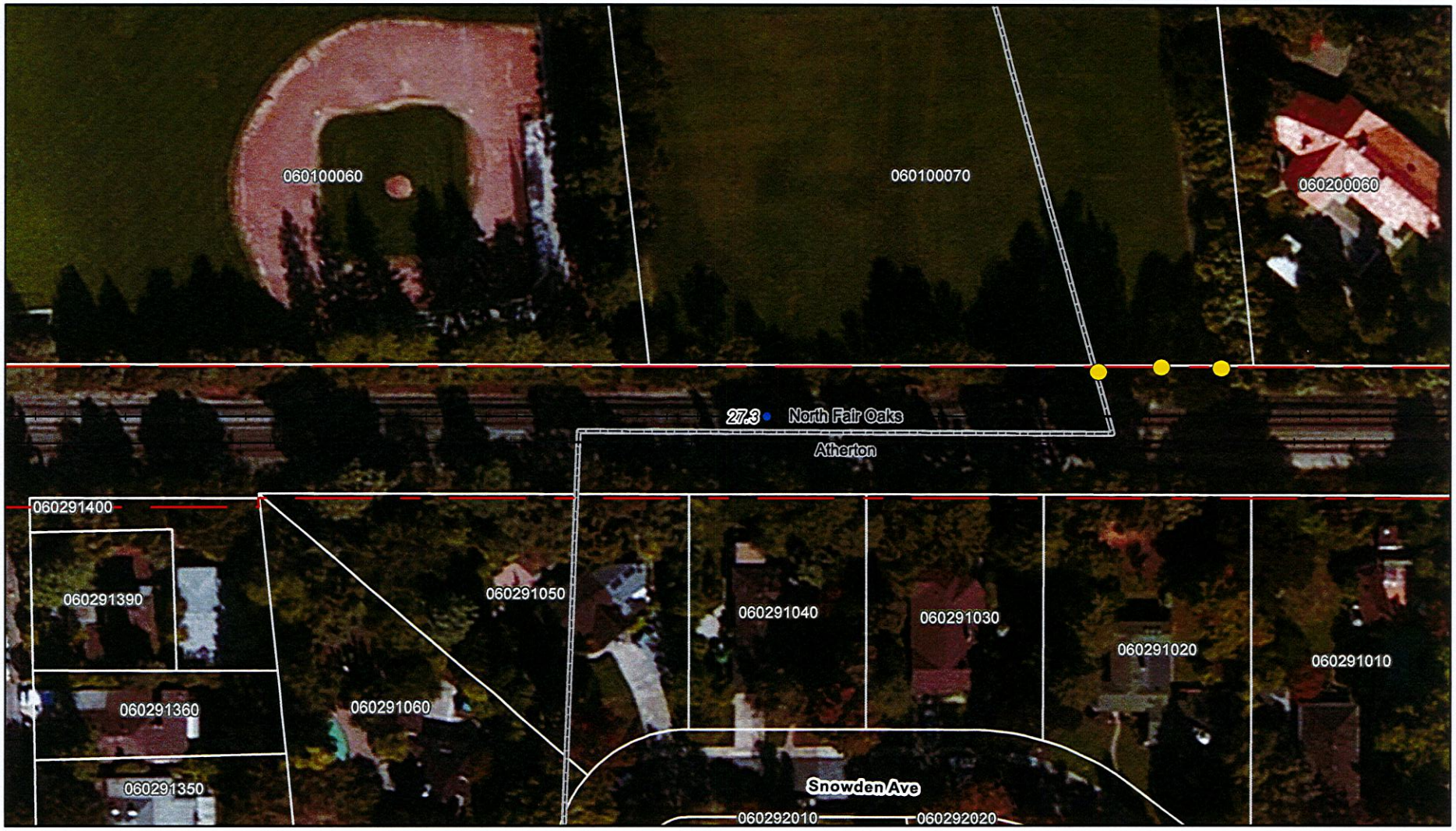
Public Right of Way
Atherton, San Mateo County

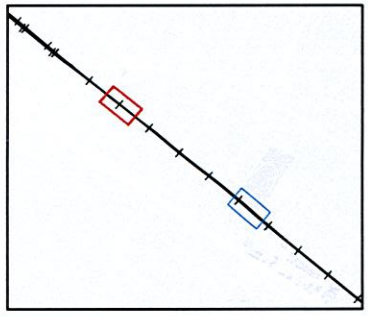
N

0 15 30 Feet

Public Trees - Atherton								
Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.95	3264	Blue gum	59		Public	No	≥ 25%	**Yes**
27.95	3265	Coast live oak	9		Public	No	< 25%	No
27.95	3266	Coast live oak	12,10,8,6	X	Public	Yes	NA	**Yes**
27.95	3267	Valley oak	6		Public	Yes	NA	**Yes**
27.95	3268	Coast live oak	15,8,8	X	Public	No	< 25%	No
27.95	3269	Coast live oak	13		Public	No	< 25%	No
27.95	3270	Coast live oak	24,15	X	Public	No	< 25%	No
27.95	3271	Coast live oak	11		Public	No	< 25%	No
27.95	3272	Coast live oak	9,5,3,2		Public	No	< 25%	No
27.95	3273	Coast live oak	13		Public	No	≥ 25%	**Yes**
27.95	3274	Coast live oak	11		Public	No	< 25%	No
27.95	3275	Bailey acacia	27		Public	No	≥ 25%	**Yes**
27.95	3276	Coast live oak	10,7		Public	No	≥ 25%	**Yes**
27.95	3277	Coast live oak	21,7	X	Public	Yes	NA	**Yes**
27.95	3278	Coast live oak	15,13,6	X	Public	Yes	NA	**Yes**
27.95	3279	Coast live oak	15,4	X	Public	Yes	NA	**Yes**
27.95	3280	Coast live oak	10		Public	Yes	NA	**Yes**
27.95	3281	Coast live oak	12		Public	Yes	NA	**Yes**
27.95	3282	Coast live oak	9		Public	No	< 25%	No
27.95	3283	Coast live oak	10		Public	Yes	NA	**Yes**
28	3284	Winged elm	6		Public	No	≥ 25%	**Yes**
28	3285	Winged elm	9		Public	Yes	NA	**Yes**
28	3687	Coast live oak	26	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No
28	3688	Coast live oak	16,13	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No
28	3689	Coast live oak	15,10	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No

* Multiple diameters are reported for trees with multiple trunks/stems.





Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

Notes:
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PCEP Tree Impact Maps
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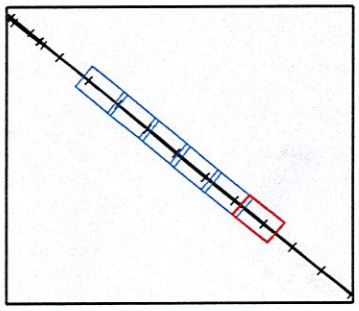
Public Right of Way
Atherton, San Mateo County

N

0 45 90 Feet



Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

Notes:
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PCEP Tree Impact Maps
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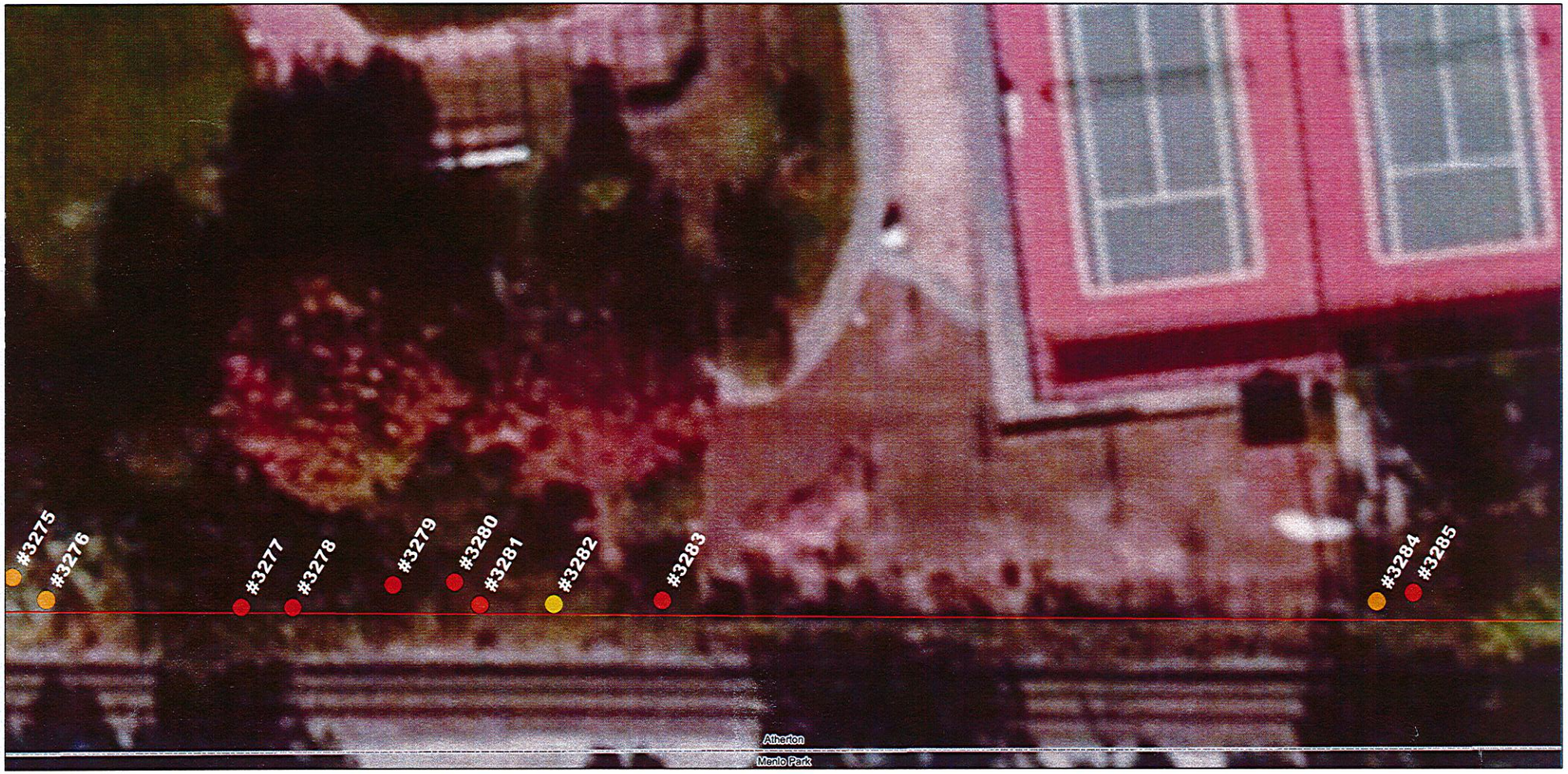
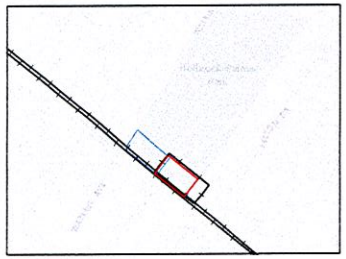
Joint Powers Board ROW
Atherton, San Mateo County

N

0 45 90 Feet





Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

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PCEP Tree Impacts on Holbrook-Palmer Park
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Public Right of Way
Atherton, San Mateo County

