Appendix A

Map of Proposed Route

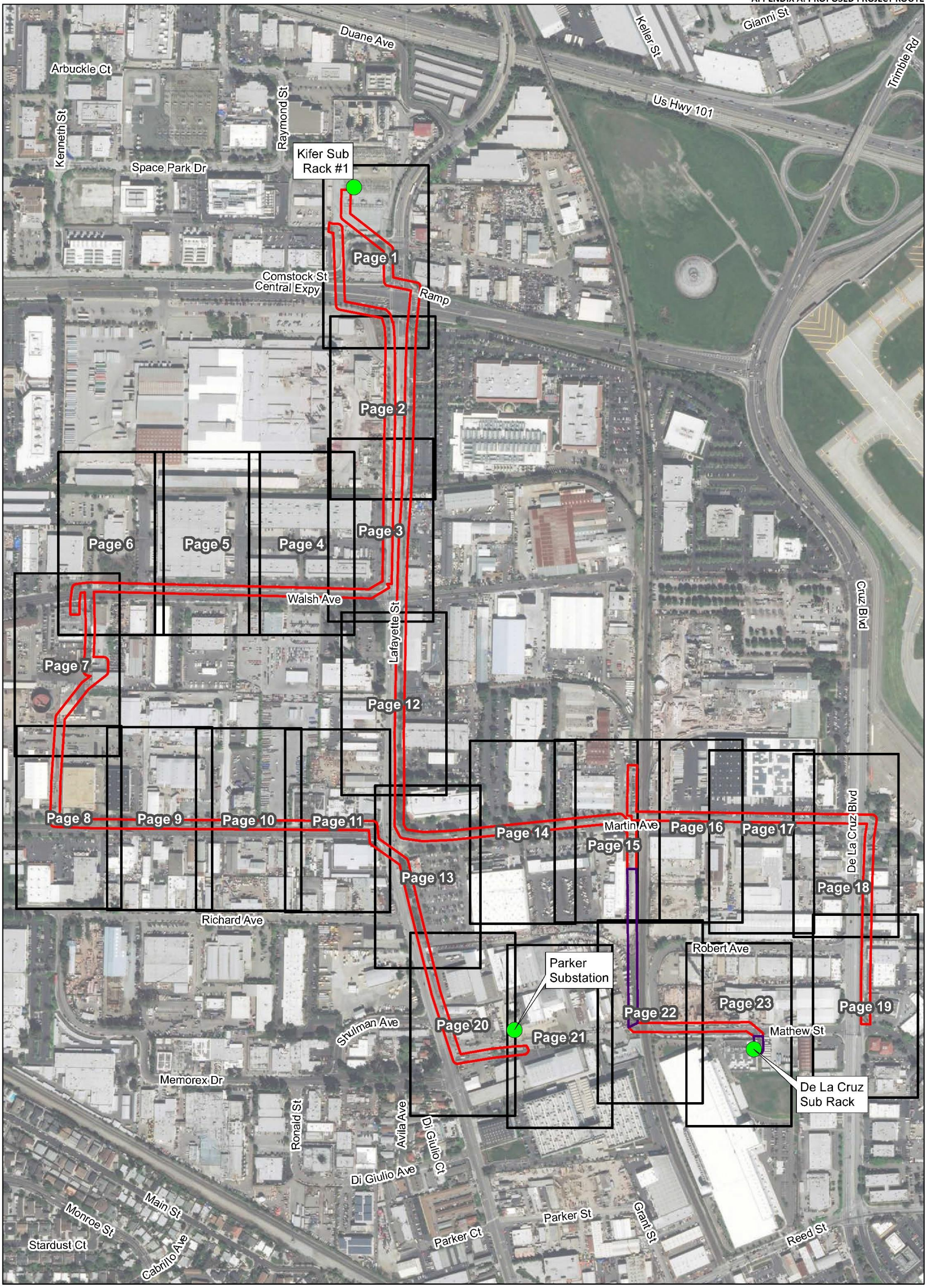
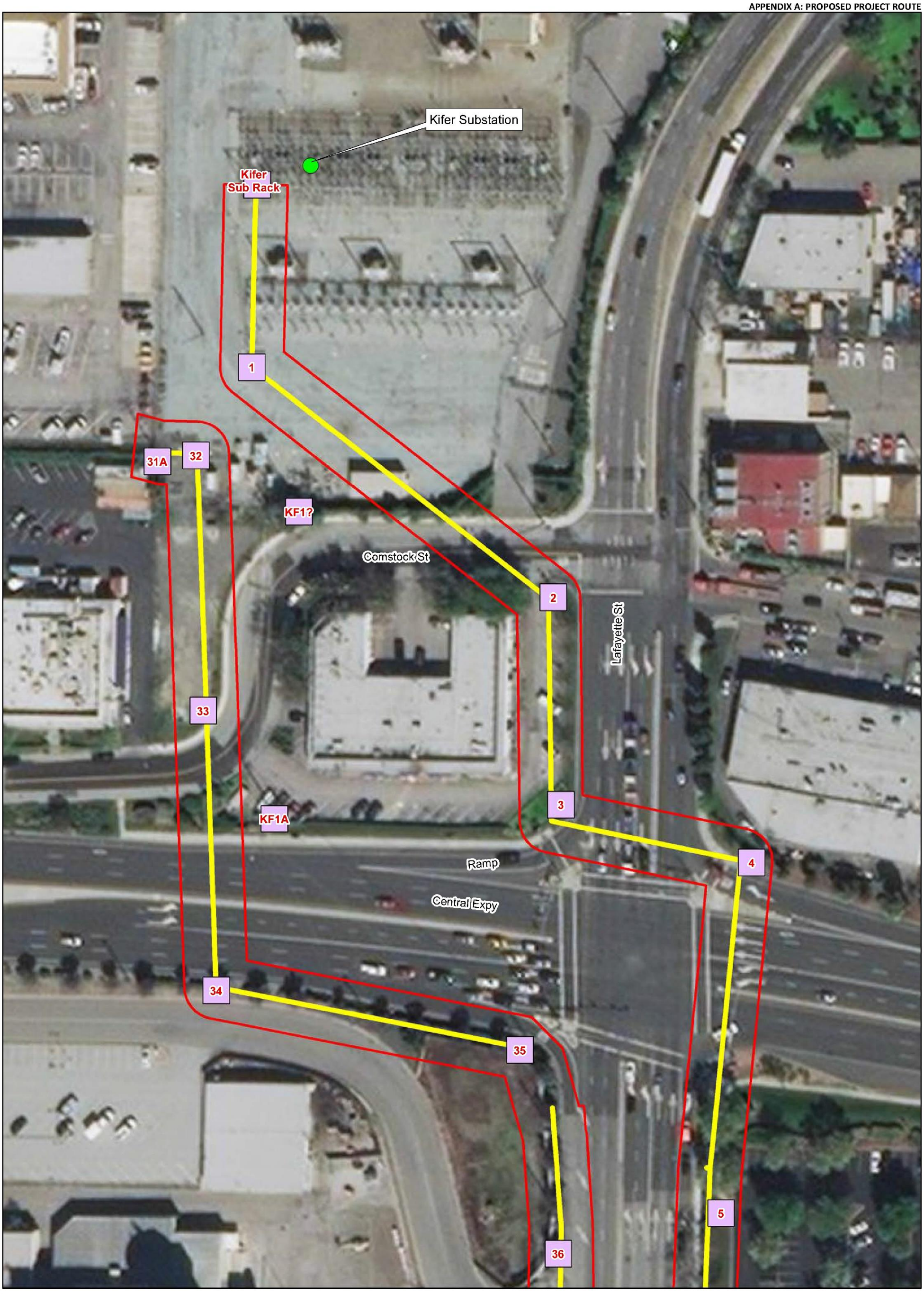
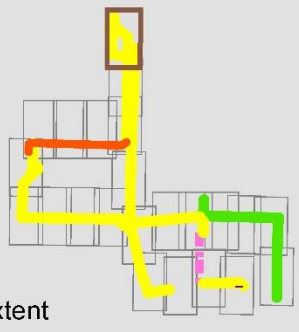


Figure A-1

Proposed Project Route

Overview Map





Substations
New Structure Location
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 1 of 23

New Structure Location
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 2 of 23

New Structure

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission

Proposed Project Area

Preferred Alignment

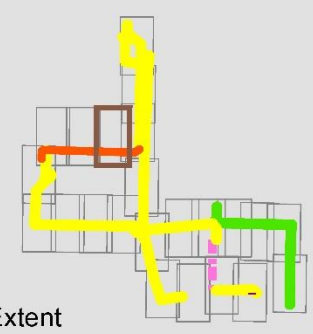
0 50 100 Feet

N

Figure A-1.

Proposed Project Route

Map 3 of 23



New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

Proposed Project Area

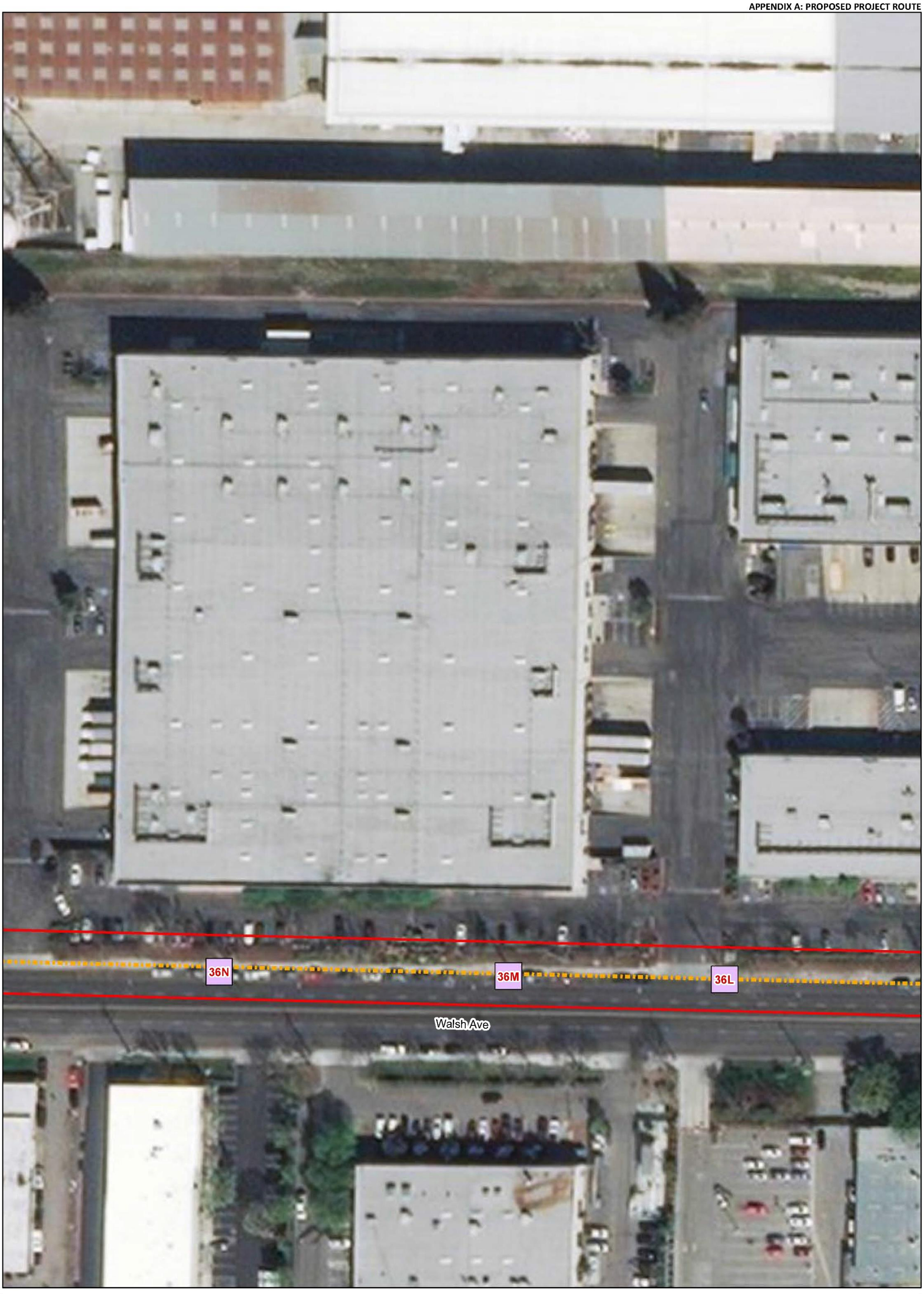
Preferred Alignment

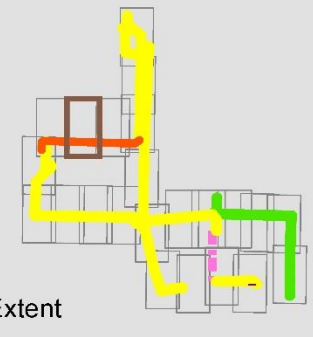
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 4 of 23