N

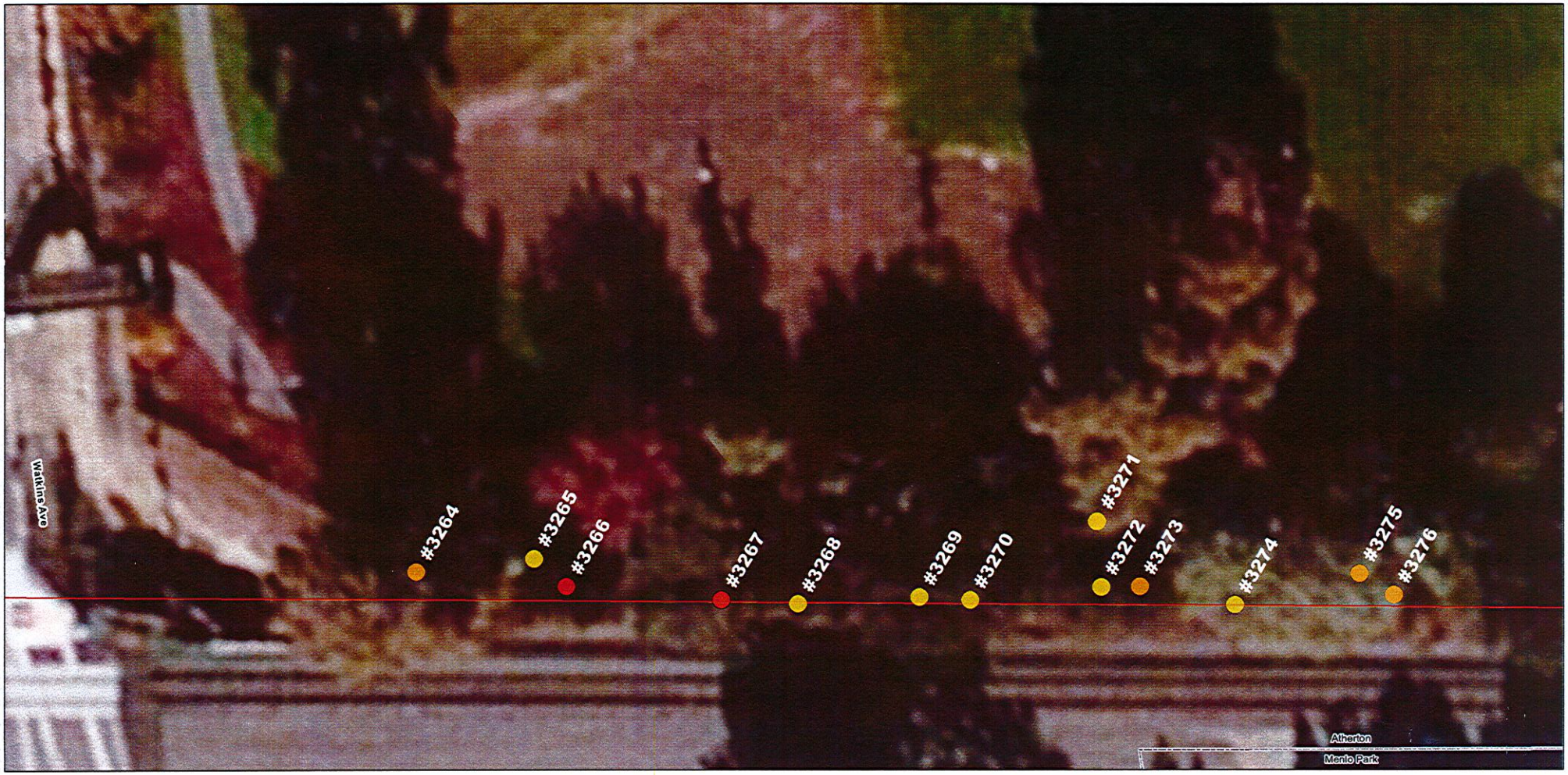
0 15 30 Feet

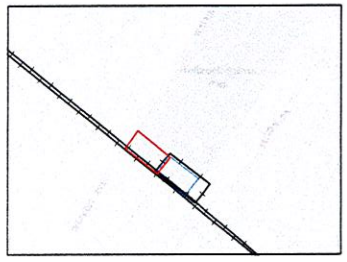
Table 1. Replacement Trees in Atherton

	Trees Impacted	Replacement Ratio	Replacement Trees
JPB ROW			
Tree Preserved	22	n/a	n/a
Tree Removed	19	1:1	19
Tree Pruned >25%	8	1:1	8
Tree Pruned <25%	22	n/a	n/a
Subtotal	*71*	-	*27*
Public Property			
Tree Preserved	2	n/a	n/a
Heritage[a] Tree Removed	4	3:1	12
Non-Heritage Tree Removed	5	1:1	5
Heritage[a] Tree Pruned >25%	0	1:1	0
Non-Heritgage Tree Pruned >25%	5	1:1	5
Tree Pruned <25%	11	n/a	n/a
Subtotal	*27*	-	*22*
Private Property			
Tree Preserved	82	n/a	n/a
Heritgage[a] Tree Removed	0	3:1	0
Non-Heritage Tree Removed	0	1:1	0
Heritage[a] Tree Pruned >25%	6	1:1	6
Non-Heritage Tree Pruned >25%	39	1:1	39
Tree Pruned <25%	107	n/a	n/a
Subtotal	*234*	-	*45*
Total			
Tree Preserved	106	n/a	n/a
Heritage[a] Tree Removed	4	-	12
Non-Heritage Tree Removed	24	-	24
Heritage[a] Tree Pruned >25%	6	-	6
Non-Heritage Tree Pruned >25%	52	-	52
Tree Pruned <25%	140	n/a	n/a
Total	***332***	-	***94***

Notes:

[a] Per Chapter 8.10 (*Removal and Damage to Heritage Trees*) of the Atherton Municipal Code, heritgage trees include: 1) a tree, located in the tree preservation area, or a native oak tree (Quercus lobata, Quercus agrifolia or Quercus douglasii) located anywhere on a lot, which has a trunk circumference of forty-eight inches (approximately 15 inches diameter) or more, when measured forty-eight inches above the natural grade, and 2) a tree so designated by the city council, based upon findings that the particular tree is unique and of importance to the public due to its unusual age, appearance, location or other factors. Heritage trees shall not include Bailey acacia, green wattle, black acacia, or tree of heaven.





Tree Impact

- < 25% Prune
- ≥ 25% Prune
- Remove

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

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PCEP Tree Impacts on Holbrook-Palmer Park
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Public Right of Way
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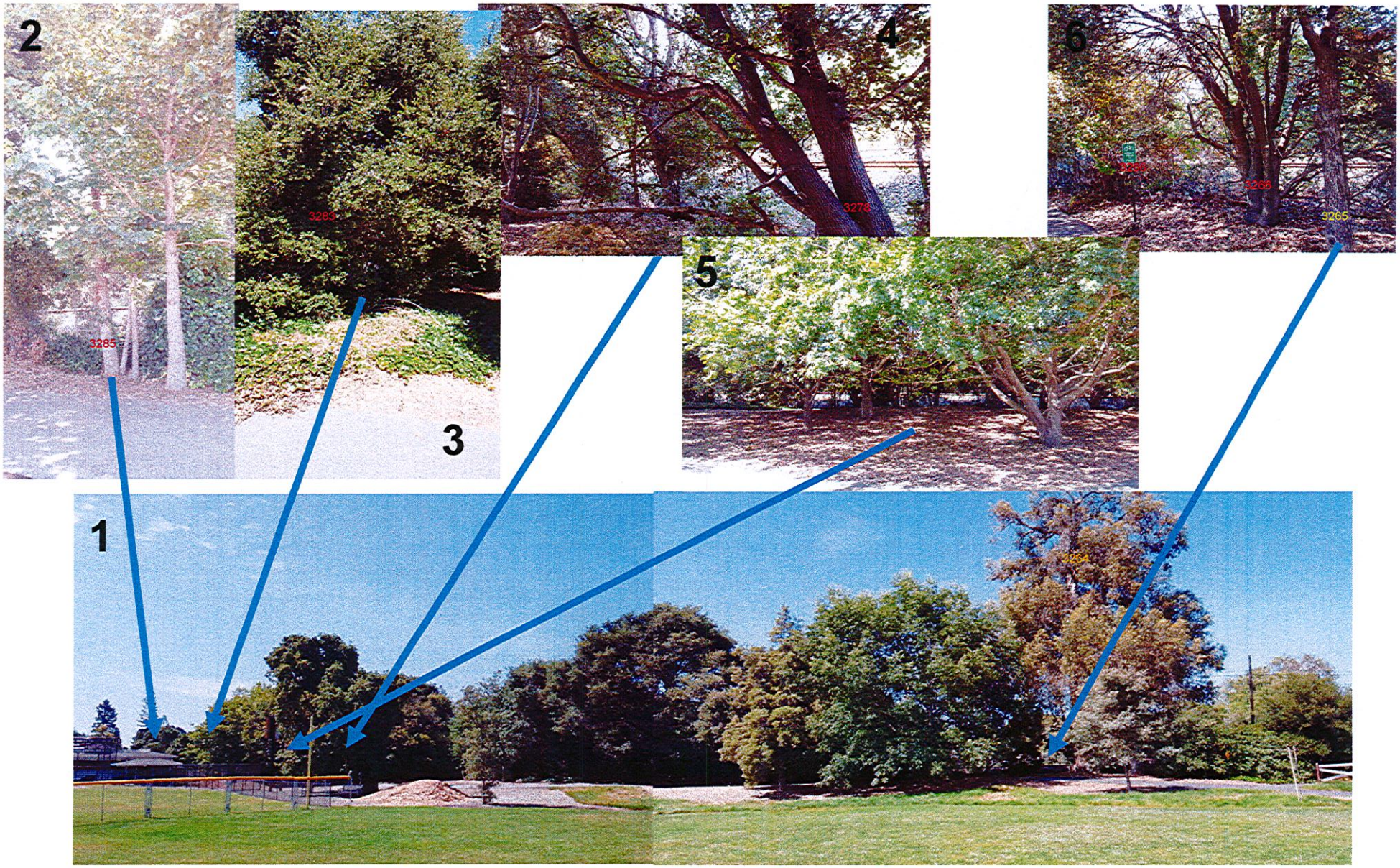
N

0 15 30 Feet


2
3285
3285
3
4
3278
6
3266
3265
5
1

Mile Post	Tree #	Species	Diameter* (in)	Owner	Remove	Prune	Mitigate
28	3286	Coast live oak	16	JPB	Yes	NA	**Yes**
28	3287	California black walnut	14,13,9	JPB	Yes	NA	**Yes**
28	3288	Coast live oak	9	JPB	Yes	NA	**Yes**
* Multiple diameters are reported for trees with multiple trunks/stems.							

Public Trees - Atherton								
Mile Post	**Tree #**	**Species**	**Diameter* (in)**	**Protected**	**Owner**	**Remove**	**Prune**	**Mitigate**
27.95	3264	Blue gum	59		Public	No	≥ 25%	**Yes**
27.95	3265	Coast live oak	9		Public	No	< 25%	No
27.95	3266	Coast live oak	12,10,8,6	X	Public	Yes	NA	**Yes**
27.95	3267	Valley oak	6		Public	Yes	NA	**Yes**
27.95	3268	Coast live oak	15,8,8	X	Public	No	< 25%	No
27.95	3269	Coast live oak	13		Public	No	< 25%	No
27.95	3270	Coast live oak	24,15	X	Public	No	< 25%	No
27.95	3271	Coast live oak	11		Public	No	< 25%	No
27.95	3272	Coast live oak	9,5,3,2		Public	No	< 25%	No
27.95	3273	Coast live oak	13		Public	No	≥ 25%	**Yes**
27.95	3274	Coast live oak	11		Public	No	< 25%	No
27.95	3275	Bailey acacia	27		Public	No	≥ 25%	**Yes**
27.95	3276	Coast live oak	10,7		Public	No	≥ 25%	**Yes**
27.95	3277	Coast live oak	21,7	X	Public	Yes	NA	**Yes**
27.95	3278	Coast live oak	15,13,6	X	Public	Yes	NA	**Yes**
27.95	3279	Coast live oak	15,4	X	Public	Yes	NA	**Yes**
27.95	3280	Coast live oak	10		Public	Yes	NA	**Yes**
27.95	3281	Coast live oak	12		Public	Yes	NA	**Yes**
27.95	3282	Coast live oak	9		Public	No	< 25%	No
27.95	3283	Coast live oak	10		Public	Yes	NA	**Yes**
28	3284	Winged elm	6		Public	No	≥ 25%	**Yes**
28	3285	Winged elm	9		Public	Yes	NA	**Yes**
28	3687	Coast live oak	26	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No
28	3688	Coast live oak	16,13	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No
28	3689	Coast live oak	15,10	X	REDWOOD CITY SCHOOL DISTRICT	No	< 25%	No

* Multiple diameters are reported for trees with multiple trunks/stems.

Private Trees - Atherton								
Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.3	3617	Monterey pine	20		WAKSMAN ABRAHAM TR	No	≥ 25%	Yes
27.3	3619	Blue gum	48,38,25		DEXTER NEIL	No	< 25%	No
27.3	3620	Bailey acacia	9,7		DEXTER NEIL	No	< 25%	No
27.3	3621	Monterey cypress	36		DEXTER NEIL	No	< 25%	No
27.35	3579	Monterey pine	26		WYNNE ANTHONY E TR	No	< 25%	No
27.35	3581	Monterey pine	14		WYNNE ANTHONY E TR	No	< 25%	No
27.35	3583	Monterey pine	24		WYNNE ANTHONY E TR	No	< 25%	No
27.35	3584	Monterey pine	14		WYNNE ANTHONY E TR	No	< 25%	No
27.35	3585	Monterey pine	36		WYNNE ANTHONY E TR	No	< 25%	No
27.35	3587	Silver dollar tree	22,15		WYNNE ANTHONY E TR	No	≥ 25%	Yes
27.4	3567	Compact blue gum	7,7,6		NIETO MANUEL EST OF	No	< 25%	No
27.4	3568	Compact blue gum	28,24,18,18		NIETO MANUEL EST OF	No	< 25%	No
27.4	3571	Blue gum	28,24		NIETO MANUEL EST OF	No	< 25%	No
27.4	3572	Blue gum	16,16,15,10,9,7		NIETO MANUEL EST OF	No	< 25%	No
27.4	3573	Compact blue gum	9,8,6		NIETO MANUEL EST OF	No	< 25%	No
27.4	3574	Compact blue gum	24,7,7		NIETO MANUEL EST OF	No	≥ 25%	Yes
27.4	3575	Monterey pine	38		WYNNE ANTHONY E TR	No	< 25%	No
27.4	3627	Monterey pine	36		HEID CHRISTIAN A	No	< 25%	No
27.4	3628	Monterey pine	30		SERRANO WILFREDO D	No	< 25%	No
27.45	3559	Valley oak	26	X	Mays Willie Howard Jr	No	< 25%	No
27.45	3560	Canary Island pine	8		NIETO MANUEL EST OF	No	< 25%	No
27.45	3561	Blue gum	48		NIETO MANUEL EST OF	No	< 25%	No
27.45	3562	Compact blue gum	9,8		NIETO MANUEL EST OF	No	< 25%	No
27.45	3563	Monterey pine	34		NIETO MANUEL EST OF	No	≥ 25%	Yes
27.45	3564	Monterey pine	10		NIETO MANUEL EST OF	No	< 25%	No
27.45	3565	Blue gum	20		NIETO MANUEL EST OF	No	< 25%	No
27.45	3566	Compact blue gum	17,16,12,9		NIETO MANUEL EST OF	No	< 25%	No
27.45	3632	Monterey pine	48		REYNOLDS LAURA L	No	< 25%	No
27.45	3634	Coast live oak	18	X	USUKA GEORGE J TR	No	< 25%	No
27.5	3527	Tree of heaven	6,6		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3528	Tree of heaven	10		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3529	Tree of heaven	7,6		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3530	Tree of heaven	8		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3531	Tree of heaven	10		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3532	Tree of heaven	9		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3533	Monterey pine	30		TIMPSON MARYLUE C TR	No	≥ 25%	Yes

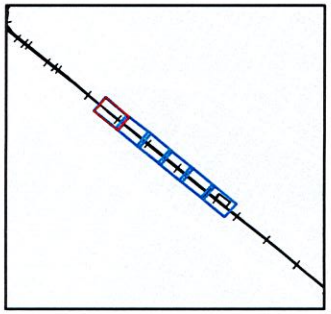
Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.5	3534	Tree of heaven	12		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3535	Tree of heaven	7		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3536	Coast live oak	7		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3537	Tree of heaven	9		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3539	Tree of heaven	8		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3540	Tree of heaven	7		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3541	Monterey pine	24		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3542	Tree of heaven	10		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3543	Tree of heaven	7		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3544	Tree of heaven	10		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3546	Tree of heaven	8		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3548	Tree of heaven	10		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3549	Tree of heaven	10		TIMPSON MARYLUE C TR	No	< 25%	No
27.5	3550	Tree of heaven	12		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.5	3644	Coast live oak	26,24	X	SIMONS JOHN B TR	No	< 25%	No
27.5	3645	Glossy privet	6,5		SIMONS JOHN B TR	No	< 25%	No
27.5	3646	Glossy privet	6		SIMONS JOHN B TR	No	< 25%	No
27.5	3647	Glossy privet	6,5,4,3		SIMONS JOHN B TR	No	< 25%	No
27.5	3648	Coast live oak	18,15,10	X	SIMONS JOHN B TR	No	< 25%	No
27.5	3650	Coast live oak	26,16,13	X	SIMONS JOHN B TR	No	< 25%	No
27.55	3512	Valley oak	32	X	LIU EMMY Y TR	No	≥ 25%	Yes
27.55	3513	Bailey acacia	7,5		LIU EMMY Y TR	No	< 25%	No
27.55	3515	Glossy privet	7		LIU EMMY Y TR	No	< 25%	No
27.55	3516	Bailey acacia	8		LIU EMMY Y TR	No	≥ 25%	Yes
27.55	3517	Bailey acacia	10		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3518	Coast live oak	12		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3519	Tree of heaven	6		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3520	Tree of heaven	6		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3521	Tree of heaven	6		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3522	Tree of heaven	10		TIMPSON MARYLUE C TR	No	≥ 25%	Yes
27.55	3523	Tree of heaven	7		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3524	Monterey pine	32		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3525	Tree of heaven	9		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3526	Tree of heaven	6		TIMPSON MARYLUE C TR	No	< 25%	No
27.55	3652	Coast live oak	22	X	SIMONS JOHN B TR	No	< 25%	No
27.55	3653	Coast live oak	26	X	SIMONS JOHN B TR	No	< 25%	No
27.55	3654	Monterey pine	38		SIMONS JOHN B TR	No	≥ 25%	Yes

Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.55	3657	Monterey pine	29		SIMONS JOHN B TR	No	< 25%	No
27.6	3506	River red gum	36		VESOM PITT TR	No	< 25%	No
27.6	3508	River red gum	28		VESOM PITT TR	No	< 25%	No
27.6	3509	Compact blue gum	8,7,7,6,6		VESOM PITT TR	No	< 25%	No
27.65	3462	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3463	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3464	Coast redwood	18		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3465	Coast redwood	12		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3466	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3467	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3468	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3469	Coast redwood	15		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3471	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3472	Coast redwood	7		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3473	Coast redwood	9		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3474	Coast redwood	18		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3475	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3477	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3478	Coast redwood	14		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3479	Coast redwood	17		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3481	Coast redwood	17		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3482	Coast redwood	9		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3483	Coast redwood	17		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3484	Coast redwood	20		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3485	Coast redwood	22		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3486	Coast redwood	18		KAWASAKI GUY & BETH	No	< 25%	No
27.65	3488	Coast redwood	20		VESOM PITT TR	No	< 25%	No
27.65	3490	River red gum	24		VESOM PITT TR	No	< 25%	No
27.65	3499	Blackwood acacia	15,12		VESOM PITT TR	No	≥ 25%	**Yes**
27.7	3435	Coast live oak	45	X	MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3436	Monterey pine	36		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3437	Valley oak	30	X	MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3454	Monterey pine	30		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3455	Tarata	8		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3456	Tarata	12,7		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3457	Tarata	7,7		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**
27.7	3459	Blue gum	26,24,18		MEHRTENS CAROL NAN TR	No	≥ 25%	**Yes**

Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.7	3461	Blue gum	36		MEHRTENS CAROL NAN TR	No	≥ 25%	Yes
27.75	3410	Coast redwood	22,16,12		YAP RENATO TR	No	< 25%	No
27.75	3411	Coast redwood	17		YAP RENATO TR	No	< 25%	No
27.75	3412	Coast redwood	12		YAP RENATO TR	No	< 25%	No
27.75	3413	Coast redwood	20		YAP RENATO TR	No	< 25%	No
27.75	3414	Coast redwood	20,6		YAP RENATO TR	No	≥ 25%	Yes
27.75	3415	Coast redwood	18,8		YAP RENATO TR	No	≥ 25%	Yes
27.75	3416	Coast redwood	16,7,7		YAP RENATO TR	No	< 25%	No
27.75	3417	Glossy privet	6,2		YAP RENATO TR	No	< 25%	No
27.75	3422	Valley oak	6		YAP RENATO TR	No	< 25%	No
27.75	3423	Valley oak	40	X	NUNEZ MANOLO M	No	< 25%	No
27.75	3424	Italian buckthorn	6,6		NUNEZ MANOLO M	No	≥ 25%	Yes
27.75	3425	Valley oak	28	X	NUNEZ MANOLO M	No	< 25%	No
27.75	3426	Italian buckthorn	9		NUNEZ MANOLO M	No	< 25%	No
27.75	3428	Glossy privet	10		NUNEZ MANOLO M	No	≥ 25%	Yes
27.75	3429	Valley oak	24	X	NUNEZ MANOLO M	No	≥ 25%	Yes
27.75	3432	African fern-pine	6		NUNEZ MANOLO M	No	< 25%	No
27.8	3400	Monterey pine	24		STEERE DANIEL C JR	No	< 25%	No
27.8	3401	Monterey pine	18		STEERE DANIEL C JR	No	< 25%	No
27.8	3402	Coast live oak	15		STEERE DANIEL C JR	No	< 25%	No
27.8	3403	Monterey pine	16		STEERE DANIEL C JR	No	< 25%	No
27.8	3406	Monterey pine	9		STEERE DANIEL C JR	No	< 25%	No
27.8	3407	Monterey pine	20		STEERE DANIEL C JR	No	< 25%	No
27.8	3408	Glossy privet	6,6,5,5,5,5		STEERE DANIEL C JR	No	< 25%	No
27.85	3359	Coast redwood	24		TASTO DONALD L TR	No	≥ 25%	Yes
27.85	3362	Coast redwood	24		TASTO DONALD L TR	No	≥ 25%	Yes
27.85	3363	Coast redwood	22		TASTO DONALD L TR	No	< 25%	No
27.85	3365	Coast redwood	18		TASTO DONALD L TR	No	< 25%	No
27.85	3366	Coast redwood	6		TASTO DONALD L TR	No	< 25%	No
27.85	3367	Coast redwood	18		TASTO DONALD L TR	No	< 25%	No
27.85	3369	Coast redwood	10		TASTO DONALD L TR	No	< 25%	No
27.85	3370	Coast redwood	7		TASTO DONALD L TR	No	< 25%	No
27.85	3371	Coast redwood	28		TASTO DONALD L TR	No	≥ 25%	Yes
27.85	3374	Coast redwood	17		TASTO DONALD L TR	No	≥ 25%	Yes
27.85	3375	Coast redwood	12		TASTO DONALD L TR	No	< 25%	No
27.85	3379	Coast redwood	22		TASTO DONALD L TR	No	≥ 25%	Yes
27.85	3381	Valley oak	30	X	CULHANE MARK A TR	No	≥ 25%	Yes

Mile Post	Tree #	Species	Diameter* (in)	Protected	Owner	Remove	Prune	Mitigate
27.85	3382	Valley oak	26	X	CULHANE MARK A TR	No	< 25%	No
27.85	3387	Valley oak	50	X	CULHANE MARK A TR	No	≥ 25%	**Yes**
27.85	3398	Coast live oak	6		STEERE DANIEL C JR	No	≥ 25%	**Yes**
27.85	3399	Italian stone pine	28		STEERE DANIEL C JR	No	< 25%	No
27.95	3357	Siberian elm	20		Chapple Stephanie	No	< 25%	No

* Multiple diameters are reported for trees with multiple trunks/stems.



Tree Impacts

- <25% Prune (from JPB ROW)
- <25% Prune (from private property)
- ≥25% Prune (from JPB ROW)
- ≥25% Prune (from private property)
- Remove (from private property)

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

Notes:
1. Trees identified based on Hort Science assessment.
2. Tree impacts based on preliminary design (April 2015); subject to change. Maps indicate impacts to trees based on the April 2015 overhead contact system (OCS) design and associated electrical safety zone (ESZ), which vary based on different OCS designs.
3.Tree locations are approximate due to GPS error (typically less than 5 feet discrepancy).

PCEP Tree Impact Maps
Page 1 of 6
Private Right of Way
Atherton,
San Mateo County

N

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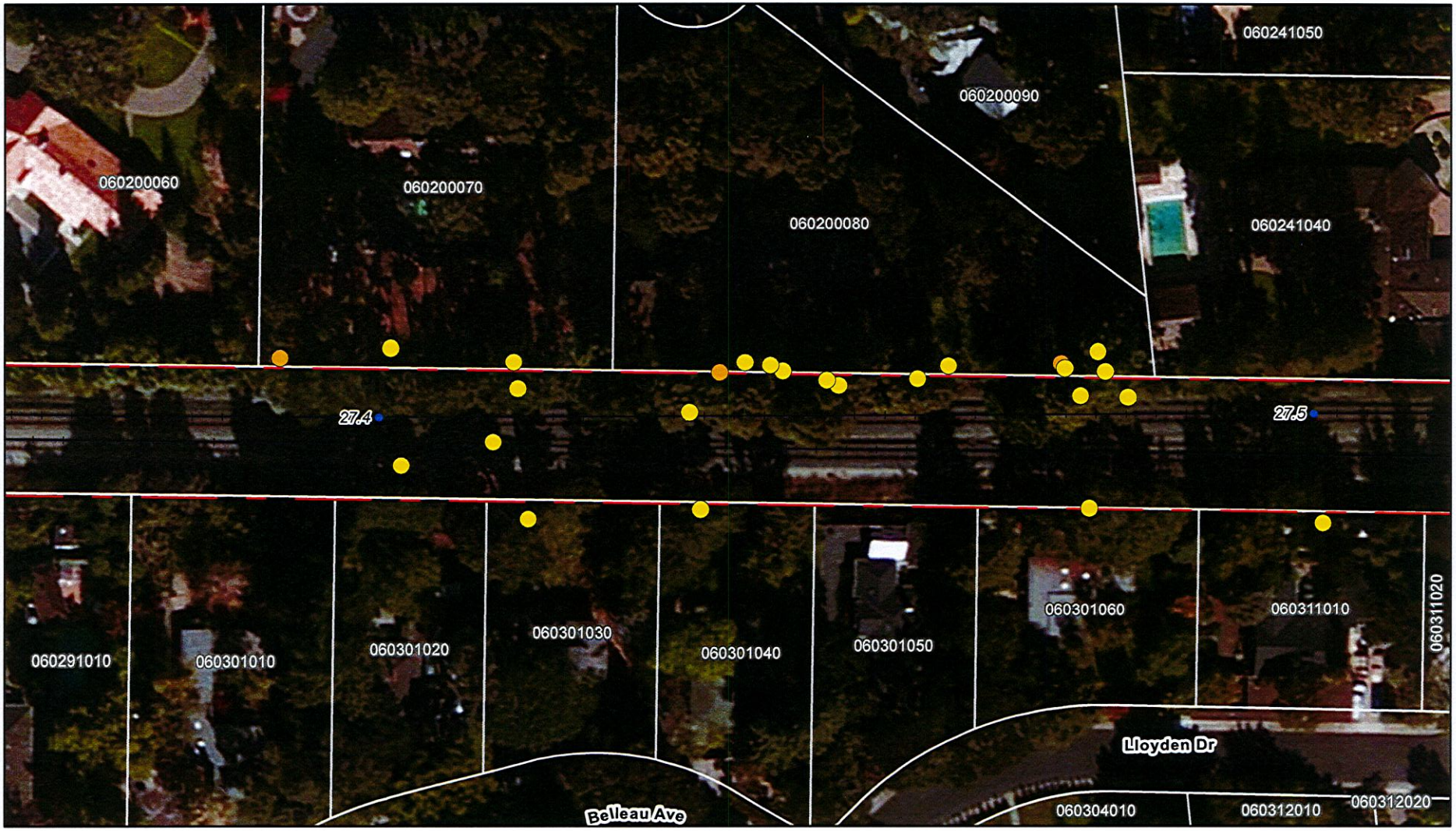
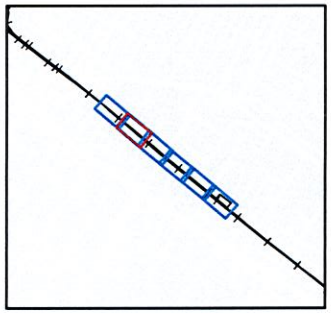
Feet