New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

Proposed Project Area

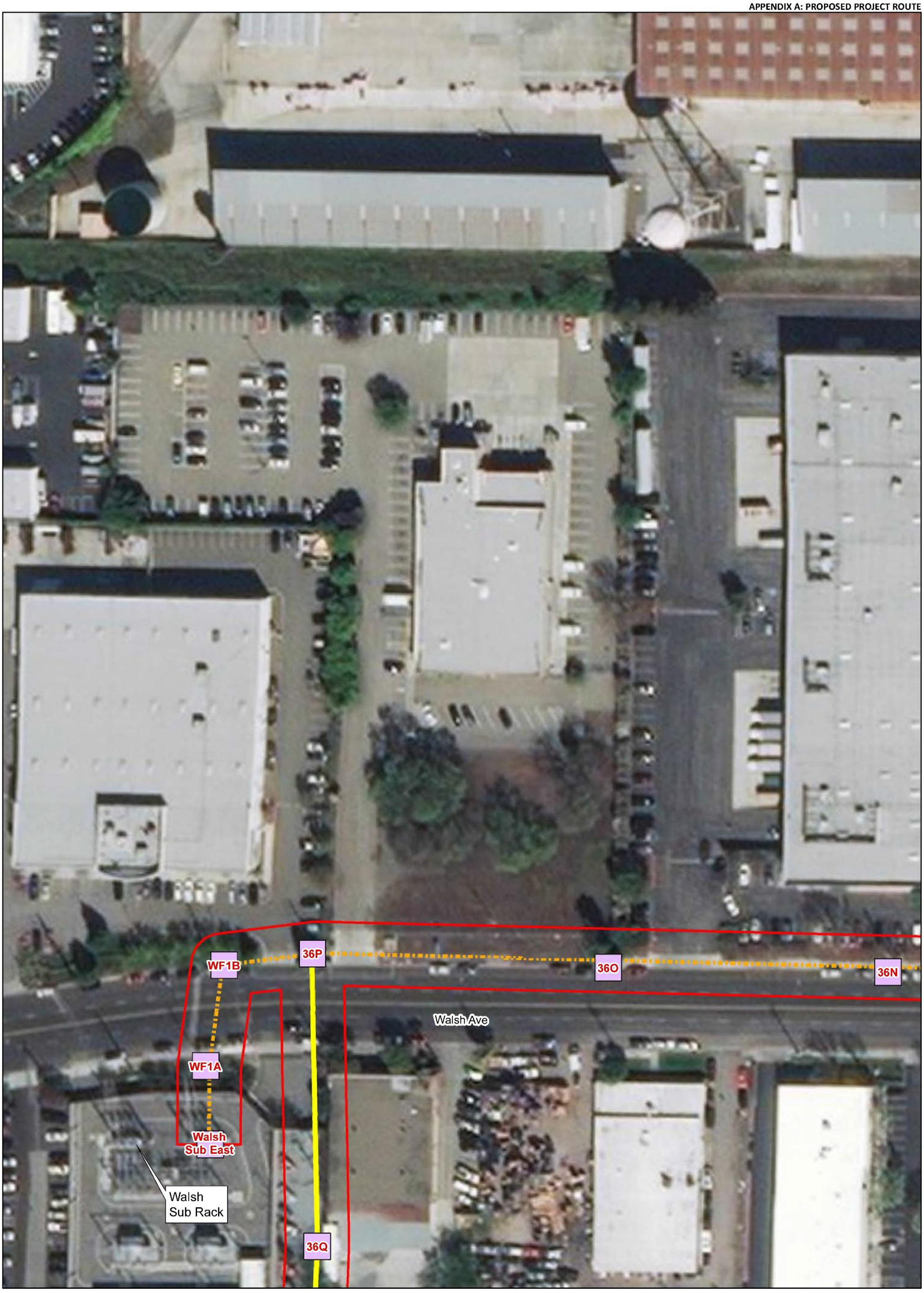
Preferred Alignment

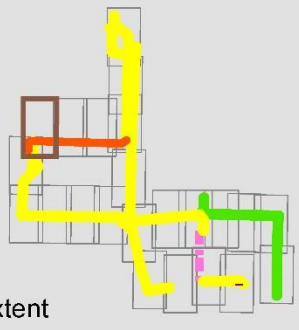
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 5 of 23





New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission Line

Proposed Project Area

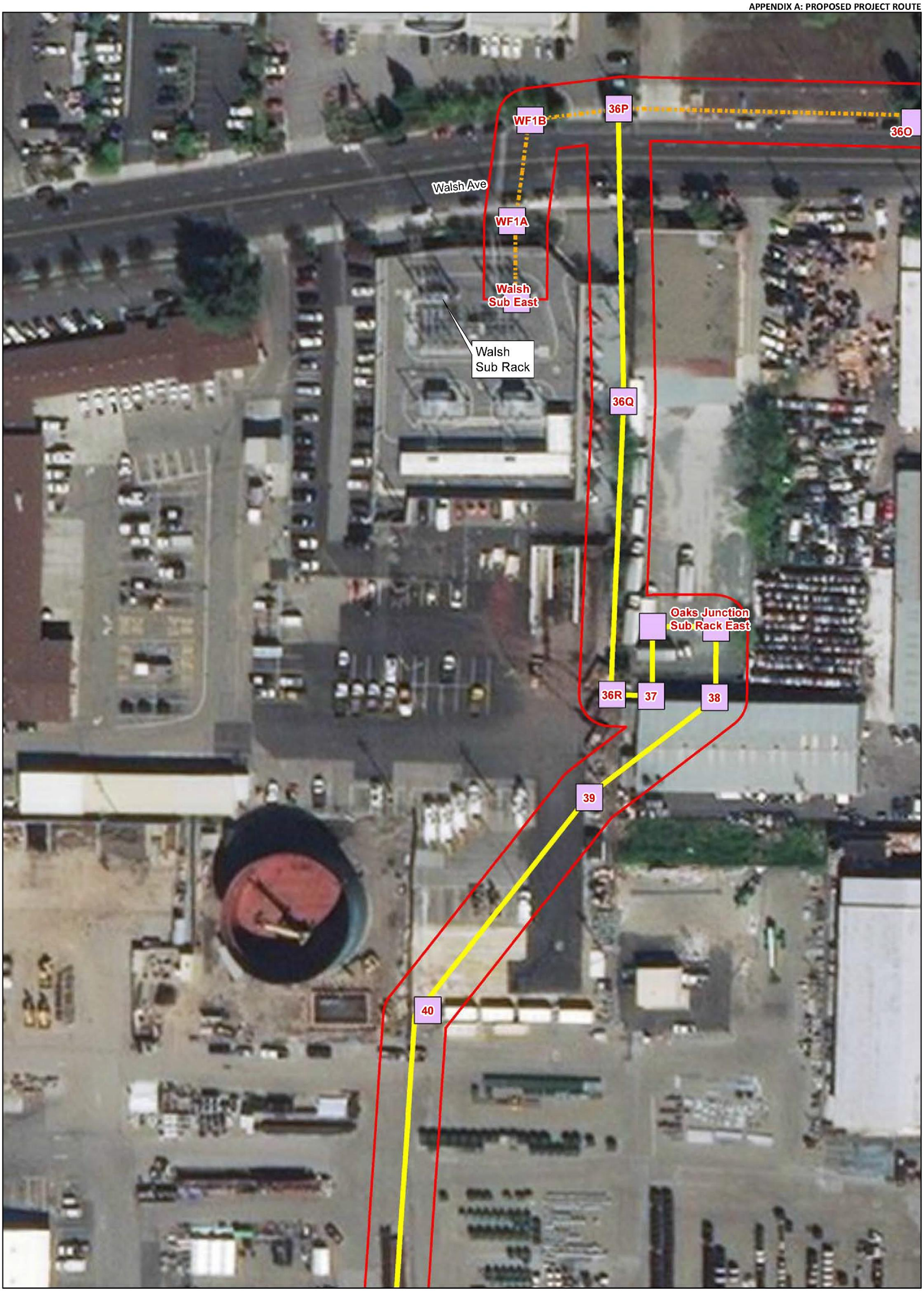
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 6 of 23



New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission Line

Proposed Project Area

Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 7 of 23

New Structure Location
New East Loop Overhead Transmission Line

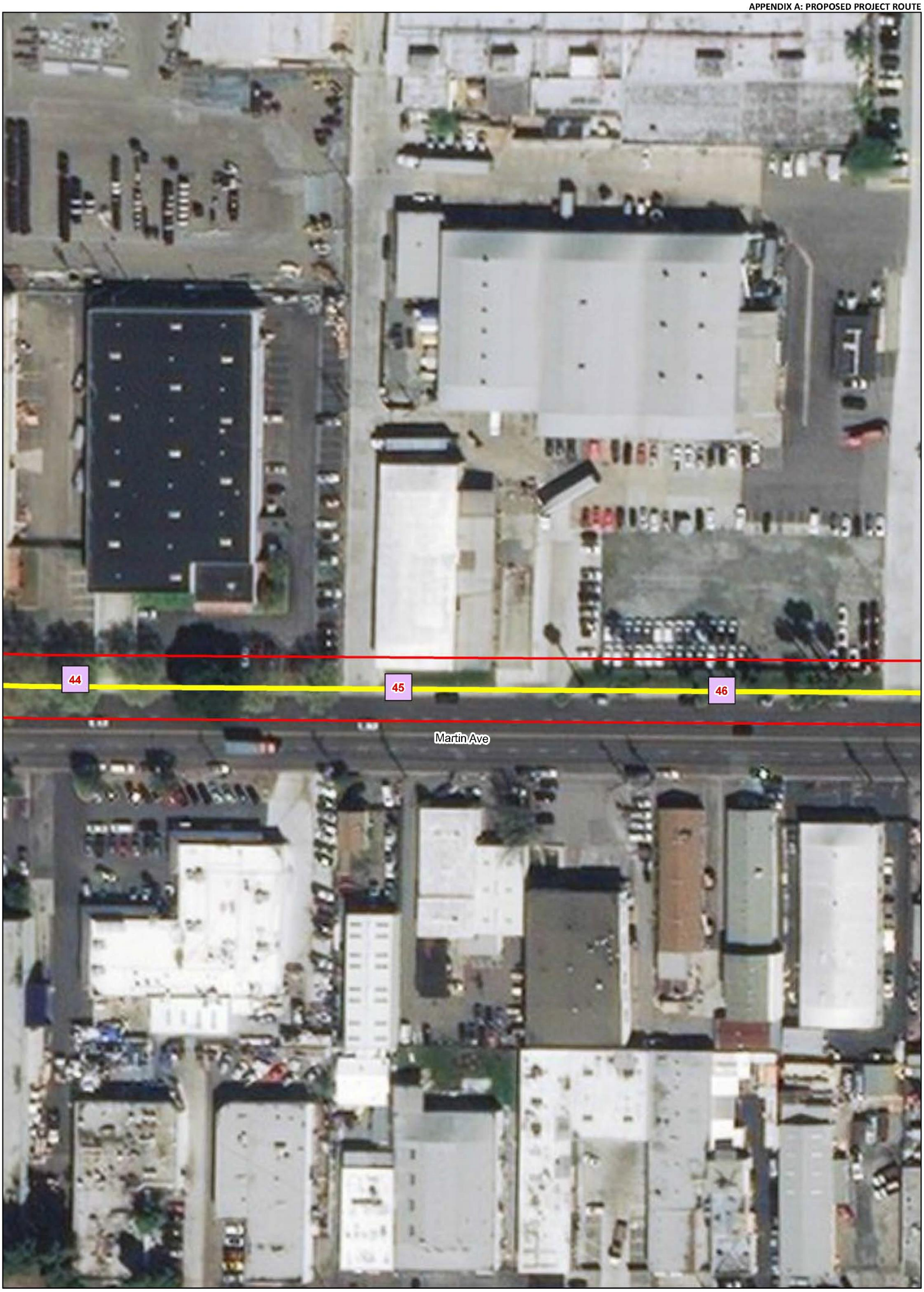
Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 8 of 23



New Structure Location
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 9 of 23

New Structure Location
New East Loop Overhead Transmission Line

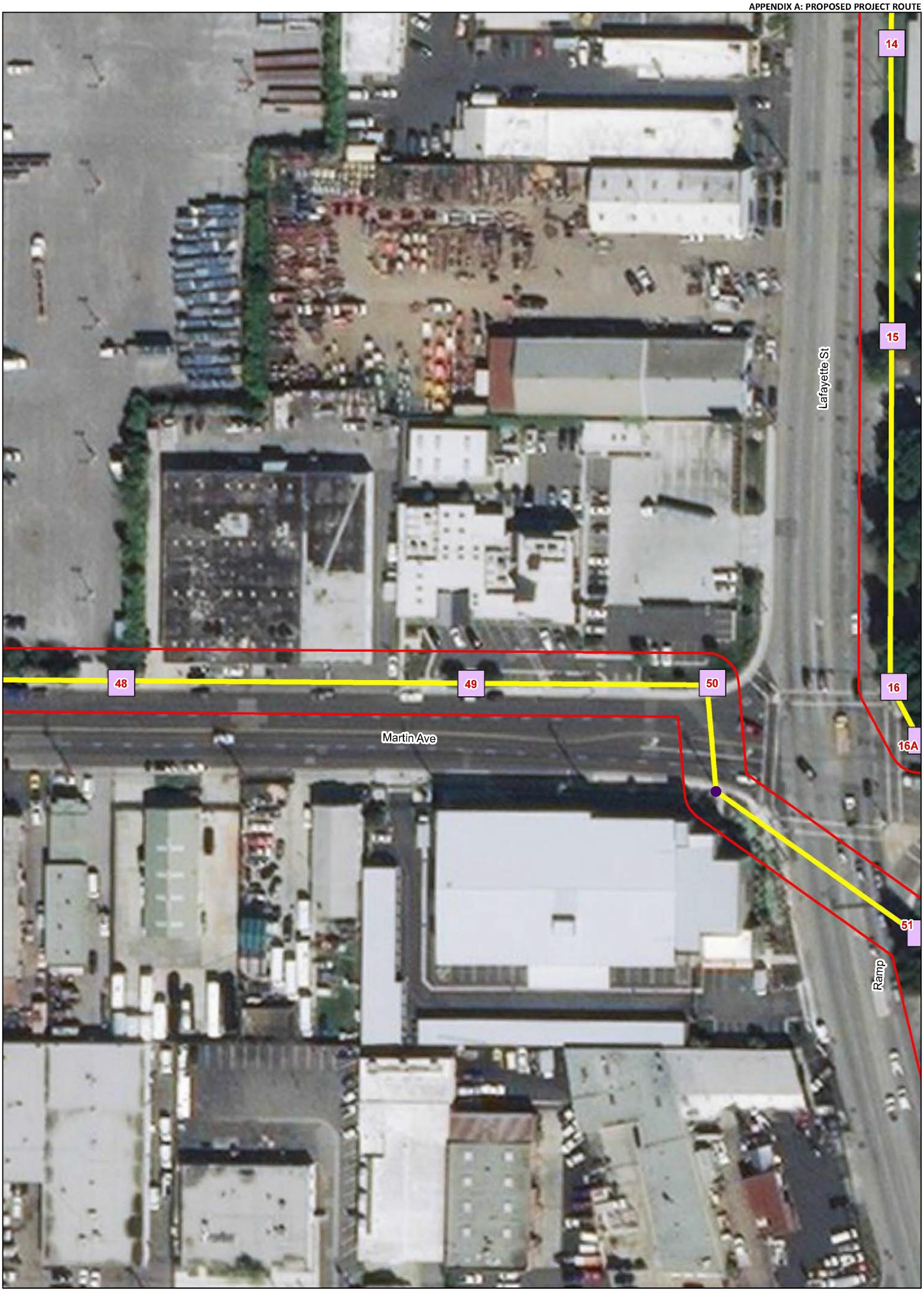
Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 10 of 23



New Structure Location
Existing Pole
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 11 of 23

New Structure Location
New East Loop Overhead Transmission Line

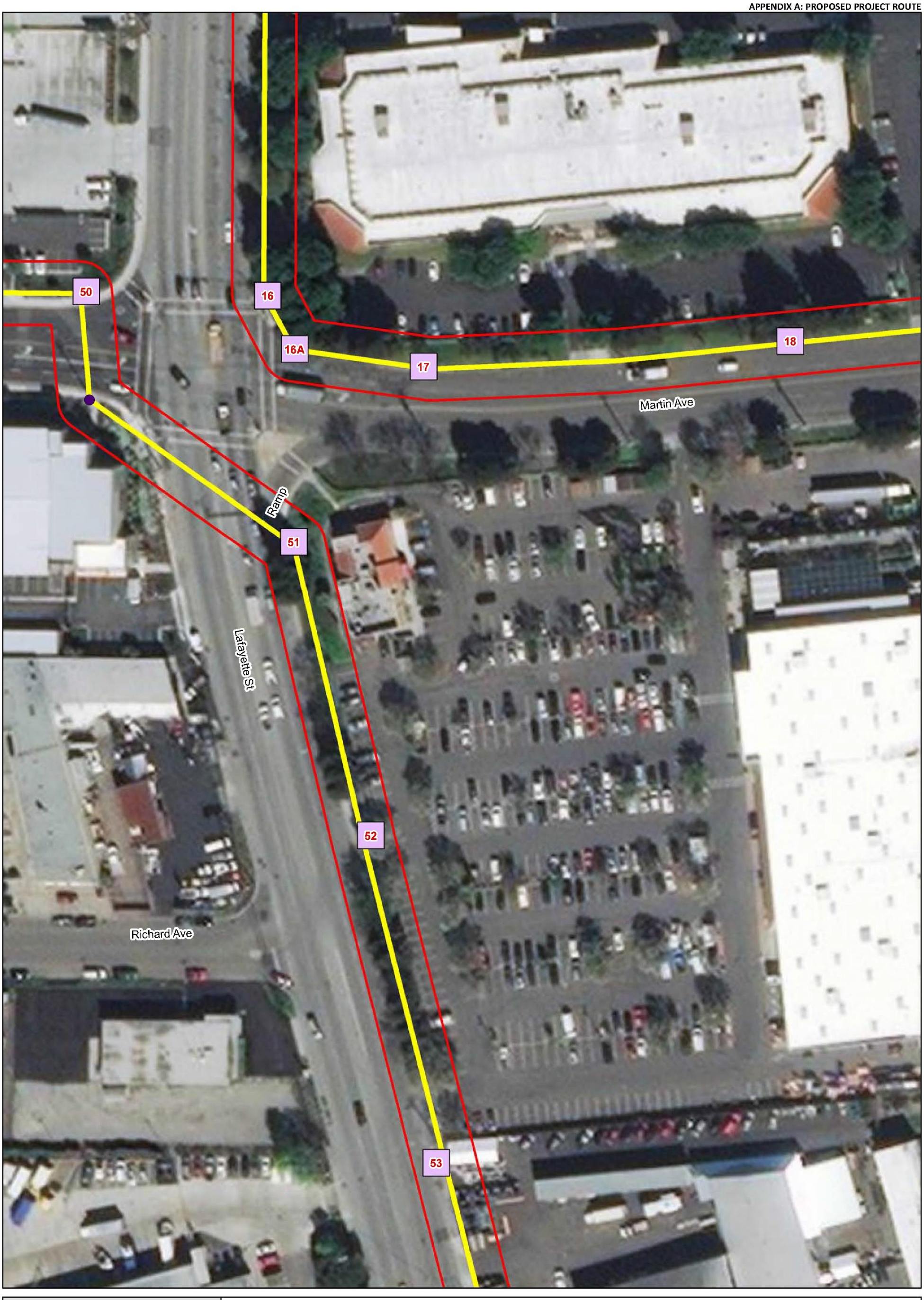
Proposed Project Area
Preferred Alignment

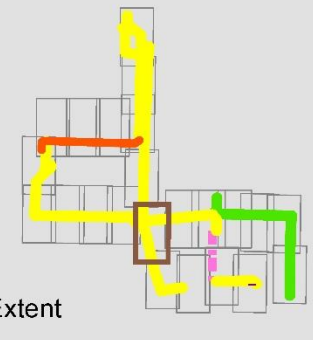
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 12 of 23





New Structure Location
Existing Pole
New East Loop Overhead Transmission Line

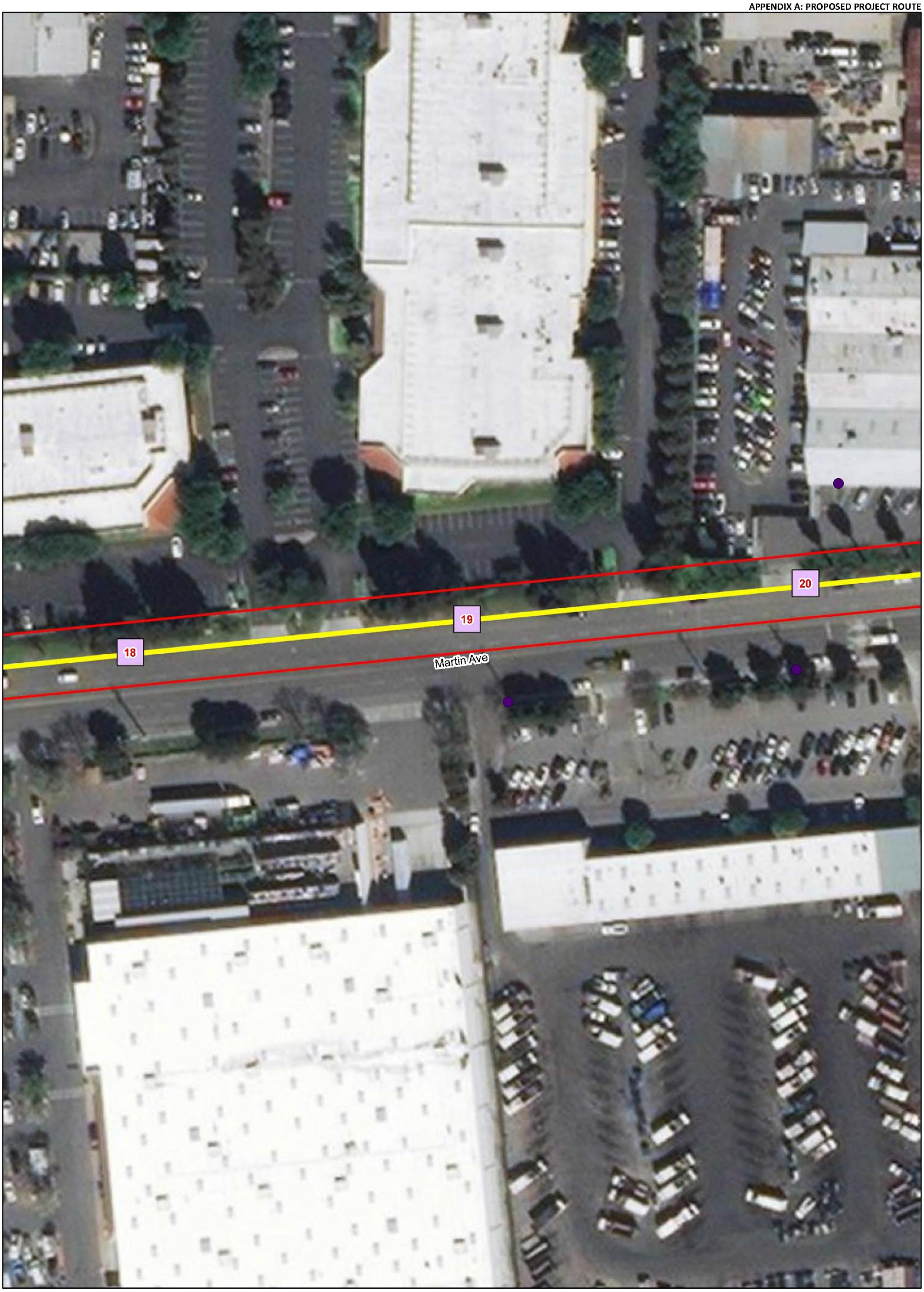
Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 13 of 23



New Structure Location
Existing Pole
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 14 of 23

New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
New South Loop Overhead Transmission Line
Existing 60 kV Transmission Line (to be reconductored)

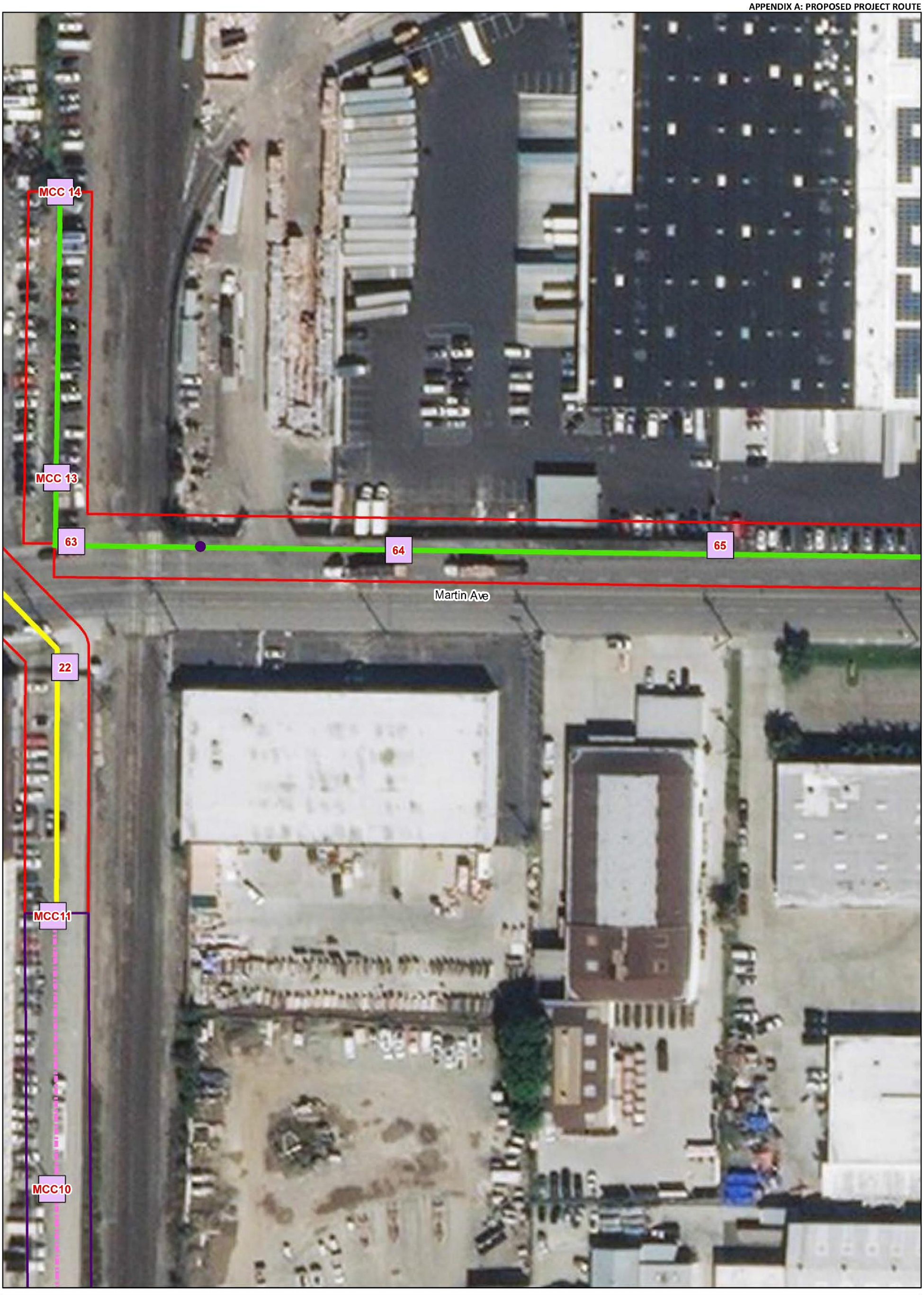
Proposed Project Area
Preferred Alignment
Existing 60 kV Transmission Line To Be Reconductored

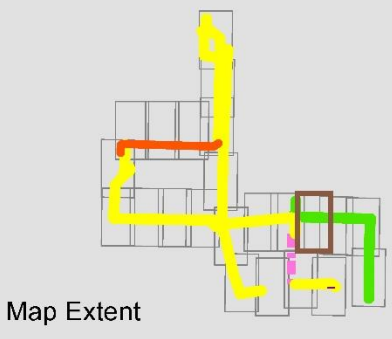
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 15 of 23





New Structure Location
Existing Pole
New East Loop Overhead Transmission
New South Loop Overhead Transmission
Existing 60 kV Transmission Line (to be reconductored)

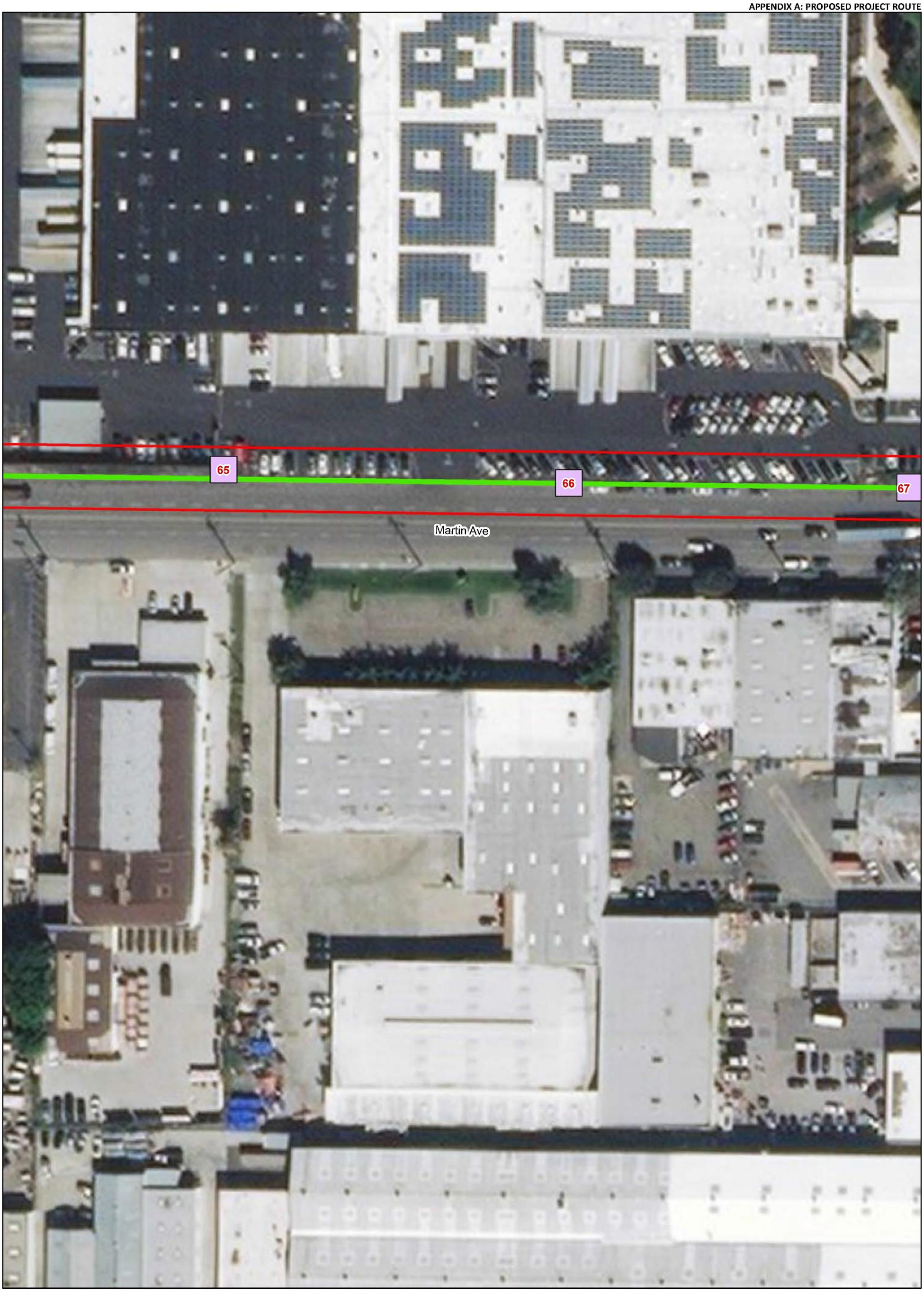
Proposed Project Area
Preferred Alignment
Existing 60 kV Transmission Line To Be Reconductored