Tree Impacts

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- Remove (from private property)

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- JPB Caltrain ROW
- Tracks
- Parcel

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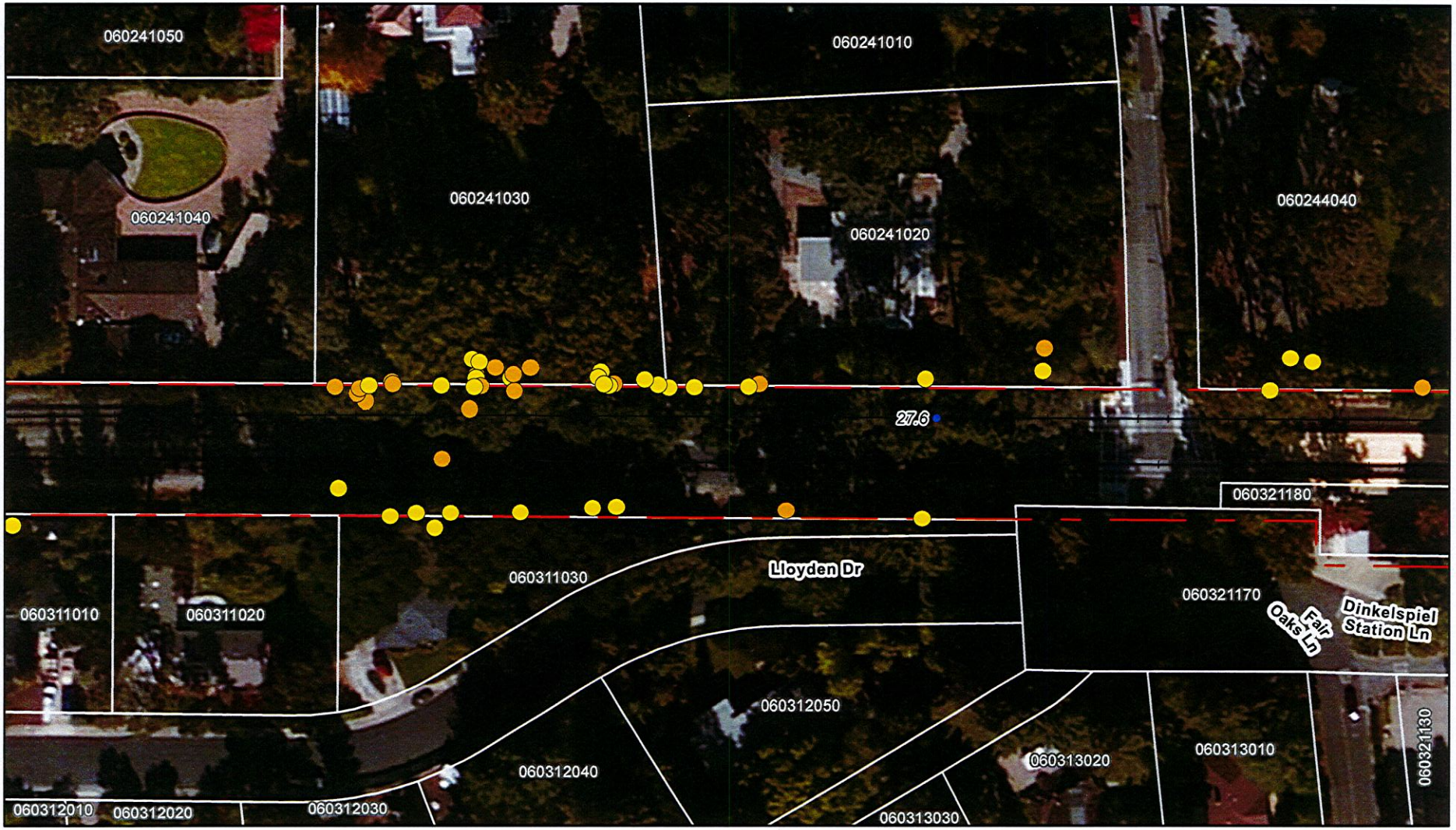
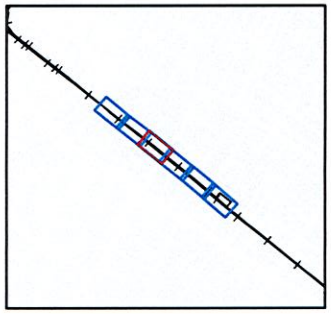
PCEP Tree Impact Maps
Page 2 of 6
Private Right of Way
Atherton,
San Mateo County

N

0 45 90 Feet





Tree Impacts

- <25% Prune (from JPB ROW)
- <25% Prune (from private property)
- ≥25% Prune (from JPB ROW)
- ≥25% Prune (from private property)
- Remove (from private property)

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

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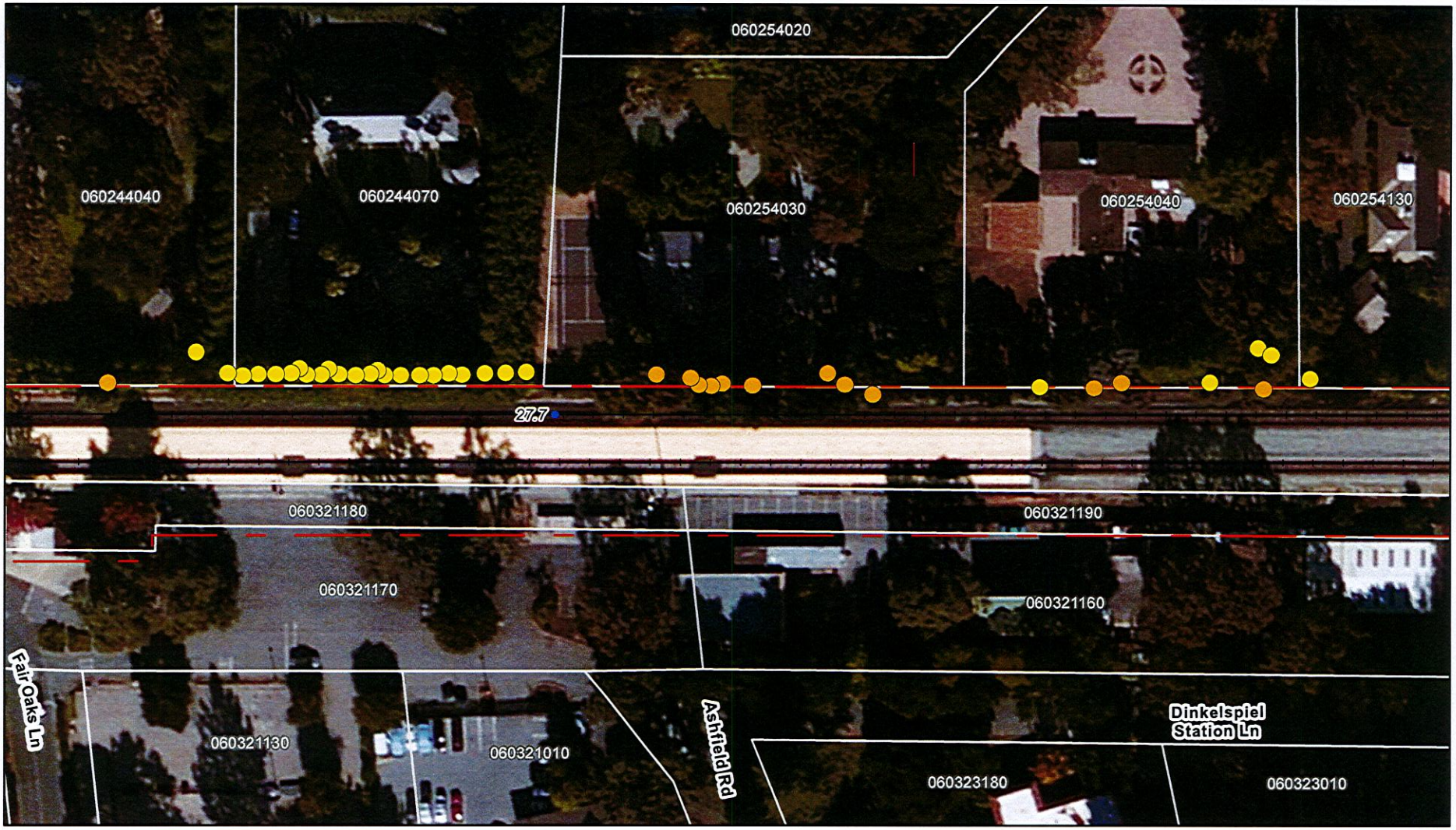
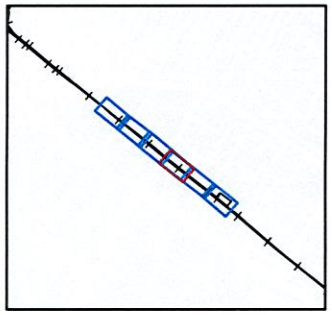
PCEP Tree Impact Maps

Private Right of Way
Atherton,
San Mateo County

N

0 45 90 Feet





Tree Impacts

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- ≥25% Prune (from private property)
- Remove (from private property)

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

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PCEP Tree Impact Maps
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Atherton,
San Mateo County

N

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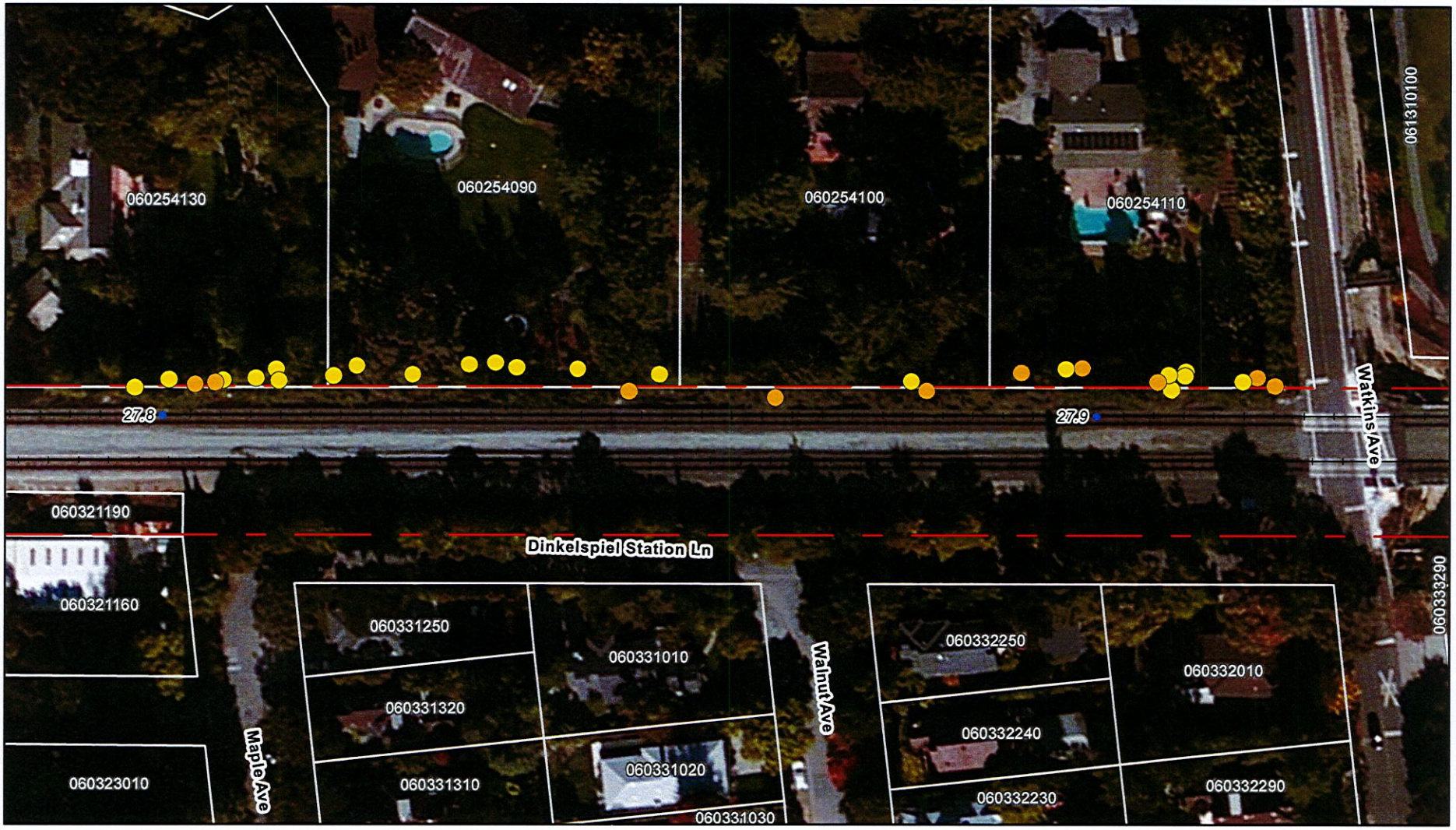

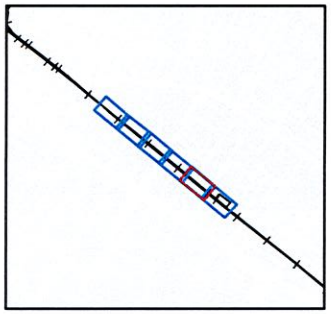

Tree Impacts

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- <25% Prune (from private property)
- ≥25% Prune (from JPB ROW)
- ≥25% Prune (from private property)
- Remove (from private property)