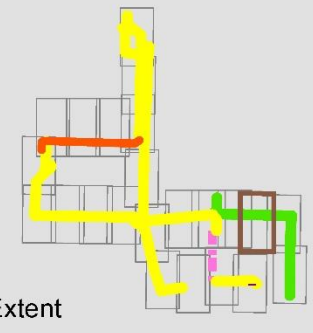
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 16 of 23





New Structure Location
New South Loop Overhead Transmission

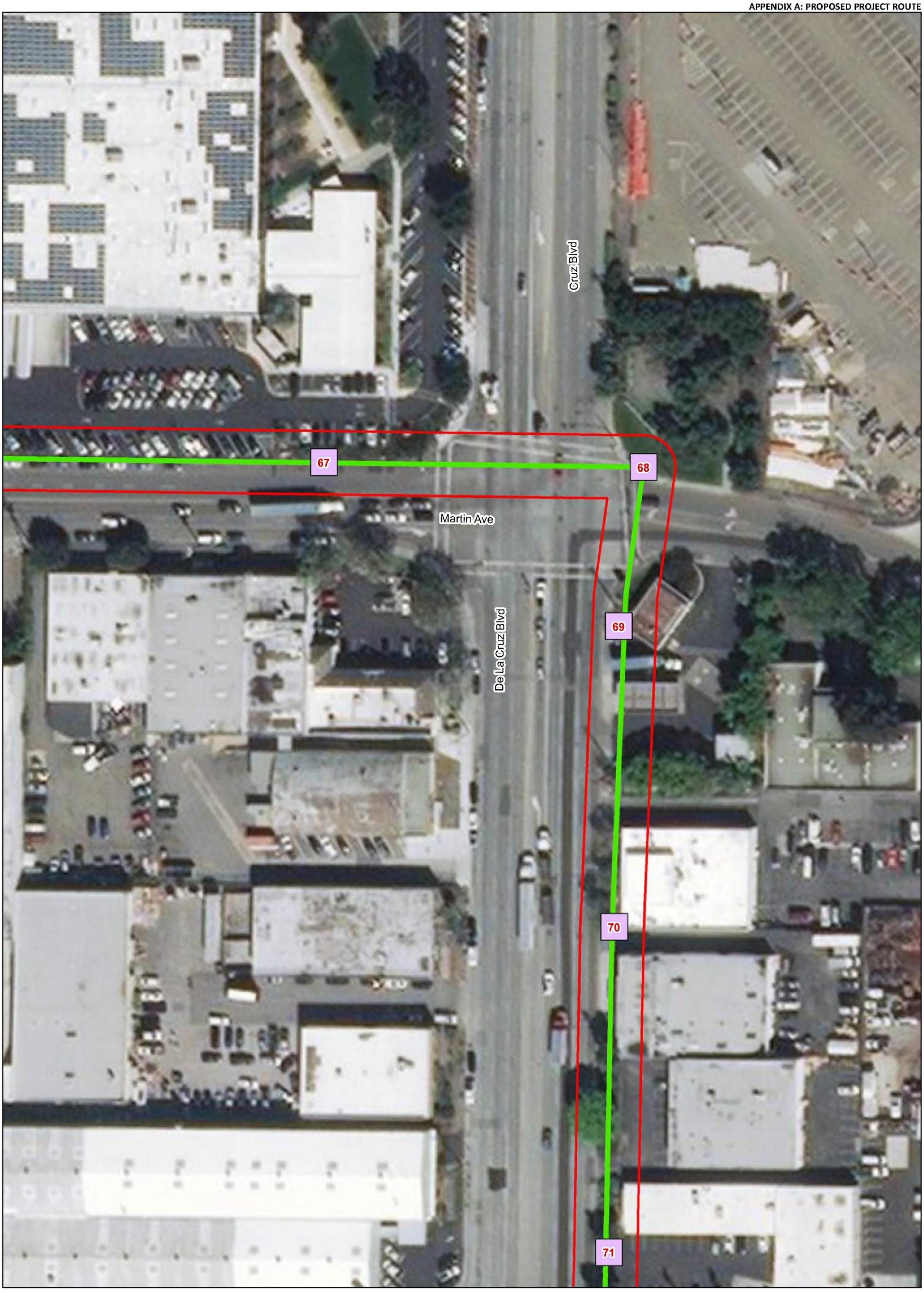
Proposed Project Area
Preferred Alignment

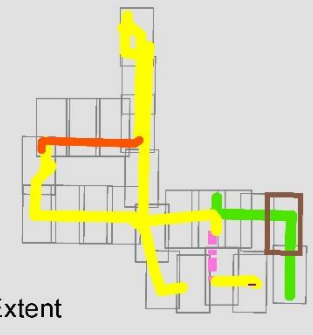
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 17 of 23





New Structure Location
New South Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 18 of 23

New Structure Location
New South Loop Overhead Transmission Line

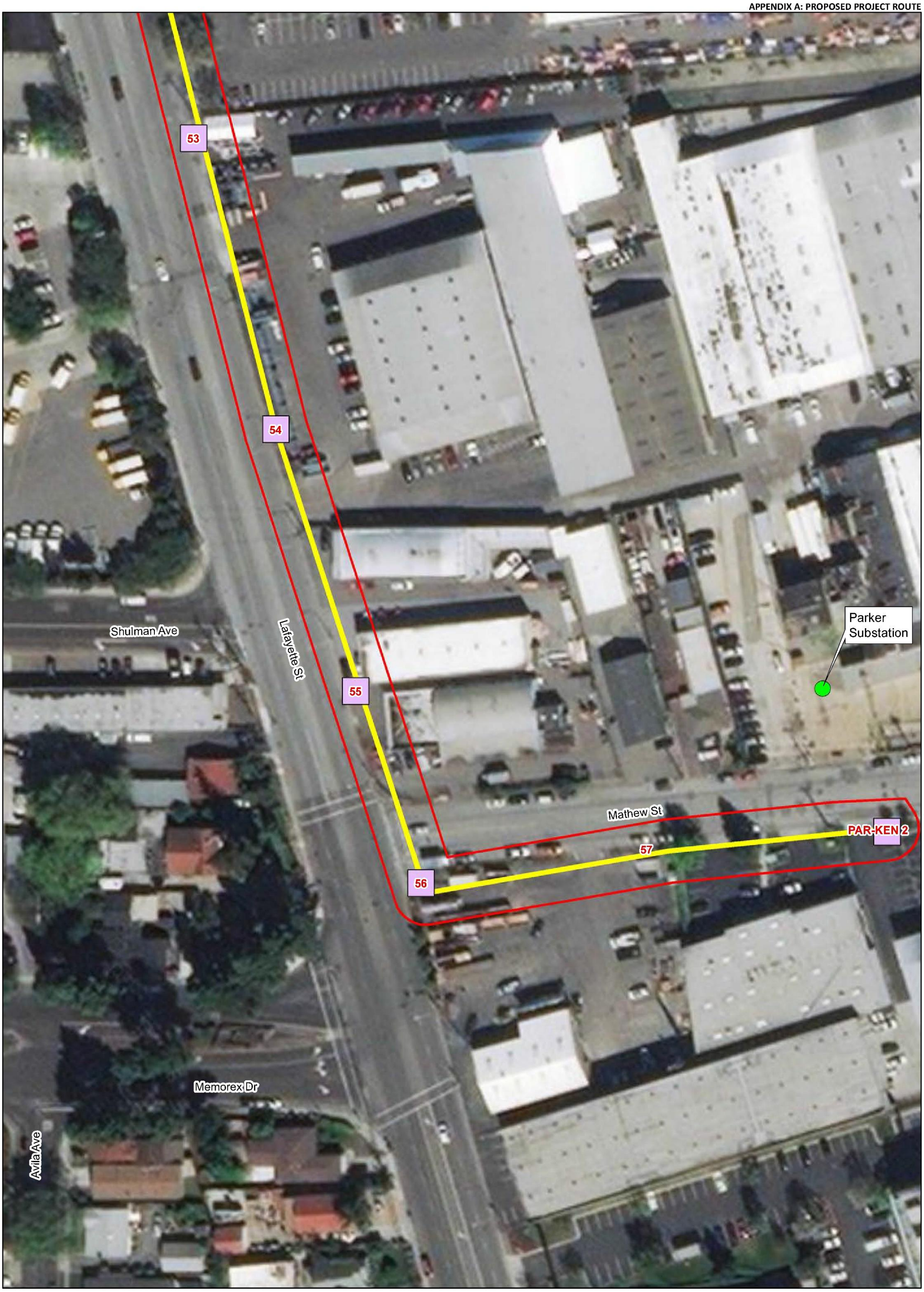
Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 19 of 23



Substations
New Structure Location
New East Loop Overhead Transmission Line

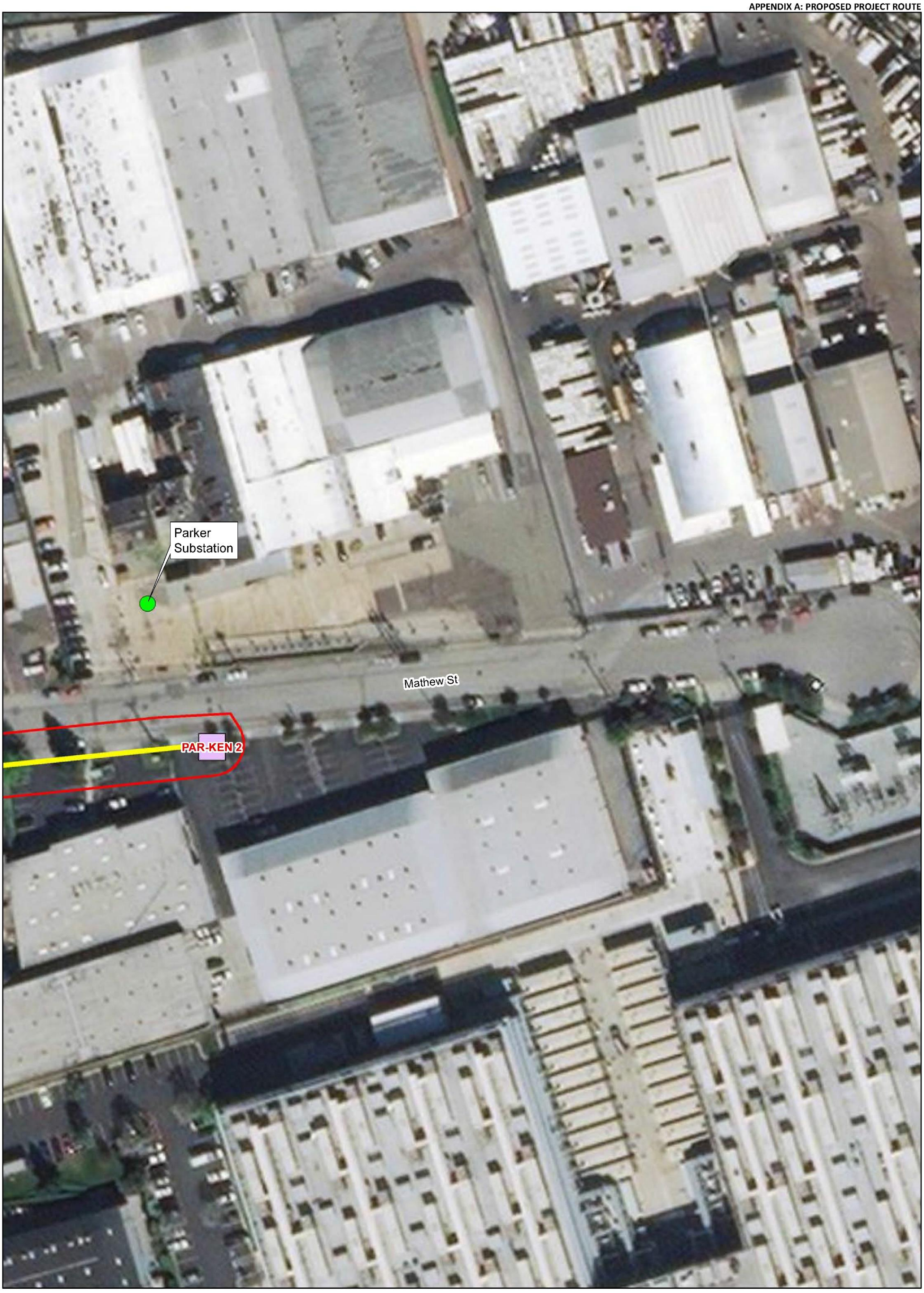
Proposed Project Area
Preferred Alignment

0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 20 of 23



Substations
New Structure Location
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment

0 50 100 Feet

N

Figure A-1.