- Track Mile Post
- JPB Caltrain ROW
- Tracks
- Parcel

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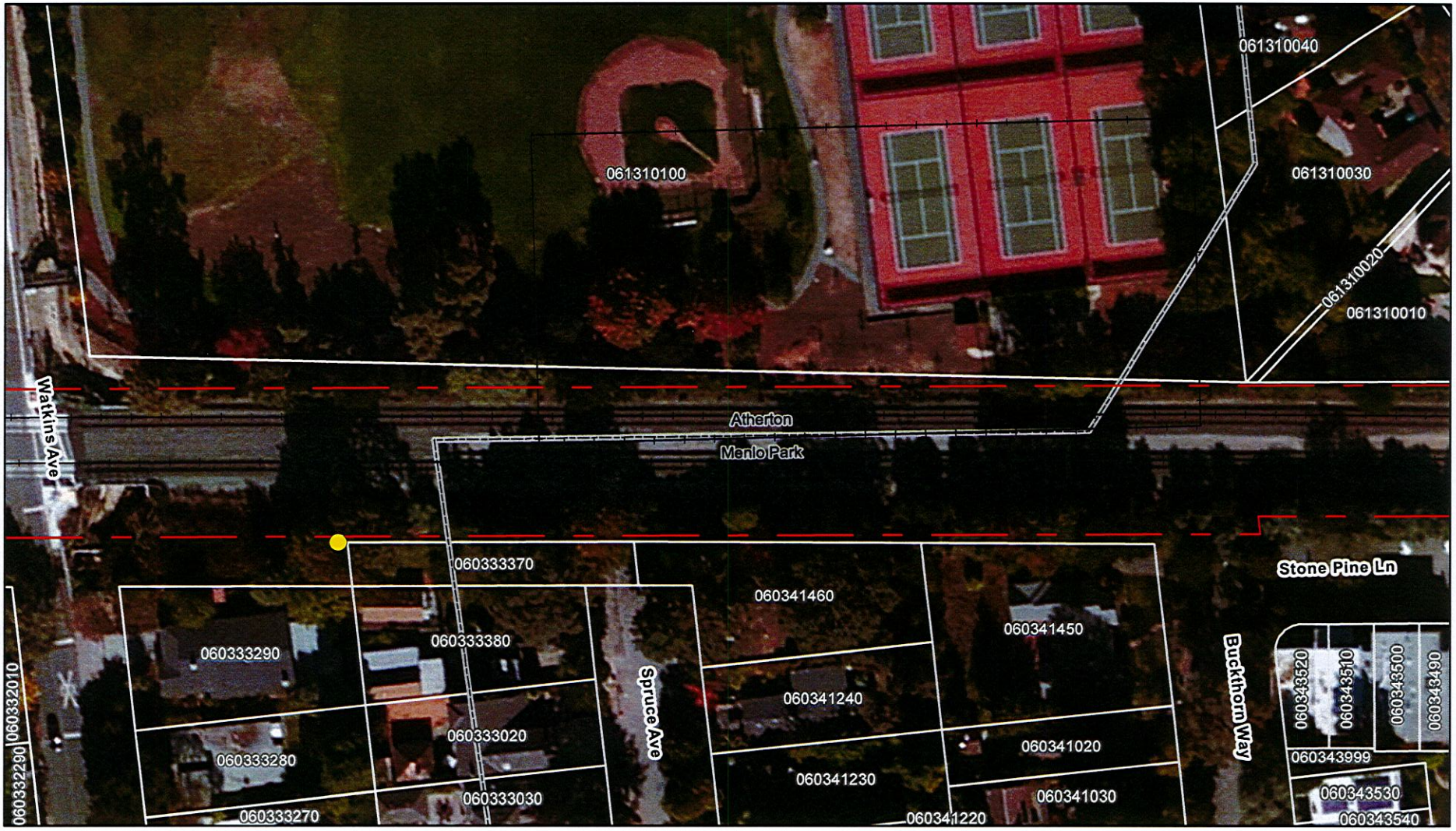
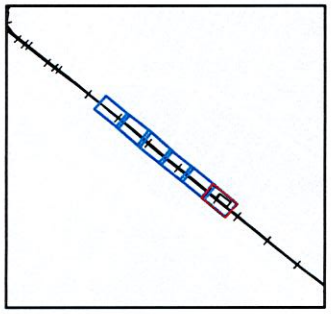
PCEP Tree Impact Maps
Page 5 of 6
Private Right of Way
Atherton,
San Mateo County

N

0 45 90 Feet





Tree Impacts

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- JPB Caltrain ROW
- Tracks
- Parcel

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PCEP Tree Impact Maps
Page 6 of 6
Private Right of Way
Atherton,
San Mateo County

N

0 45 90 Feet

ATTACHMENT 3

Atherton Tree Replacement Plan

Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

City of Atherton, CA
Potential Tree Replacement Sites
Exhibit A-1

HORT SCIENCE

Overview of Potential Tree Replacement Locations

The Caltrain right-of-way (ROW) in Atherton is narrow and already densely vegetated. One replacement location is available within the ROW (Site 84). Thirteen (13) potential tree replacement sites are on private residential properties and one site has been identified on public property, Holbrook-Palmer Park. Potential tree replacement sites are summarized in Table A-1 and depicted in Figure A-1. These potential planting locations do not provide enough space for planting the number of trees required for replacement. Caltrain will work with the City of Atherton and property owners to find other suitable planting spaces. In addition, if property owners decline to have trees planted on their properties, additional tree replacement sites will need to be identified.

Opportunities

Some private property owners will have trees removed or pruned more than 25% to install the electrification system. Offering replacement trees to affected property owners will help minimize the effects of the project on individual owners as well as to the greater community. No trees are planned for removal from Holbrook-Palmer Park, but two trees will be pruned greater than 25%. Trees in the public ROW between the park and the Caltrain ROW will be pruned and removed, so screening will be lost.

Trees could be planted at the park to replace lost screening or for general landscaping purposes (Photo A-1).

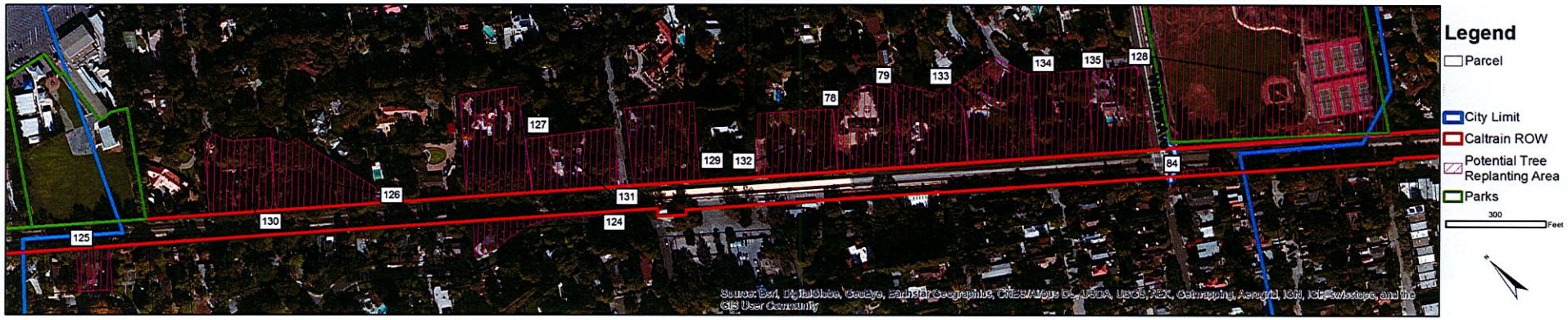
Challenges

Because the Caltrain ROW is too narrow for planting, two aspects of tree replacement outside the Caltrain ROW may be particularly difficult: (1) finding enough suitable planting locations and (2) establishing access for planting and maintenance. Some property owners may decline replacement trees offered by Caltrain, and alternative tree replacement locations must be found.

Table A-1. Potential Tree Replacement Sites

Site No	APN	Ownership	Number of trees	Opportunities	Comment
78	60254040	Private	3	Replacement	Private yard
79	60254130	Private	2	Replacement	Private yard
84	-	Caltrain	5	Replacement	Small space across from park.
124	60311030	Private	1	Replacement	Private yard
125	60291030	Private	1	Replacement	Private yard
126	60200080	Private	2	Replacement	Private yard
127	60241030	Private	15	Replacement	Private yard
128	-	Public	20	Replacement	Holbrook-Palmer Park
129	60244040	Private	1	Replacement	Private yard
130	60200070	Private	1	Replacement	Private yard
131	60241020	Private	2	Replacement	Private yard
132	60254030	Private	9	Replacement	Private yard
133	60254090	Private	1	Replacement	Private yard
134	60254100	Private	2	Replacement	Private yard
135	60254110	Private	5	Replacement	Private yard

Figure A-1. Potential Tree Replacement Locations



Tree Replacement Needs

Current estimates are that 94 trees need to be replaced within Atherton. Potential tree planting sites for up to 70 trees have been identified. Locations for 24 trees have not been identified. If all private properties decline replacement trees, replacement sites for an additional 45 trees will be required. Given this uncertainty, trees in Table A-2 are presented as ranges.

Table A-2. Proposed Tree Replacement by Site

Ownership	Identified	Unidentified	Total
Private	0-45	-	0-45
Caltrain	5	-	5
Atherton	0-20	24-89	20-89
Total	**5-70**	**24-89**	**94**

Proposed Site Selection

All 15 potential sites are recommended as proposed replacement sites: one on Caltrain ROW, 13 on private property and one publicly owned. Seventy (70) trees are proposed for planting in these sites. Caltrain will work with the City and private property owners to find suitable space for planting the 24 additional trees for which replacement sites have not yet been identified.

Forty-five (45) trees will be offered to 13 private property owners which will have trees pruned greater than 25% or removed.

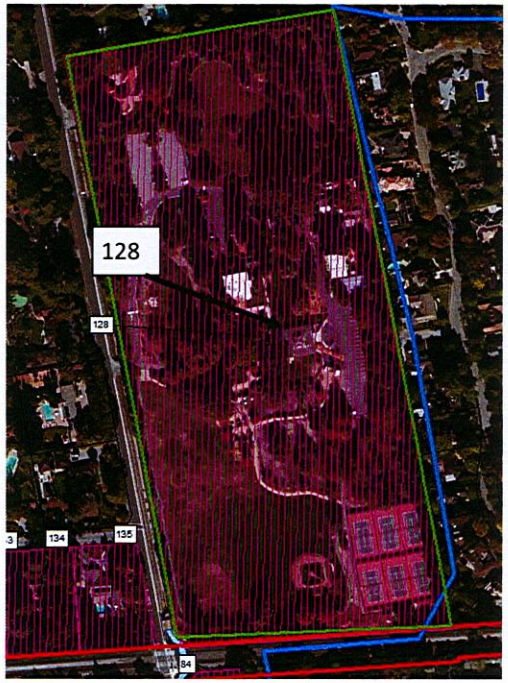
One site in the Caltrain ROW has been identified where there is space for five trees to be planted.

Site 128 (Holbrook-Palmer Park, Figure A-2) will have two trees pruned in excess of 25%. This pruning will likely reduce screening of the tracks from the park. Based on the size of the park property, 20 trees are proposed for planting at the park to enhance screening.

The remaining 24 trees will be offered to the City. If the private property owners reject some or all of the replacement trees they are offered, the City will be provided additional trees. The City can propose tree planting locations not identified in this plan or request contributions to a City tree fund.

No alternate replacement sites were identified in Atherton.

Figure A-2. Proposed Tree Replacement Site 128



Sites on Private Property

Tree replacement Sites 78, 79, 124-127, and 129 - 135 are on private properties that will have trees pruned more than 25% or removed. The number of trees that could be planted in each site was estimated (Table A-3). Some properties do not have sufficient space to plant a replacement tree for each one that will be pruned or removed.

Field inspections may reveal additional space on private property for tree planting, above the number of trees offered as a replacement. If sufficient space is available, additional trees will be offered to the property owners.

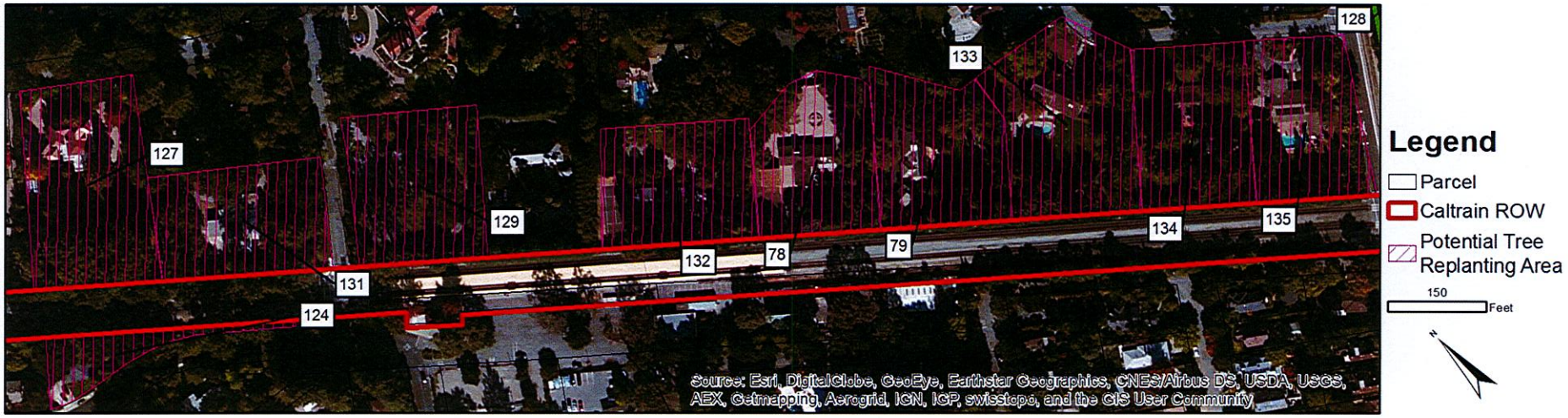
The species and locations of trees planted will be determined by property owners in conjunction with Caltrain's property owner outreach process.

If a private property owner declines replacement trees, additional tree replacement sites will need to be identified.

Table A-3. Proposed Tree Replacement Sites

Site No	APN	Number of trees
78	60254040	3
79	60254130	2
84	-	5
124	60311030	1
125	60291030	1
126	60200080	2
127	60241030	15
128	-	20
129	60244040	1
130	60200070	1
131	60241020	2
132	60254030	9
133	60254090	1
134	60254100	2
135	60254110	5

Figure A-3. Proposed Tree Replacement Sites 78, 79, 124 ,127-129, 131-135 (Refer to Figure A-1 for Sites 125, 126, 130)



Site 84

Site 84 is within the Caltrain ROW. Five (5) trees are proposed for planting at this site. Planting trees in this location will provide screening for the adjacent residential area. The site is near a drainage and buried fiber optic cable.

Site 84 is flat and in full sun. It is densely vegetated with wild fennel, which will need to be removed before planting (Photo A-2). Fennel is a perennial herb that is identified as invasive by the California Invasive Plant Council. Although fennel provides some screening of the Caltrain ROW the invasive plant will be removed to make way for a more sustainable landscape and an evergreen screen.

Vehicle access for planting and maintenance at this site is limited. Irrigation will need to be provided by water bag or tank; there is no water on-site. Weed control will be an important maintenance operation at this site.

Site 128

Site 128 is the City of Atherton's Holbrook-Palmer Park that is adjacent to the Caltrain ROW. Pruning to establish the electrical safety zone will likely reduce screening of the tracks from the park (Photo A-3). Based on the size of the park property, 20 trees are proposed for planting at the park to enhance screening.

There is good access for planting at Site 128. Water for irrigation is available at the site.

Photo A-2. Before planting, invasive fennel must be removed from Site 84.

Photo A-3. Holbrook-Palmer Park is located adjacent to the Caltrain ROW and is an ideal location for tree planting.

Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-5

Basic Information
Site ID#: 130 Replacing tree#: 3587
Date: ____ Jurisdiction: Atherton
Milepost: 27.4 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 1 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Basic Information
Site ID#: 131 Replacing tree#: 3512, 3516
Date: ____ Jurisdiction: Atherton
Milepost: 27.6 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

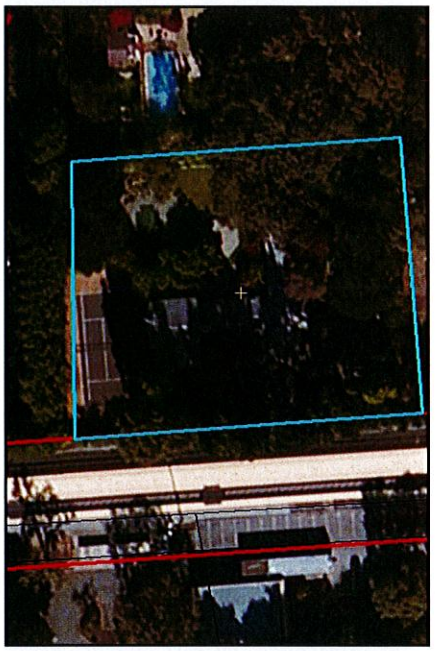
Planting Conditions
Potential # trees: 2 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-6

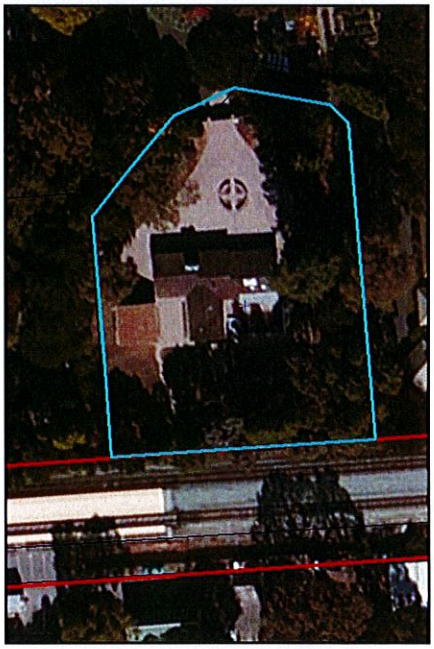
Basic Information
Site ID#: 132 Replacing tree#: 3454, 3435, 3436, 3437, 3455, 3456, 3457, 3459, 3461
Date: ____ Jurisdiction: Atherton
Milepost: 27.7 Planting Function: __
Placement: Private Distance from ESZ: __



Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 9 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Basic Information
Site ID#: 078 Replacing tree#: 3424, 3428, 3429
Date: ____ Jurisdiction: Atherton
Milepost: 27.7 Planting Function: __
Placement: Private Distance from ESZ: __



Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

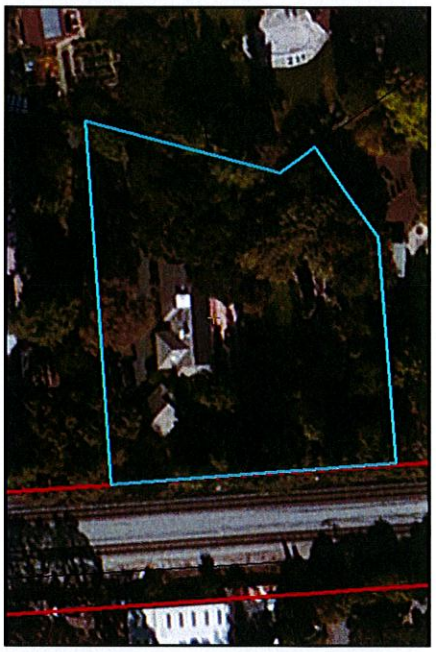
Planting Conditions
Potential # trees: 3 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-7

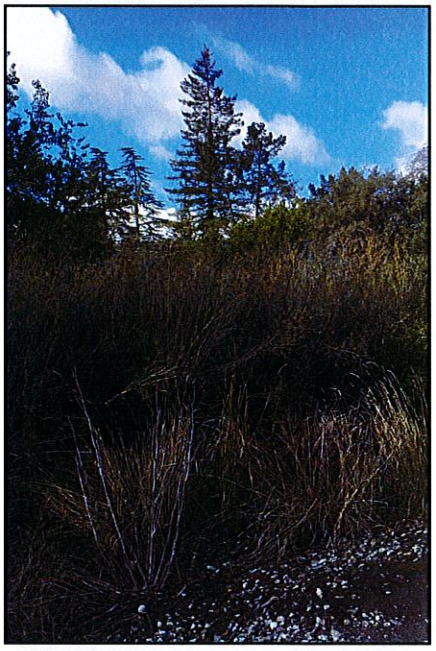
Basic Information
Site ID#: 079 Replacing tree#: 3414, 3415
Date: ____ Jurisdiction: Atherton
Milepost: 27.8 Planting Function: __
Placement: Private Distance from ESZ: __



Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 2 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Basic Information
Site ID#: 084 Replacing tree#: ____
Date: 10/18/2016 Jurisdiction: Atherton
Milepost: 28 Planting Function: Screening
Placement: Caltrain property Distance from ESZ: __



Site Conditions
Soil Surface: Fennel Slope: Flat
Aspect: __ Exposure: Full sun
Adjacent property: Residential
Screening needed: Yes If yes, height: 20
Size: length: 45 width: 40
Overhead utilities: No Vertical clearance: __

Planting Conditions
Potential # trees: 5 Access for crew: Vehicle restrictions
Adjacent Vegetation: Fennel
Availability of water: None
Access for water truck: Walk-in only
Irrigation method: Water bag/tank
Maintenance concerns: Fennel control
Comments: Adjacent to drainage, buried fiber optic cable.

Tree Replacement Plan

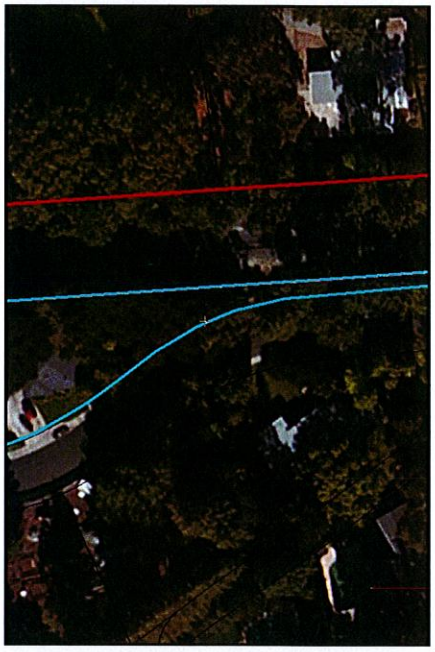
Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-8

Basic Information
Site ID#: 124 Replacing tree#: 3654
Date: ____ Jurisdiction: Atherton
Milepost: 27.6 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

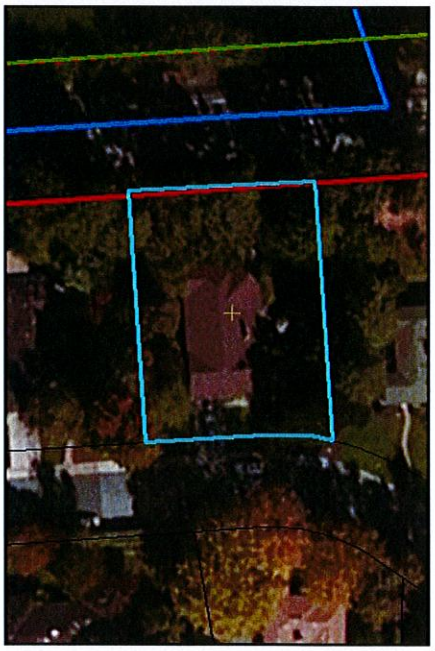
Planting Conditions
Potential # trees: 1 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __



Basic Information
Site ID#: 125 Replacing tree#: 3617
Date: ____ Jurisdiction: Atherton
Milepost: 27.3 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 1 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __



Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-9

Basic Information
Site ID#: 126 Replacing tree#: 3563, 3574
Date: ____ Jurisdiction: Atherton
Milepost: 27.5 Planting Function: __
Placement: Private Distance from ESZ: __

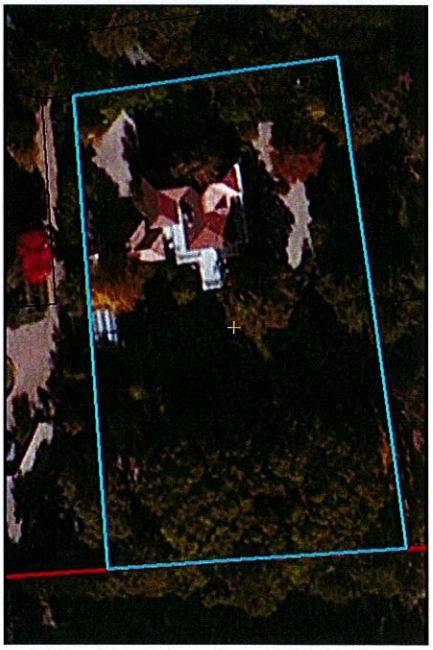
Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 2 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Basic Information
Site ID#: 127 Replacing tree#: 3522, 3528, 3529, 3530, 3532, 3533, 3536, 3539, 3540, 3542, 3543, 3544, 3546, 3548, 3550
Date: ____ Jurisdiction: Atherton
Milepost: 27.5 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 15 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __



Tree Replacement Plan

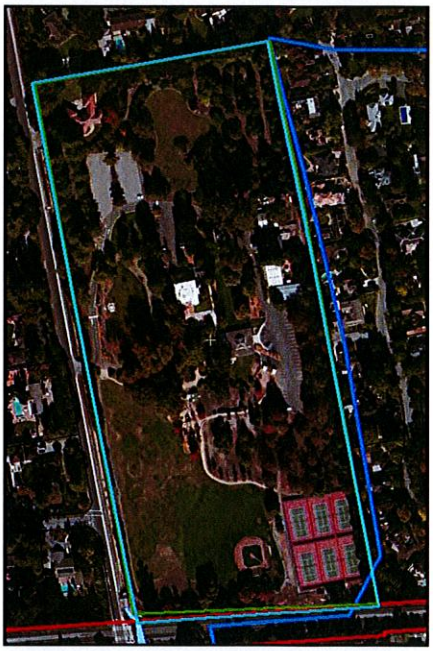
Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-10

Basic Information
Site ID#: 128 Replacing tree#: 3264-3285
Date: ____ Jurisdiction: Atherton
Milepost: 28 Planting Function: __
Placement: Public Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 20 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __



Basic Information
Site ID#: 129 Replacing tree#: 3499
Date: ____ Jurisdiction: Atherton
Milepost: 27.6 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 1 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Tree Replacement Plan

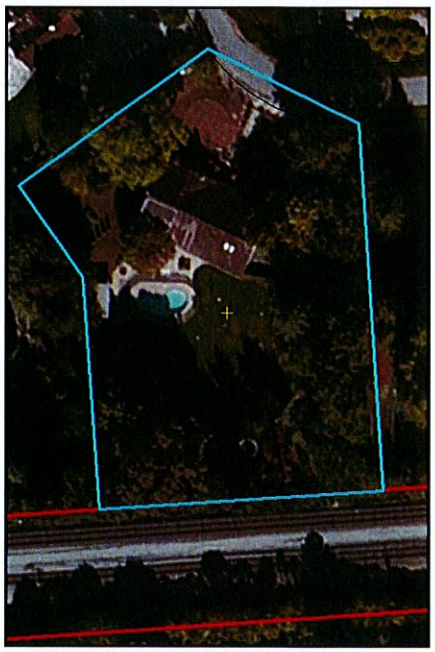
Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-11