Proposed Project Route

Map 21 of 23

New Structure Location
New East Loop Overhead Transmission
Existing 60 kV Transmission Line (to be reconductored)

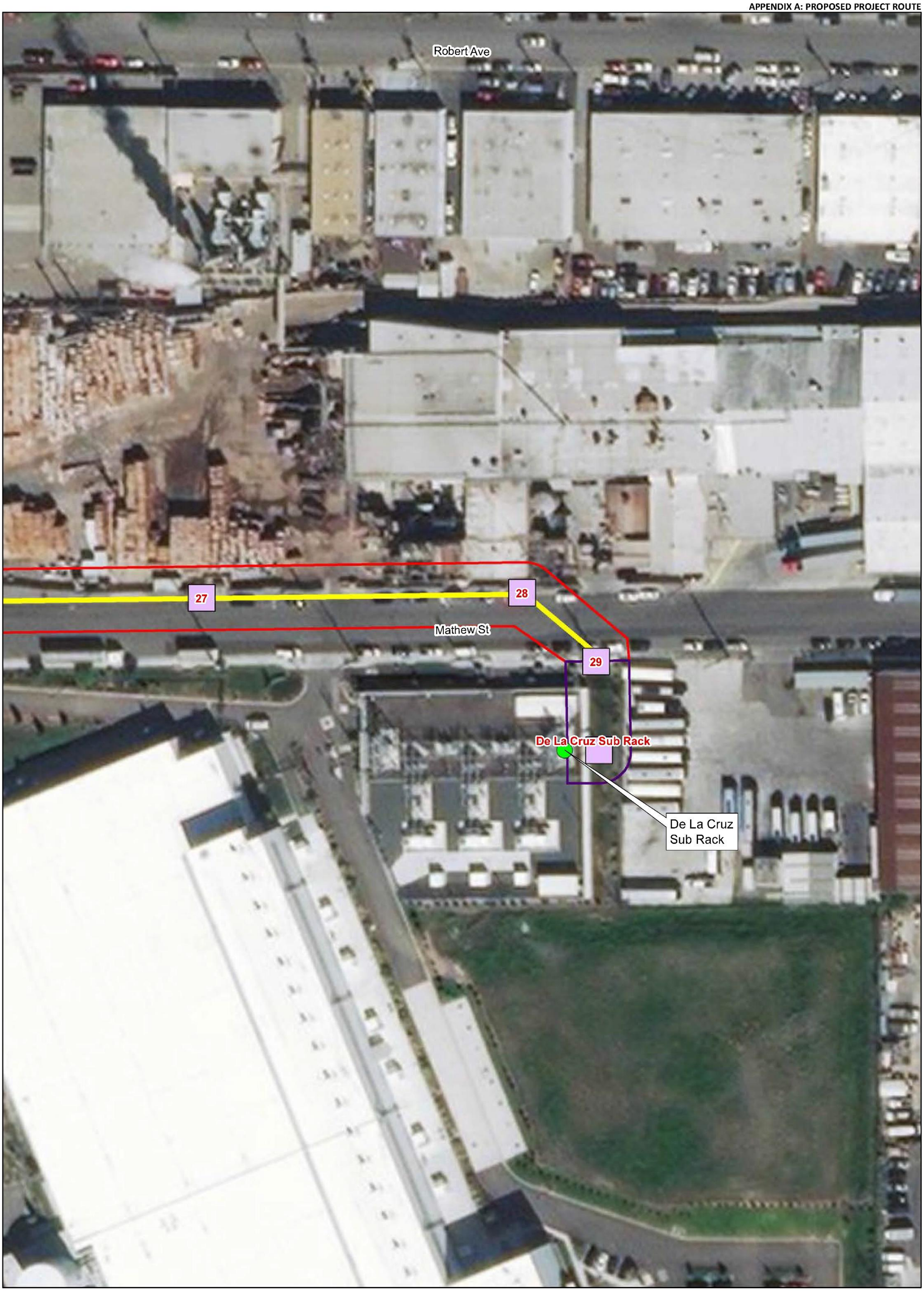
Proposed Project Area
Preferred Alignment
Existing 60 kV Transmission Line To Be Reconductored

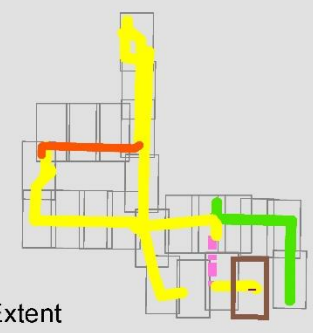
0 50 100 Feet

Figure A-1.

Proposed Project Route

Map 22 of 23





Substations
New Structure Location
New East Loop Overhead Transmission Line

Proposed Project Area
Preferred Alignment
Existing 60 kV Transmission Line To Be Reconductored

0 50 100 Feet

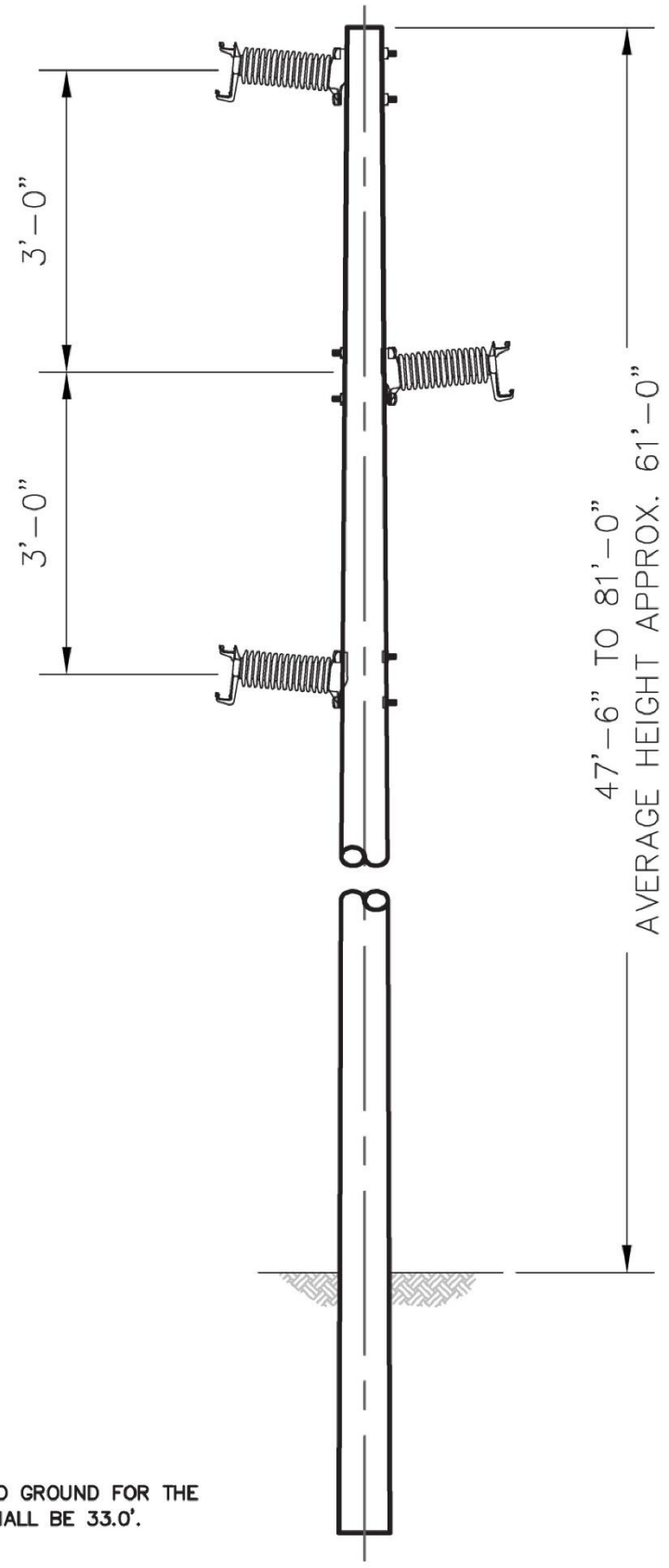
Figure A-1.

Proposed Project Route

Map 23 of 23

Appendix B

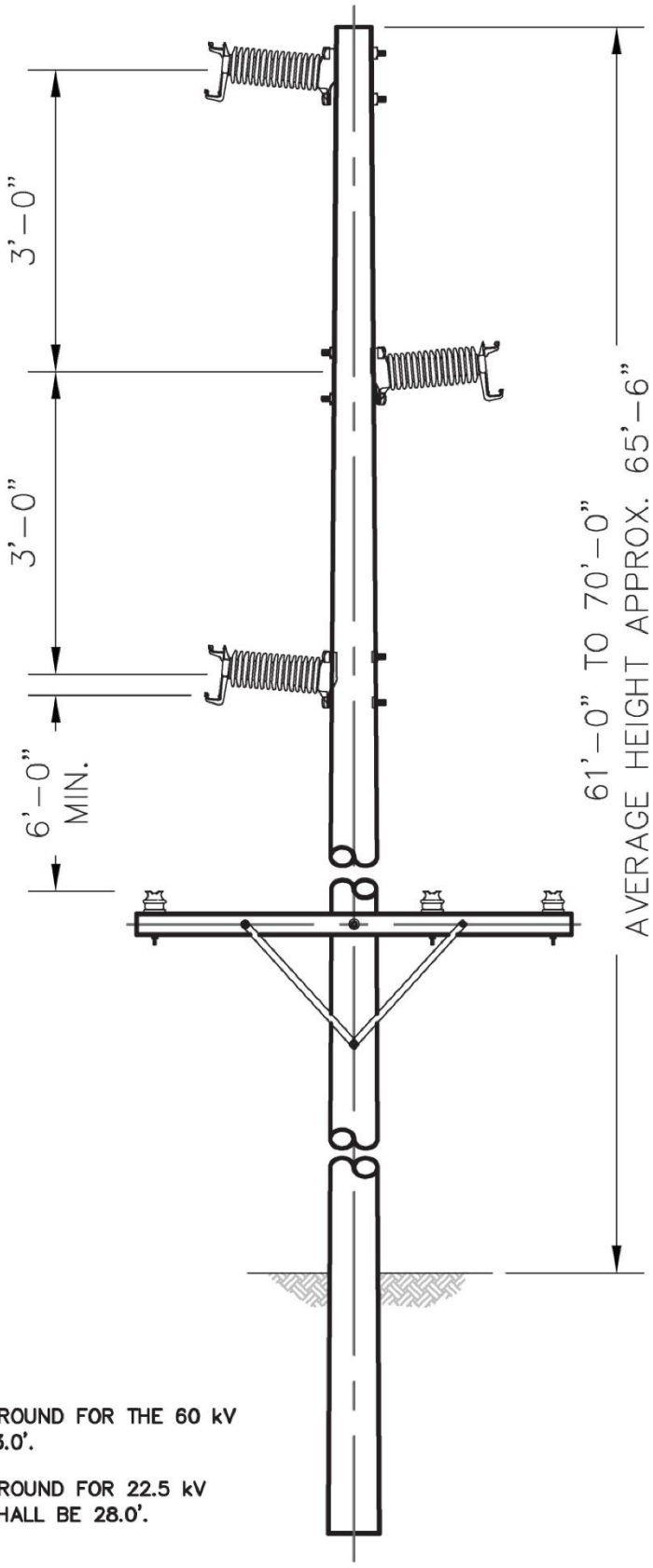
Typical Structures



NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.

Figure B-1

Typical 60 kV Single Circuit Tangent Structure

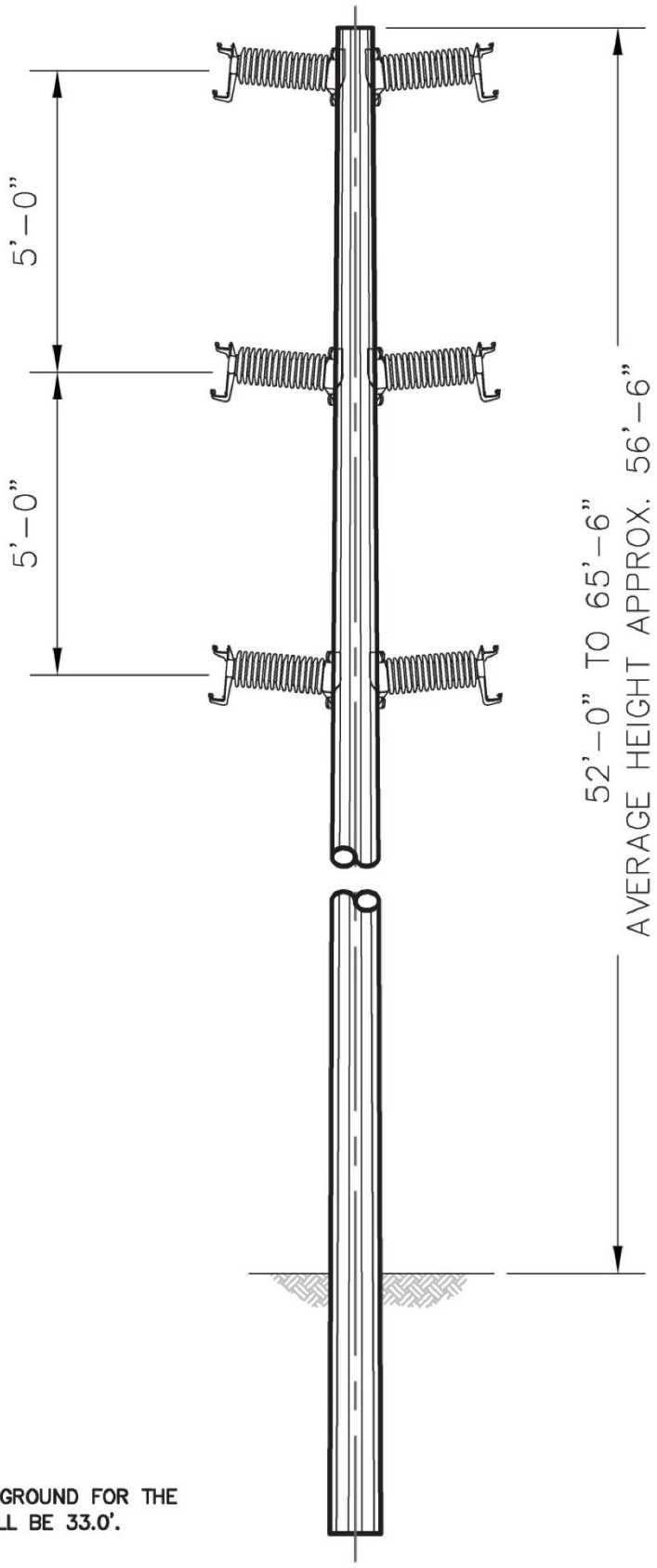


NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.
2. MINIMUM CLEARANCE TO GROUND FOR 22.5 kV (OR LESS) CONDUCTORS SHALL BE 28.0'.

Source: xx

Figure B-2

Typical 60 kV Single Circuit Tangent Structure with Distribution Line Underbuild

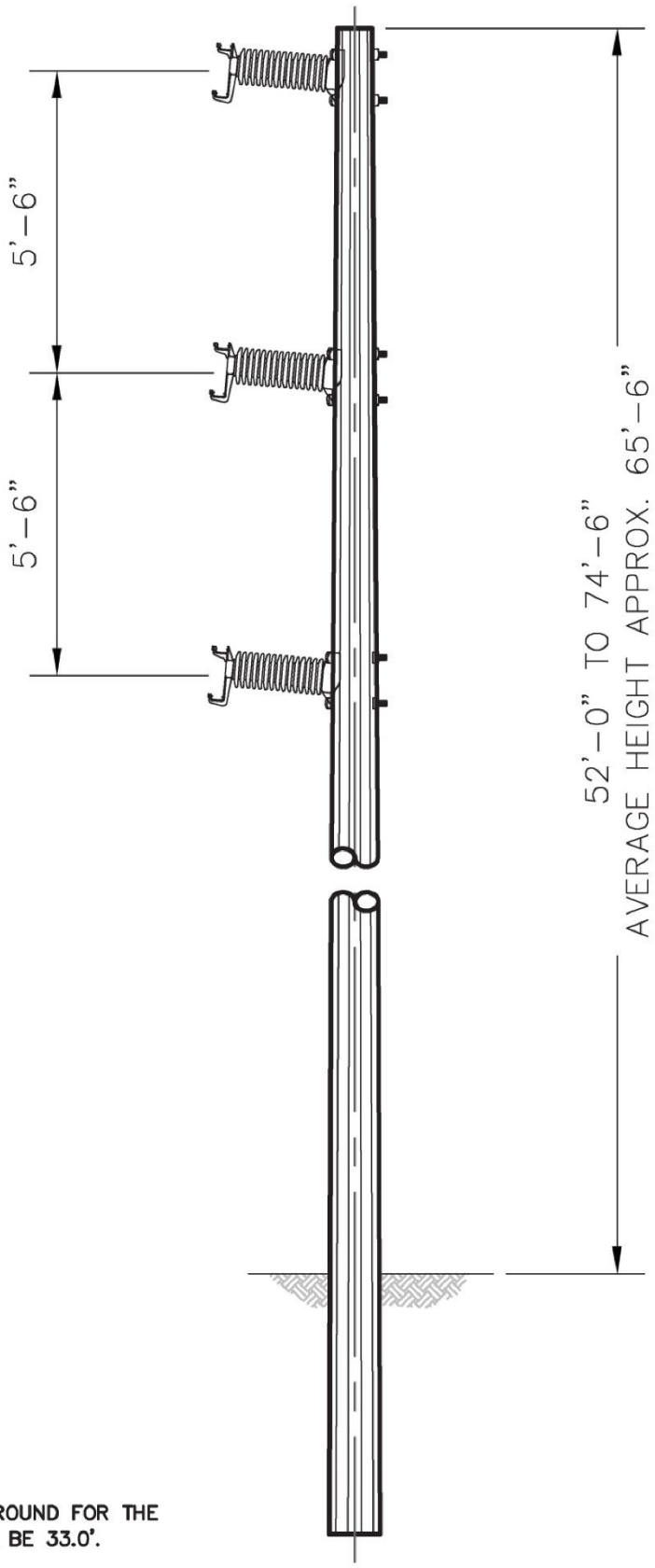


NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.

Source: xx

Figure B-3

Typical 60 kV Double Circuit Tangent Structure

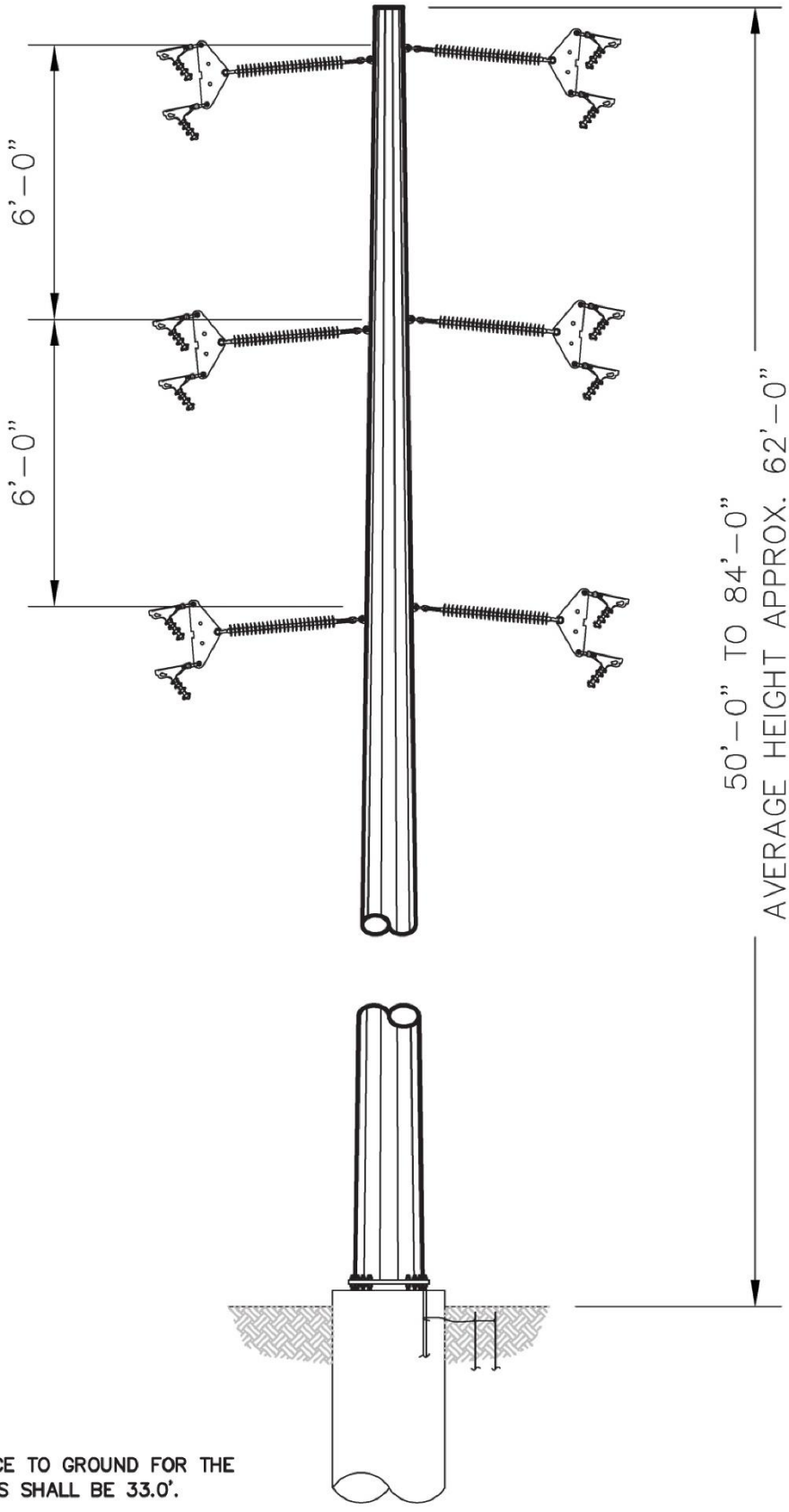


NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.

Source: xx

Figure B-4

Typical 60 kV Angle Structure

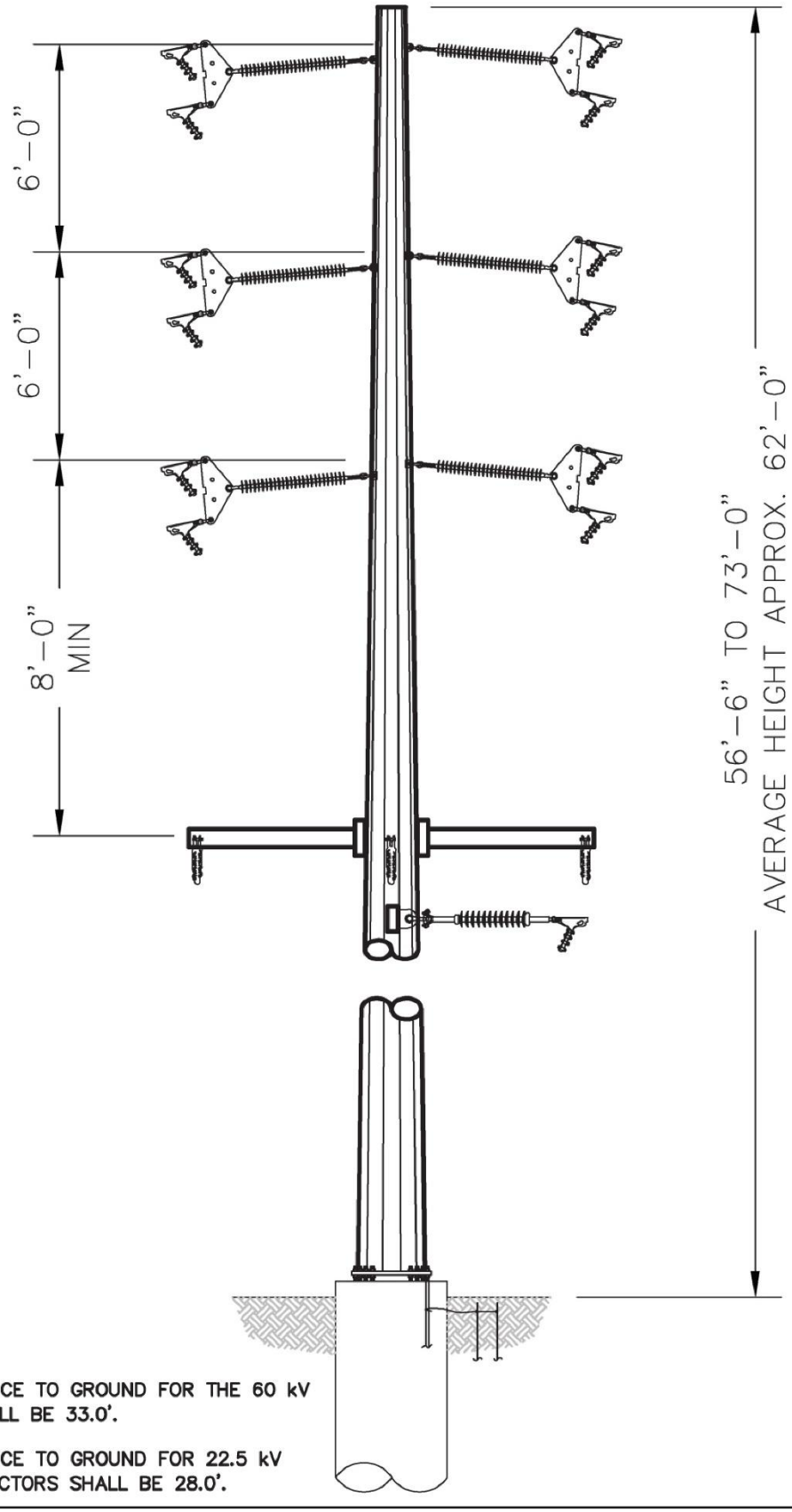


NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.

Source: xx

Figure B-5

Typical 60 kV Single Circuit Dead-end Structure

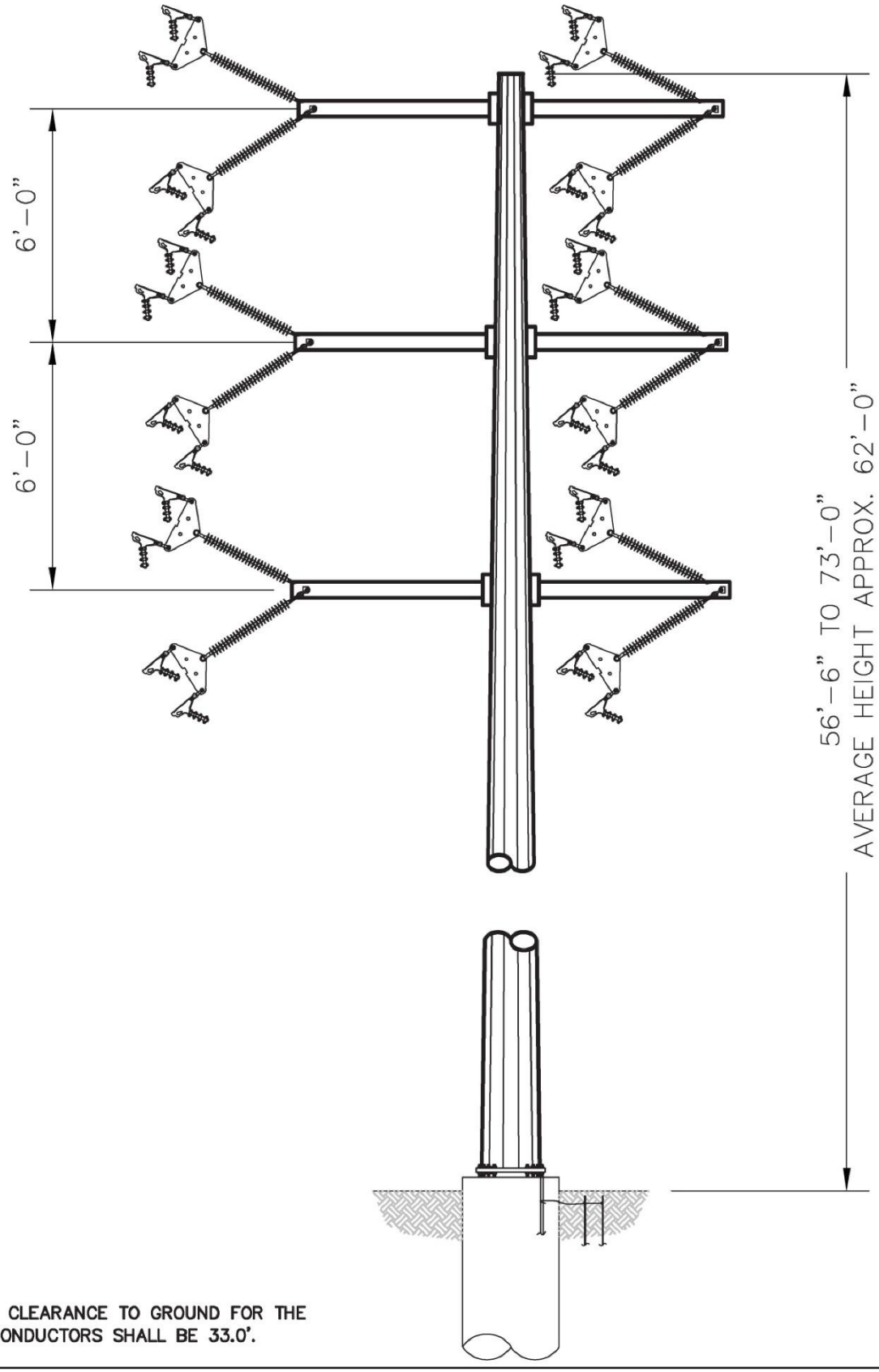


NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.
2. MINIMUM CLEARANCE TO GROUND FOR 22.5 kV (OR LESS) CONDUCTORS SHALL BE 28.0'.

Source: xx

Figure B-6

Typical 60 kV Single Circuit Dead-end Structure with Distribution Line Underbuild



NOTES:
1. MINIMUM CLEARANCE TO GROUND FOR THE 60 kV CONDUCTORS SHALL BE 33.0'.

Source: xx

Figure B-7

Typical 60 kV Double Circuit Dead-end Structure

Appendix C

List of Preparers

Appendix C
List of Preparers

A consultant team headed by Aspen Environmental Group provided technical assistance under the direction of Silicon Valley Power. The preparers and technical reviewers of this document are presented below.