Basic Information
Site ID#: 133 Replacing tree#: 3398
Date: ____ Jurisdiction: Atherton
Milepost: 27.8 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 1 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __



Basic Information
Site ID#: 134 Replacing tree#: 3381, 3387
Date: ____ Jurisdiction: Atherton
Milepost: 27.9 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 2 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

Tree Replacement Plan

Caltrain Peninsula Corridor Electrification Project

Atherton, CA
Potential Planting Sites
Exhibit A-12

Basic Information
Site ID#: 135 Replacing tree#: 3359, 3362, 3371, 3374, 3379
Date: ____ Jurisdiction: Atherton
Milepost: 27.9 Planting Function: __
Placement: Private Distance from ESZ: __

Site Conditions
Soil Surface: __ Slope: __
Aspect: __ Exposure: __
Adjacent property: __
Screening needed: __ If yes, height:__
Size: length: __ width: __
Overhead utilities: __ Vertical clearance: __

Planting Conditions
Potential # trees: 5 Access for crew: __
Adjacent Vegetation:_
Availability of water: __
Access for water truck: __
Irrigation method: __
Maintenance concerns: __
Comments: __

No Photo

ATTACHMENT 4

Property Owner Notification Memo

CalMod

PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

Date: **Month Day, 2017**

To: **[PROPERTY OWNER]**

From: **Caltrain Modernization Program**

Re: **Peninsula Corridor Electrification Project: Proposed Tree Replacement for the Property at [ADD ADDRESS, APN XXX]**

The purpose of this letter is to inform you about the potential tree impacts and tree replacement related to the Joint Powers Board's (JPB) Peninsula Corridor Electrification Project (Project) in relation to your property. The Project[1] will electrify the Caltrain corridor between San Francisco and San Jose to allow Caltrain to operate electrified trains for commuter rail service. Electrification will upgrade the performance, operating efficiency, capacity, safety and reliability of Caltrain's commuter rail service by allowing Caltrain to operate quieter, cleaner, more frequent and/or faster train service to more riders. Increased capacity and improved service will help Caltrain meet increasing ridership demand and alleviate local and regional traffic congestion.

In 2015, a Final Environmental Impact Report[2] (EIR) was prepared and certified pursuant to the requirements of the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts of the Project. The Project includes installation of new electrification infrastructure (i.e., an Overhead Contact System [OCS]) consisting of poles and wires to carry the electricity used by electrified trains. Figure 1 in Attachment 1 shows the OCS for a typical situation along the Caltrain ROW using side poles. Vegetation clearance within an electrical safety zone (ESZ) is required 10 feet from the OCS infrastructure to provide for electrical safety around the energized portions of the OCS. There cannot be any vegetation within the ESZ. It is important to note that, as design has progressed, the ESZ has been further refined and the total number of trees impacted has been reduced substantially today overall (initial estimates were that up to 2,200 trees overall would be removed corridor-wide whereas current estimated are around 600 trees would be removed).

According to the current analysis, at the preliminary design phase, the JPB will need to prune or remove trees located on your property to comply with the electrical safety requirements.

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[1] Additional information about the Project is available on the web at www.caltrain.com/electrification.
[2] The FEIR may be reviewed online at http://www.caltrain.com/projectsplans/CaltrainModernization/Documents.html

[Information on ROW acquisition]

[You have already been contacted by JPB regarding right-of-way (ROW) acquisition [ESZ easement] on your property. The required tree removal [tree pruning] will occur within the acquired [easement] area.]

OR

[No tree removal or pruning would occur on your property. However, tree pruning may be required from the JPB ROW on trees with trunks that may be within your property.]

According to our preliminary analysis, there are [XX spp. trees that require removal and/or XX pruning] from your property to establish the ESZ [OR XX spp. trees that require removal in the JPB ROW adjacent to your property OR XX spp. trees that require pruning from the JPB ROW for which the trunk of the trees may be on your property]. Figure 2 depicts various scenarios of how vegetation clearance will be achieved based on the location of a tree relative to the ROW or ESZ lines. Attachment 2 depicts the location of these trees on your property relative to the ESZ and Caltrain ROW. Pursuant to the requirements of the Final EIR, the JPB is responsible for mitigating tree impacts by replacing trees at [Insert Ratio based on jurisdiction, or standard ratio for protected/non-protected trees]. Therefore, the JPB proposes to plant [number of trees] replacement trees to compensate for those removed from or pruned on your property in excess of 25% [OR removed from the JPB ROW for which the JPB would be willing to plant the replacement tree on your property].

The JPB is providing property owners with an opportunity to select one of two options for the location of their replacement trees.

1) With the property owner's permission, tree replacement and maintenance on the subject property for the first 5 years will be the responsibility of the JPB via the Design Build Contractor. The JPB / Design Build Contractor will be responsible for providing maintenance and annual monitoring of all replaced trees to assure their survival and or remedial replacement in case they do not survive. The JPB/Design Build Contractor will provide no less than 14 days advance notice prior to planned tree replacement and maintenance activities. Maintenance activities may continue up to 5 years (if planting is determined to be successful) or more (if initial planting is determined to not be successful).

2) The property owner would not like tree replacement on the subject property. The location of tree replacement for trees affected by the Project on the subject property will be determined by the JPB at its sole discretion.

Please complete and return the attached hard copy form to advise the JPB of your preferred planting approach (including preference of the tree species) no later than [DATE of LETTER + 60 DAYS]. If you do not respond by the requested deadline, a replacement tree will be planted within JPB ROW or public property.

Please see Attachment 3 for a list of replacement tree species options with pictures and tree characteristics.

Timing of tree removal and pruning is coordinated with the construction schedule. For your property, tree removal and pruning is anticipated to commence Spring/Summer 2017. Replacement tree planting is anticipated to occur when OCS construction is complete.

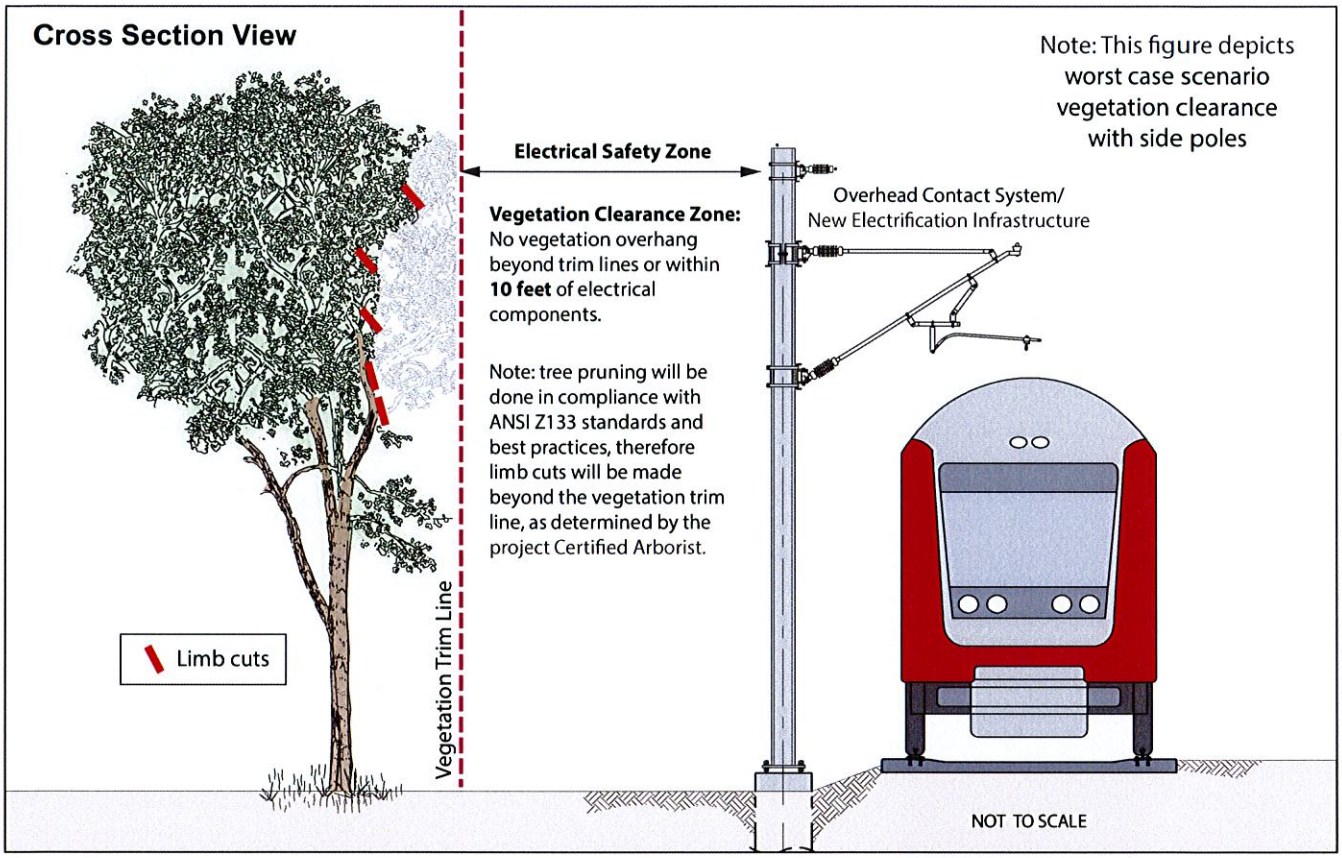
Questions may be submitted by email to trees@caltrain.com with the subject line "PCEP Tree Replacement." Alternatively, comments may be submitted by mail to:

Peninsula Corridor Joint Powers Board (Caltrain)
Attn: Stacy Cocke, Principal Planner
2121 S. El Camino Real, Suite 300
San Mateo, CA 94403

Phone: 650-508-6207
Email: trees@caltrain.com

Attachments

1. Electric Safety Zone Figures
2. Property Specific Tree Impact Mapping
3. Tree Replacement Survey



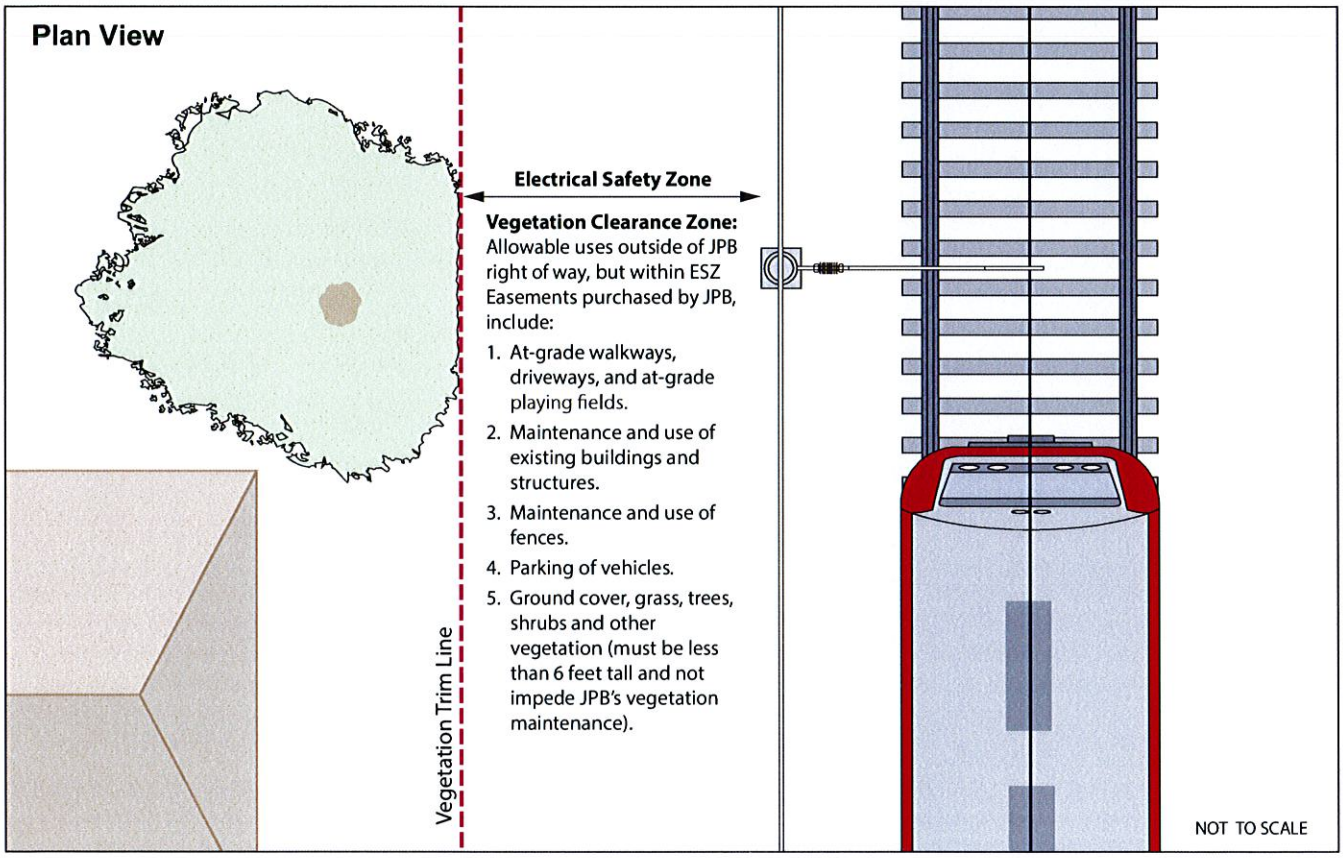
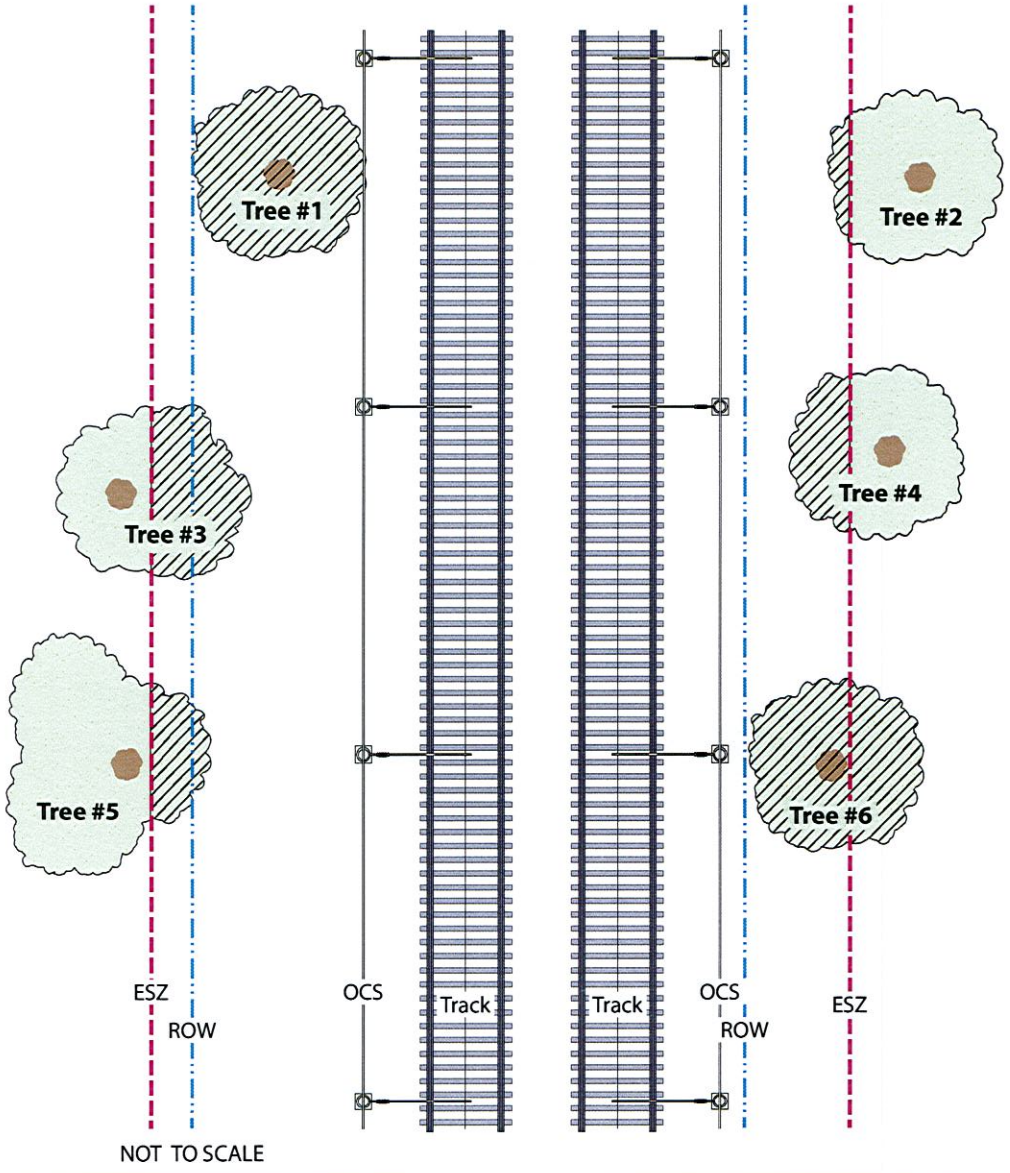


Figure 1
Vegetation Clearance in Electrical Safety Zone
Peninsula Corridor Electrification Project



Tree #1: Rooted inside Caltrain ROW and ESZ. Remove tree from Caltrain ROW.[a]

Tree #2: Rooted outside Caltrain ROW with less than 25% of canopy in ESZ. Trim canopy from public/private property.[b]

Tree #3: Rooted outside Caltrain ROW with more than 25% canopy extending into ESZ and ROW. Trim canopy from Caltrain ROW.[a]

Tree #4: Rooted outside Caltrain ROW with more than 25% of canopy in ESZ. Trim canopy from public/private property.[a, b]

Tree #5: Rooted outside Caltrain ROW with less than 25% canopy extending into ESZ and ROW. Trim canopy from Caltrain ROW.

Tree #6: Rooted outside Caltrain ROW and inside ESZ. Remove tree from public/private property.[a, b]

Vegetation Clearance Zone/ Electrical Safety Zone (ESZ)

Existing and New Caltrain Right of Way (ROW)

Overhead Contact System (OCS)/ New Electrification Infrastructure

Tree

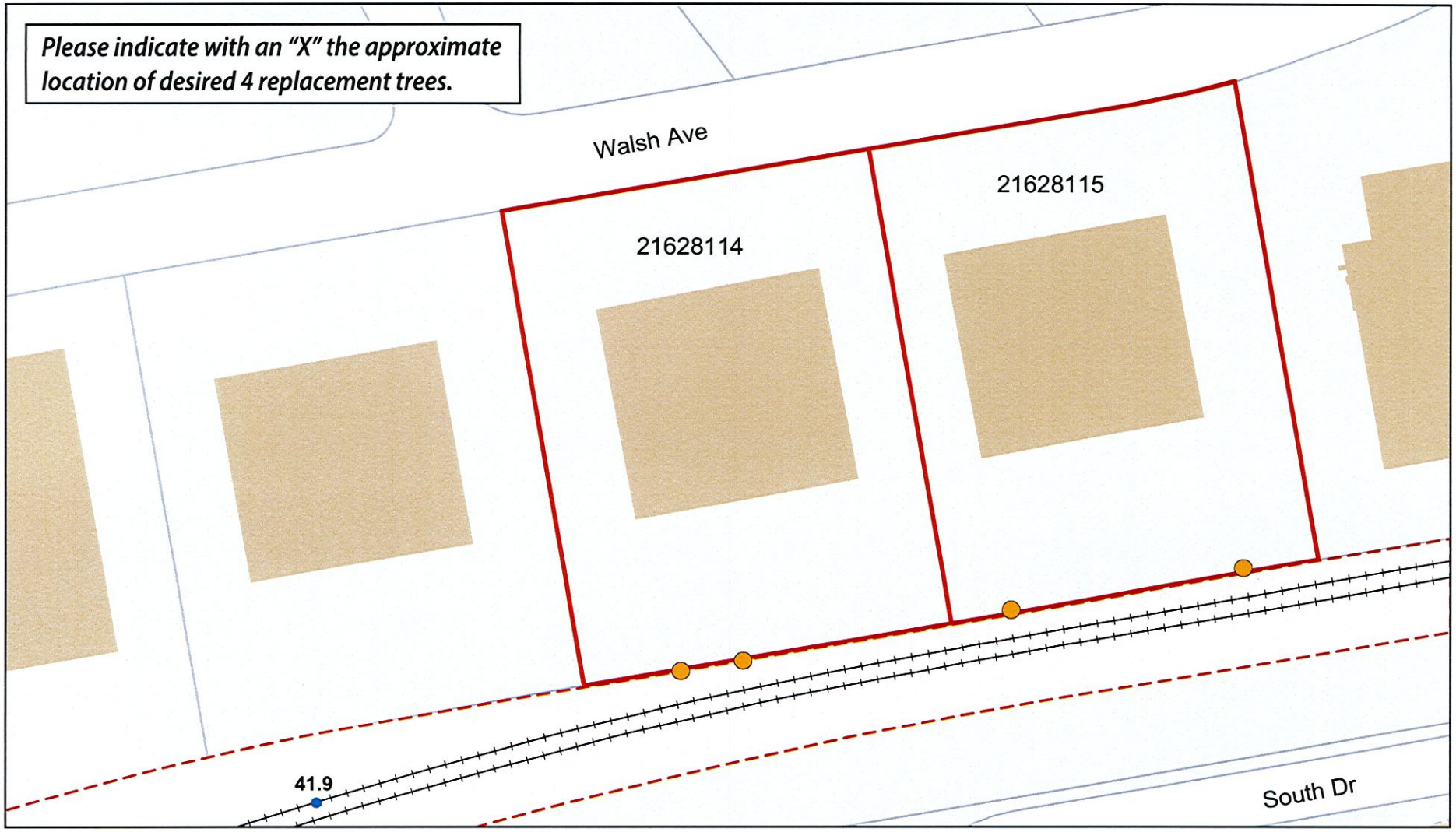
Trimmed or removed portion of tree

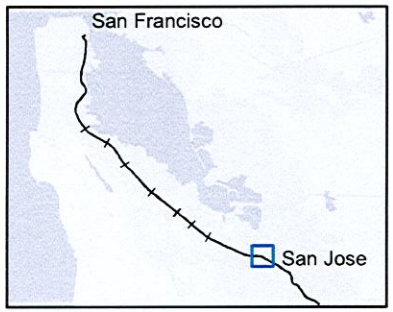
[a] A replacement tree will be planted.

[b] Access to tree from private/public property will be required.

Figure 2
Vegetation Clearance Scenarios
Peninsula Corridor Electrification Project

EXAMPLE MAP





Tree Impacts

- Prune 25% or more (from JPB ROW)
- Prune 25% or more (from private property)
- Remove

- JPB Right of Way
- Tracks
- Parcel

Notes:
1. Parcel boundaries and building areas are approximate, for visualization only.
2. Tree locations are approximate due to GPS error (discrepancy typically less than 5 feet).

PCEP Tree Impact Maps

Santa Clara
21628114 and 21628115
COLE OFCE Santa Clara Walsh C

N

Not to Scale

CalMod

PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

TREE REPLACEMENT SURVEY

The Peninsula Corridor Joint Powers Board (JPB) is constructing the Peninsula Corridor Electrification Project[1] (Project), which will electrify the Caltrain corridor between San Francisco and San Jose to allow Caltrain to operate electrified trains for commuter rail service. Preliminary analysis, at the 35% design phase, shows that there is a need to prune or remove trees located on your property to establish an electrical safety zone (ESZ).

The Project includes installation of an Overhead Contact System (OCS) consisting of poles and wires to carry the electricity used by electrified trains. In addition to the placement of poles and wires, vegetation clearance within an ESZ is required 10 feet from the OCS infrastructure to provide for electrical safety around the energized portions of the OCS. There cannot be any vegetation within the ESZ.

The purpose of this survey is for you, the property owner, to select your preferred approach for tree replacement and maintenance on your property.

Please complete and return the following survey using the pre-addressed envelope.

[1] Additional information about the Project is available on the web at www.caltrain.com/electrification.

1. Property Owner Information

Name:	
Address:	
Address 2:	
City, State, Zip:	
Email Address:	
Phone Number:	

2. Replacement Method (Pick One)

☐ I provide permission for tree replacement and maintenance on the subject property. Replacement and maintenance will be the responsibility of the JPB via the Design Build Contractor. The JPB / Design Build Contractor will be responsible for providing maintenance and annual monitoring of all replaced trees to assure their survival and or remedial replacement in case they do not survive. The JPB/Design Build Contractor shall provide no less than 14 days advance notice prior to planned tree replacement and maintenance activities. I recognize that maintenance activities may continue up to 5 years or more after initial tree planting.

☐ I do not want tree replacement on my property. Tree replacement for trees affected by the Project on my property can be determined by the JPB at its sole discretion.

3. Tree Species Selection (see attached flyer for tree information)

☐ Coast live oak (*Quercus agrifolia)*	☐ Marina madrone (*Arbutus* 'Marina')	☐ Canary Island pine (*Pinus canariensis)*
☐ Golden rain tree (*Koelreuteria paniculata*)	☐ Orange (*Citrus sinensis*)	

4. Consent

I, _____, the owner of the property at the address listed above, agree to the replacement option (including tree species) selected above.

Signature:		**Date:**	

Coast live oak —*Quercus agrifolia*

Size - Large (20-70' tall)
Water Use - Very low
Native – Yes
Screening Height - Low to high
Evergreen
Notes: California native; provides dense shade year round; intolerant of irrigated landscapes; very drought tolerant.

Marina madrone — *Arbutus* 'Marina'

Size - Medium (30-40' tall)
Water Use - Low
Native - No
Screening Height – Low
Evergreen
Notes: Provides year-round color with flowers, foliage, and bark; adapted to Mediterranean climate; slow growing; fruit litter can be a nuisance.

Golden rain tree — *Koelreuteria paniculata*

Size - Medium (20-35' tall)
Water Use - Low
Native - No
Screening Height – High
Deciduous
Notes: Loses leaves in winter; leaves turn yellow in fall and produces colorful fruit; provides soft shade.

Orange — *Citrus sinensis*

Size - Small to medium (10-30' tall)
Water Use - Moderate
Native - No
Screening Height – Low
Evergreen
Notes: Edible fruit; requires good drainage and regular maintenance (e.g., irrigation, fertilization, pruning, fruit harvest); susceptible to pests and diseases.

Canary Island Pine - *Pinus canariensis*

Size - Large (50-80' tall)
Water Use - Low
Native - No
Screening Height - High
Evergreen
Notes: Tall conifer adapted to Mediterranean climate; sheds some needle and cone litter.