Lead Agency

Silicon Valley Power

Jeevan Valath, Senior Electric Utility Engineer ..... Lead Agency Contact

Project Management and Document Production

Aspen Environmental Group – Prime Contractor

Hedy Koczwara, MS, Senior Associate	Project Manager
Brewster Birdsall, MS, PE, QEP, Senior Associate	Air Quality, Greenhouse Gas, Noise, Energy
Melissa Do, MS, Environmental Scientist	Aesthetics; Agriculture and Forestry; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Mineral Resources; Population and Housing; Public Services; Utilities and Service Systems, Recreation, Transportation & Traffic
Diana Dyste, Interim Cultural Resources Supervisor	Cultural Resources, Tribal Cultural Resources
Jody Fessler, Environmental Scientist	Biological Resources
Fritts Golden, Senior Associate	Document Review
Joshua Noyer, Cultural Resources Specialist	Cultural Resources, Tribal Cultural Resources
Tracy Popiel, MA, GIS Specialist	GIS/Graphics
Kati Simpson, Senior Graphic Designer	Graphics
Mark Tangard, Associate	Document Production
Grace Weeks	Wildland Fire

Kramer Botanical

Neal Kramer, Arborist ..... Tree Survey and Report

Appendix D

Tree Survey Report

DRAFT

Arborist Report

for

Silicon Valley Power - South Loop Reconfigure Project

Santa Clara, California

Prepared for:

Aspen Environmental Group

235 Montgomery Street, Suite 935

San Francisco, CA 94104

Prepared by:

Kramer Botanical

September 23, 2019

Draft Arborist Report -

Silicon Valley Power – South Loop Reconfigure Project

Table of Contents

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Project Overview

Silicon Valley Power (SVP) is proposing to construct approximately 3.5 miles of new 60 kV single and double circuit transmission line segments along the existing East and South Transmission Line Loops, with the northernmost segment beginning at the Kifer Substation located near the corner of Central Expressway and Lafayette Streets. The proposed routes would continue to the De La Cruz Substation, which is located on Mathew Street. The transmission line would also be routed to several other existing substations located along or near the transmission line corridor, including Fiberglass, Walsh, Mathew and Parker Substations. In addition to the new line, approximately 0.2 miles of existing 60 kV line along the railroad tracks would be reconductored and approximately 0.3 miles of existing 60 kV line would be transferred and underbuilt on the new structures along Walsh Avenue and the existing structures would be removed. Figure 1 below provides an overview of the proposed SVP – South Loop Reconfiguration Project routes.

Scope of Report

This arborist report provides the following:

- An inventory of trees within and immediately adjacent to the proposed SVP – South Loop Reconfiguration Project boundaries. Project boundaries extend 25 feet on either side of the centerline of Project Alignments and are shown on tree location Maps provided with this report as Attachment B.
- A general assessment of health/condition for each tree surveyed.
- An assessment of project impacts to trees within the project area.

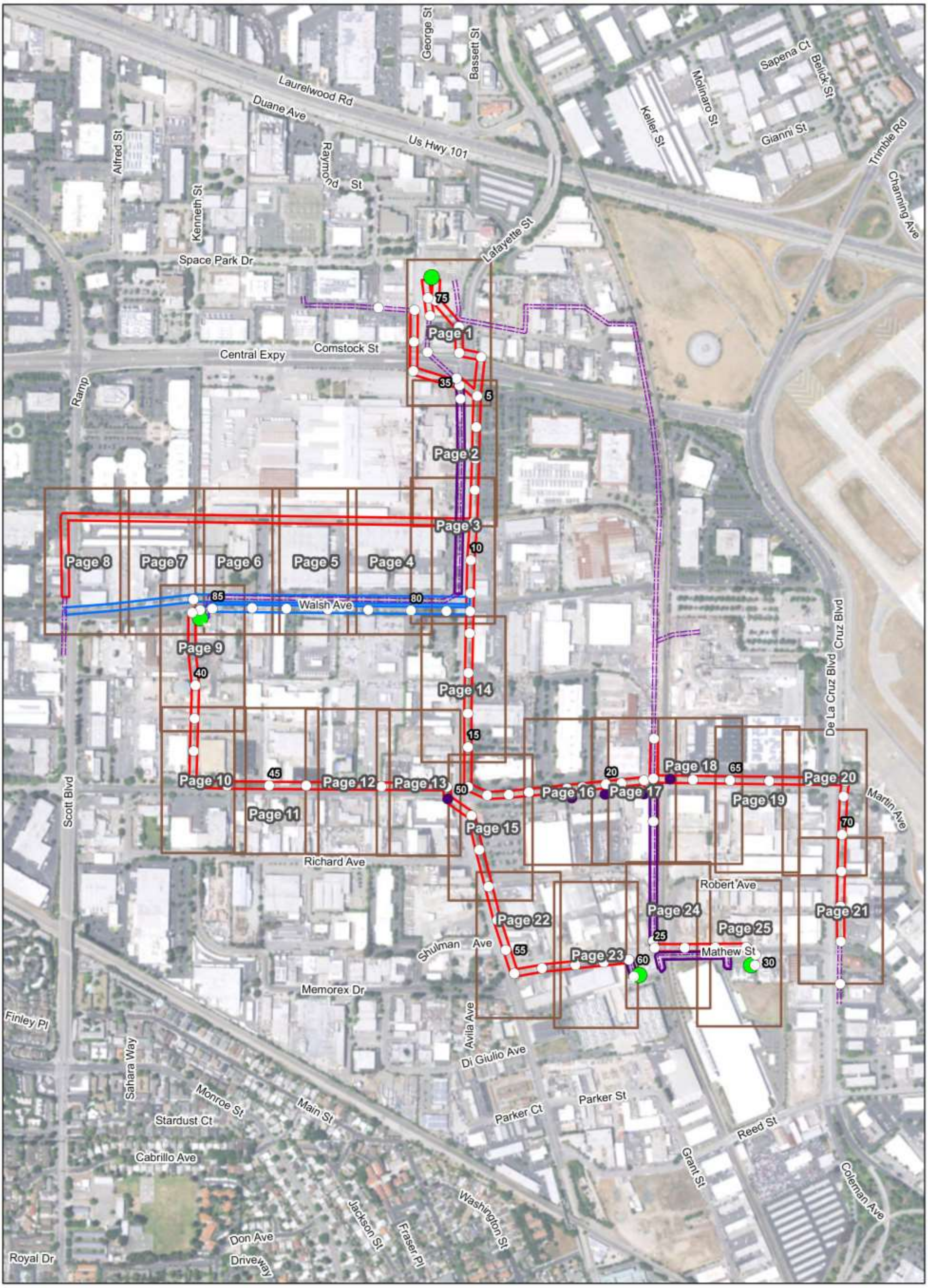
City of Santa Clara Tree Policies

City of Santa Clara General Plan policies which may apply to the SVP South Loop Reconfigure Project include the following:

5.10.1-P4 Protect all cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference (approximately 11.5 inches in diameter) measured at 48 inches above-grade on private and public property as well as in the public right-of-way.

5.10.1-P3 Require preservation of all City-designated heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan

5.3.1-P10 Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees to be removed as part of the proposal to help increase the urban forest and minimize the heat island effect.



Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Figure 1. Project Overview Map

Survey Methods

An initial tree survey for the SVP South Loop Reconfiguration Project was completed by Kramer Botanical certified arborist Neal Kramer in November 2017 and resulted in a Draft Arborist Report dated January 2018. This preliminary report included the proposed project's Preferred Alignment, selected Existing Alignments where trees might be impacted by the project, as well as potential Alternative Alignments being considered for the project. This report updates and revises the January 2018 report to reflect only the project's final Preferred Alignment, along with selected Existing Alignments where trees might be impacted.

Because of the extended time interval between the initial tree survey and this report, all trees from the November 2017 survey that are included in this report were revisited to verify any changes in tree characteristics and/or condition that may have occurred over time.

Tree surveys for this report were conducted between August 21 and August 27, 2019 by Kramer Botanical. All trees within SVP South Loop Reconfiguration Project boundaries, or immediately adjacent with canopy overhanging a project boundary, having at least one woody trunk with a diameter of 3 inches or greater at 48 inches above the ground were surveyed for this report. Newly planted trees with trunk diameters of less than 3 inches were also included in the survey.

Each surveyed tree was marked with a numbered aluminum tag. GPS coordinates for each tree were recorded using a Trimble Geo7x unit, and the approximate location of each was noted on an aerial field map. Information regarding the tree species, trunk diameter at 48 inches above the ground, and the approximate canopy spread and height was also gathered for each tree.

Health and structure were evaluated for each tree using a basic visual inspection, and a general condition rating was assigned using the categories shown below. Individual tree ratings consider a variety of factors, including overall tree vigor, evidence of decay, insects or diseases, and/or any other structural defects.

Good: 80-100% healthy foliage and no significant defects.

Fair: 50-79% healthy foliage and/or minor defects.

Poor: 5-49% healthy foliage and/or other significant defects.

Dead: less than 5% healthy foliage.

Based on final project boundaries provided by SVP and maps showing proposed transmission alignments, transmission pole positions and a 25 foot buffer on either side of the transmission centerline, an assessment of project impacts to trees was made and each tree was assigned a project impact code using one of the following categories:

(R) Tree may be removed for tower or pole placement, or for line clearance

(CP) Clearance pruning may be required – Tree will be retained; maximum tree height under T-lines will vary from 27 to 35 feet depending on location.

(-) No impact expected

Unless expressed otherwise, this survey was limited to visual examination of accessible parts without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies regarding the trees discussed in this report may not arise in the future.

Survey Results

A total of 317 trees along the Project Alignment were documented for this report. A summary of all 317 trees is provided with this report as Attachment A. Attachment A lists each surveyed tree sequentially by tag number, and includes information regarding the common and scientific name, trunk diameter at 48 inches above the ground, approximate canopy spread and height, City protected status, general tree condition rating and a projected assessment of project impacts for each tree surveyed. Specific comments regarding individual trees are included where relevant.

Approximate tree locations along transmission alignments are shown on aerial maps 1-23 provided with this report as Attachment B.

Table 1 below divides the transmission alignments into sections, describes each section location, lists tree numbers located in each section and indicates the Attachment B map number(s) where tree locations on the section can be found.

Trees documented for this report include 36 different species. Table 2 lists each species by common and scientific name in descending order of abundance and includes the total number of each species documented. The tree species list is dominated by 4 species, American sycamore (*Platanus occidentalis*) – 64 trees, purple-leaf plum (*Prunus cerasifera 'Atropurpurea'*) – 58 trees, coast redwood (*Sequoia sempervirens*) – 53 trees, and Mexican fan palm (*Washingtonia robusta*) – 23 trees. Together these four species account for 62% of all trees documented for the report.

Of the 36 tree species included with this report, only coast redwood is native to the Bay Area.

Tree Health/Condition

Of 317 trees documented for this report, 230 trees (73%) are rated in good condition, 68 trees (21%) are in fair condition, 14 trees (2%) are in poor condition and 5 trees are dead. Dead trees include 4 purple-leaf plums (numbers 144, 151, 222 and 225) and 1 European white birch (number 446). The general condition rating for individual trees is provided in Attachment A, with the 5 dead trees highlighted in dark grey.

Table 1: Project alignment locations indexed to tree tag and Attachment B map numbers

Location	Tree Numbers	Attachment B
Vicinity Kifer Substation north of Central Expressway	1-2, 5-11, 23-25	Map 1
South side of Central Expressway west of Lafayette St	14-19, 527-530	Map 1
Lafayette St - east side, between Central Expressway and Walsh Ave	26-55, 57	Maps 2 & 3
Lafayette St - east side, between Walsh Ave and Martin Ave	121-163	Maps 12 & 13
Lafayette St - east side, between Martin Ave and Mathew St	164-183	Maps 13 & 20
Lafayette St - west side, between Central Expressway and Walsh Ave	20-22, 58-59, 333-365	Maps 2 & 3
Walsh Ave - north side, between Lafayette St and Walsh Sub-rack	366-399	Maps 3-6
Vicinity Walsh Sub-rack	442-448, 497-508	Maps 6 &7
Santa Clara City yard between Walsh Ave and Martin Ave	500-508	Maps 7 & 8
Martin Ave - north side, west of Lafayette St	185, 187-216	Maps 8-11
Martin Avenue -north side, from Lafayette St to railroad tracks	217-263,	Maps 13-15
Martin Avenue -north side, from railroad tracks to De La Cruz Blvd	270-274	Maps 16-18
Railroad tracks - west side, north of Martin Ave	264-267, 269, 509	Map 15
Railroad tracks - west side, between Mathew St and Martin Ave	314	Maps 15 & 22
De La Cruz Blvd - east side, between Martin Ave and Mathew St	275-278, 280-288	Maps 18-10
Mathew St - south side, west of Lafayette St	289-290	Maps 20 & 21
Mathew St from railroad tracks east to De La Cruz Sub-rack	329-332	Map 22 & 23

Table 2: Tree species documented along the Project alignment, by descending order of abundance (August 2019)

Common Name	Scientific Name	Trees Documented	Native/ Non-native
American sycamore	*Platanus occidentalis*	64	Non-
purple -leaf plum	*Prunus cerasifera 'Atropurpurea'*	58	Non-
coast redwood	*Sequoia sempervirens*	53	Native
Mexican fan palm	*Washingtonia robusta*	23	Non-
olive	*Olea europea*	12	Non-
Shamel ash	*Fraxinus uhdei*	11	Non-
liquidambar	*Liquidambar styraciflua*	10	Non-
crape myrtle	*Lagerstroemia indica*	8	Non-
Australian willow	*Geijera parviflora*	7	Non-
European white birch	*Betula pendula*	7	Non-
N. Calif. black walnut	*Juglans hindsii*	7	Non-
London plane tree	*Platanus x acerifolia*	7	Non-
ornamental pear	*Pyrus calleryana*	6	Non-
Raywood ash	*Fraxinus angustifolia 'Raywood'*	6	Non-
Southern magnolia	*Magnolia grandiflora*	6	Non-
holly oak	*Quercus ilex*	5	Non-
Japanese maple	*Acer palmatum*	2	Non-
tree of heaven	*Ailanthus altissima*	2	Non-
carob	*Ceratonia siliqua*	2	Non-
camphor tree	*Cinnamomum camphora*	2	Non-
juniper	*Juniperus spp.*	2	Non-
Grecian laurel	*Laurus nobilis*	2	Non-
Italian stone pine	*Pinus pinea*	2	Non-
incense cedar	*Calocedrus decurrens*	1	Non-
honey locust	*Gleditsia triacanthos*	1	Non-
English walnut	*Juglans regia*	1	Non-
glossy privet	*Ligustrum lucidum*	1	Non-
New Zealand Xmas tree	*Metrosideros excelsus*	1	Non-
Mondell pine	*Pinus brutia var. eldarica*	1	Non-
Scotch pine	*Pinus sylvestris*	1	Non-
Lombardy poplar	*Populus nigra 'Italica'*	1	Non-
sweet cherry	*Prunus avium*	1	Non-
almond	*Prunus dulcis*	1	Non-
Chinese elm	*Ulmus parvifolia*	1	Non-
giant yucca	*Yucca elephantipes*	1	Non-
sawtooth zelkova	*Zelkova serrata*	1	Non-

Protected Trees

The City of Santa Clara General Plan (5.10.1-P4) defines "protected trees" as "all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size and all other trees over 36 inches in circumference (approximately 11.5 inches in diameter) measured from 48 inches above-grade on private and public property as well as in the public right-of-way".

One hundred ninety-four (194) of the 317 trees surveyed for this report qualify as "protected trees" under City of Santa Clara General Plan. Individual protected trees are indicated as such in Attachment A under the "Santa Clara Protected Tree" column.

City-designated heritage trees are listed in the Heritage Tree Appendix 8.10 of the City of Santa Clara General Plan, a copy of which is provided with this report as Attachment C. No Heritage trees are present within or immediately adjacent to proposed SVP- South Loop Reconfigure Project boundaries.

Assessment of Project Impacts on Trees

Some trees along the new alignment will need to be removed for the placement of new transmission line structures.

Many trees along the new alignment corridors will need to be pruned to create minimum clearance distances around the new structures and transmission lines. Based on clearance guidelines provided by project engineers, maximum allowable tree height within 25 feet of the transmission centerline will vary between 27 feet to 35 feet above the ground. Tree branches that are closer than 5 feet vertically or 10 horizontally to any conductor or wire will be trimmed to meet that minimum clearance standard.

In some cases, necessary clearance pruning may be extensive, altering the tree canopy to a degree that long term health, and/or acceptable structure or aesthetics will be compromised. In such instances, removal of the tree is recommended. This may be the case especially for tall single stem trees such as coast redwoods or Mexican fan palms located near the transmission centerline.

The Project Impact Code column in Attachment A designates likely impacts to individual trees using one of the following impact codes:

(R) Tree may need to be removed for structure placement or line clearance

(CP) Clearance pruning may be required – Tree to be retained; maximum tree height under transmission lines will vary from 27 to 35 feet depending on location.

(-) No impact expected

Table 3 below summarizes potential impacts to all surveyed trees by impact codes described above. The table also includes a separate line showing projected impact for Protected trees.

Table 3: Potential Project Impacts to Trees

	Likely to be Removed	May Require Clearance Pruning	No Impact Expected	Total
All trees	29	122	166	317
Protected trees only	24	111	59	194

This assessment of project impacts on individual trees is a best estimate based on information available at the time of the report. Table 4 provides a list of trees that are projected to be removed for Project development and indicates those with Protected status. Once the Project is complete, a final assessment of project alignments should be conducted to confirm the actual number of Protected trees removed for the project.

Table 4: Trees likely to be Removed for Project Development

Tree Number	Common Name	Remove for	Protected Tree
15	Purple-leaf plum	Structure placement	no
24	Ornamental pear	Structure placement	**yes**
123	Southern magnolia	Structure placement	**yes**
164	Coast redwood	Line clearance	**yes**
165	Coast redwood	Line clearance	**yes**
166	Coast redwood	Line clearance	**yes**
188	London plane tree	Structure placement	**yes**
203	Mexican fan palm	Line clearance	**yes**
211	Purple-leaf plum	Structure placement	no
212	Australian willow	Structure placement	no
236	Coast redwood	Line clearance	**yes**
250	Coast redwood	Line clearance	**yes**
255	Mexican fan palm	Line clearance	**yes**
256	Mexican fan palm	Line clearance	**yes**
257	Mexican fan palm	Line clearance	**yes**
258	Mexican fan palm	Line clearance	**yes**
259	Mexican fan palm	Line clearance	**yes**
260	Mexican fan palm	Line clearance	**yes**
262	Mexican fan palm	Line clearance	**yes**
263	Mexican fan palm	Line clearance	**yes**
266	Mexican fan palm	Line clearance	**Yes**
267	Mexican fan palm	Line clearance	**Yes**
282	European white birch	Structure placement	**Yes**
334	Purple-leaf plum	Structure placement	no
337	Purple-leaf plum	Structure Placement	no
388	American sycamore	Structure placement	**Yes**
392	Mexican fan palm	Structure placement	**Yes**
395	Coast redwood	Structure placement	**yes**

Tree Replacement

Potential Project impacts to trees can be reduced to "less than significant" by replacing trees that will be removed, as required by the City of Santa Clara. The City of Santa Clara General Plan 5.3.1-P10 requires a minimum 2:1 on- or off-site replacement for trees to be removed as part of a new development proposal. At the discretion of the City, an in-lieu fee per required replacement tree may be paid to the City in-lieu of off-site tree planting, with funds to be used by the City for tree planting and maintenance of planted trees. Tree replacement requirements will ultimately be determined by the City arborist or City designated representative.

Attachment A: Tree Survey Results

Appendix A: Tree Survey Results August 2019 - Silicon Valley Power South Loop Reconfiguration Project Prefered Alignment , Santa Clara, Ca

Light grey highlight indicates tree numbers intentionally skipped

Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
1	holly oak	*Quercus ilex*	5+4+4+4+3	12	17	P	-	Poor	multi-stem trunk embedded in chain link fence
2	ornamental pear	*Pyrus calleryana*	7	12	12	-	-	Fair	
5	crape myrtle	*Lagerstroemia indica*	5	12	16	-	-	Good	
6	sawtooth zelkova	*Zelkova serrata*	20	35	32	P	CP	Good	
7	American sycamore	*Platanus occidentalis*	10	20	25	-	-	Good	
8	American sycamore	*Platanus occidentalis*	5	16	20	-	-	Good	
9	American sycamore	*Platanus occidentalis*	6	12	24	-	-	Good	
10	American sycamore	*Platanus occidentalis*	7	17	24	-	-	Good	
11	American sycamore	*Platanus occidentalis*	11	22	30	-	CP	Good	
14	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	14	-	-	Good	
15	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	13	15	-	R	Good	Remove for structure placement
16	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	17	16	-	-	Good	
17	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	14	16	-	-	Good	
18	juniper	*Juniperus sp.*	6+11+5	18	18	-	-	Fair	
19	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	12	17	-	-	Good	
20	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	12	18	-	-	Good	
21	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	8	16	17	-	-	Good	
22	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	13	18	-	-	Good	
23	ornamental pear	*Pyrus calleryana*	12	16	26	P	-	Good	
24	ornamental pear	*Pyrus calleryana*	13	14	24	P	R	Fair	Remove for structure placement
25	coast redwood	*Sequoia sempervirens*	12	14	28	P	CP	Good	
26	American sycamore	*Platanus occidentalis*	19	40	47	P	CP	Good	
27	American sycamore	*Platanus occidentalis*	16	36	42	P	CP	Good	
28	American sycamore	*Platanus occidentalis*	15	32	38	P	CP	Good	
29	American sycamore	*Platanus occidentalis*	15	26	40	P	CP	Good	
30	American sycamore	*Platanus occidentalis*	14	26	40	P	CP	Good	
31	American sycamore	*Platanus occidentalis*	12	22	36	P	CP	Good	
32	American sycamore	*Platanus occidentalis*	8	15	28	-	CP	Fair	
33	American sycamore	*Platanus occidentalis*	15	30	34	P	CP	Good	
34	American sycamore	*Platanus occidentalis*	11	20	30	-	CP	Good	
35	American sycamore	*Platanus occidentalis*	9	18	24	-	-	Good	
36	American sycamore	*Platanus occidentalis*	10	20	28	-	CP	Good	

[1] Project Impact code: **R** = May need to be removed for pole placement or line clearance, **CP** = May require pruning for line clearance, **(-)** = No impacts expected.

[2] Condition: **Good** = 80-100% healthy foliage and no significant defects; **Fair** = 50-79% healthy foliage and/or minor defects; **Poor** = 5-49% healthy foliage and/or other significant defects; **Dead** = less than 5% healthy foliage.

Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
37	American sycamore	*Platanus occidentalis*	10	24	22	-	-	Good	
38	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	15	-	-	Good	
39	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	14	-	-	Good	
40	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	4	12	12	-	-	Good	
41	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	14	-	-	Good	
42	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	14	-	-	Good	
43	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	12	-	-	Good	Remove for pole placement
44	American sycamore	*Platanus occidentalis*	13	32	30	P	CP	Good	
45	American sycamore	*Platanus occidentalis*	13	24	32	P	CP	Good	
46	American sycamore	*Platanus occidentalis*	12	22	30	P	CP	Good	
47	American sycamore	*Platanus occidentalis*	12	26	28	P	CP	Good	
48	American sycamore	*Platanus occidentalis*	12	20	30	P	CP	Good	
49	American sycamore	*Platanus occidentalis*	13	24	32	P	CP	Good	
50	American sycamore	*Platanus occidentalis*	13	26	30	P	CP	Good	
51	American sycamore	*Platanus occidentalis*	11	24	32	-	CP	Good	
52	American sycamore	*Platanus occidentalis*	9	22	28	-	CP	Fair	
53	American sycamore	*Platanus occidentalis*	9	20	30	-	CP	Fair	
54	American sycamore	*Platanus occidentalis*	12	22	32	P	CP	Good	
55	American sycamore	*Platanus occidentalis*	13	28	32	P	CP	Good	
57	coast redwood	*Sequoia sempervirens*	13	12	32	P	CP	Fair	
58	American sycamore	*Platanus occidentalis*	14	32	22	P	-	Good	
59	American sycamore	*Platanus occidentalis*	7	22	20	-	-	Good	
121	honey locust	*Gleditsia triacanthos*	9	18	20	-	-	Fair	
122	Raywood ash	*Fraxinus angustifolia*	23	28	26	P	CP	Fair	
123	Southern magnolia	*Magnolia grandiflora*	15	22	28	P	R	Good	Remove for structure placement
124	liquidambar	*Liquidambar styraciflua*	16	20	25	P	CP	Good	
125	Southern magnolia	*Magnolia grandiflora*	7+3+3+3+3+2	16	18	-	-	Good	
126	Southern magnolia	*Magnolia grandiflora*	3	7	12	-	-	Good	
127	Japanese maple	*Acer palmatum*	3	8	18	-	-	Good	
128	Southern magnolia	*Magnolia grandiflora*	17	32	26	P	CP	Good	
129	Japanese maple	*Acer palmatum*	3	8	12	-	-	Good	
130	Southern magnolia	*Magnolia grandiflora*	17	18	28	P	CP	Poor	significant trunk scar, hard prune and topped for power line
131	coast redwood	*Sequoia sempervirens*	20	18	50	P	CP	Good	
132	coast redwood	*Sequoia sempervirens*	21	20	50	P	-	Good	
133	liquidambar	*Liquidambar styraciflua*	15	24	35	P	-	Fair	

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[2] Condition: **Good** = 80-100% healthy foliage and no significant defects; **Fair** = 50-79% healthy foliage and/or minor defects; **Poor** = 5-49% healthy foliage and/or other significant defects; **Dead** = less than 5% healthy foliage.

Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
134	liquidambar	*Liquidambar styraciflua*	14	24	35	P	CP	Poor	>50% dead or chlorotic canopy
135	liquidambar	*Liquidambar styraciflua*	13	24	35	P	CP	Fair	
136	Scotch pine	*Pinus sylvestris*	18	34	35	P	CP	Good	
137	liquidambar	*Liquidambar styraciflua*	7	12	14	-	-	Poor	> 50% dead canopy
138	liquidambar	*Liquidambar styraciflua*	7	15	16	-	-	Poor	> 50% dead canopy
139	coast redwood	*Sequoia sempervirens*	25	20	45	P	-	Fair	
140	coast redwood	*Sequoia sempervirens*	6	10	22	P	-	Fair	
141	Southern magnolia	*Magnolia grandiflora*	12	25	28	P	CP	Good	
142	Shamel ash	*Fraxinus uhdei*	13	24	40	P	CP	Fair	
143	Shamel ash	*Fraxinus uhdei*	17	30	45	P	CP	Good	
144	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	6	10	-	-	Dead	
145	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	4	3	8	-	-	Poor	
146	Shamel ash	*Fraxinus uhdei*	31	50	58	P	-	Good	
147	coast redwood	*Sequoia sempervirens*	23	18	55	P	-	Good	Remove for Line clearance
148	coast redwood	*Sequoia sempervirens*	22	18	55	P	CP	Good	
149	coast redwood	*Sequoia sempervirens*	18	18	50	P	CP	Good	
150	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	6	8	-	-	Poor	hard prune, dead branches
151	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	10	6	8	-	-	Dead	
152	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	10	8	8	-	-	Poor	hard prune, dead branches
153	coast redwood	*Sequoia sempervirens*	25	20	55	P	CP	Good	
154	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	9	12	-	-	Fair	
155	Shamel ash	*Fraxinus uhdei*	26	32	55	P	CP	Good	
156	Shamel ash	*Fraxinus uhdei*	24	32	50	P	-	Good	
157	Shamel ash	*Fraxinus uhdei*	17	25	56	P	CP	Fair	
158	Shamel ash	*Fraxinus uhdei*	16	28	55	P	-	Fair	
159	coast redwood	*Sequoia sempervirens*	18	26	38	P	CP	Good	
160	coast redwood	*Sequoia sempervirens*	22	18	55	P	CP	Good	
161	Shamel ash	*Fraxinus uhdei*	19	32	55	P	-	Good	
162	Shamel ash	*Fraxinus uhdei*	26	26	55	P	CP	Good	
163	coast redwood	*Sequoia sempervirens*	24	22	60	P	CP	Good	
164	coast redwood	*Sequoia sempervirens*	25	20	60	P	R	Good	Remove for Line clearance
165	coast redwood	*Sequoia sempervirens*	26	20	60	P	R	Good	Remove for Line clearance
166	coast redwood	*Sequoia sempervirens*	25	20	58	P	R	Good	Remove for Line clearance
167	Mexican fan palm	*Washingtonia robusta*	18	12	22	P	-	Good	
168	Raywood ash	*Fraxinus angustifolia*	16	24	28	P	CP	Fair	
169	Raywood ash	*Fraxinus angustifolia*	14	24	30	P	CP	Fair	
170	coast redwood	*Sequoia sempervirens*	23	20	50	P	CP	Good	

[1] Project Impact code: **R** = May need to be removed for pole placement or line clearance, **CP** = May require pruning for line clearance, **(-)** = No impacts expected.

[2] Condition: **Good** = 80-100% healthy foliage and no significant defects; **Fair** = 50-79% healthy foliage and/or minor defects; **Poor** = 5-49% healthy foliage and/or other significant defects; **Dead** = less than 5% healthy foliage.

Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
171	coast redwood	*Sequoia sempervirens*	19	18	45	P	CP	Good	
172	coast redwood	*Sequoia sempervirens*	20	18	40	P	CP	Good	
173	ornamental pear	*Pyrus calleryana*	17	28	25	P	-	Good	
174	ornamental pear	*Pyrus calleryana*	15	28	30	P	CP	Fair	
175	Raywood ash	*Fraxinus angustifolia*	21	32	42	P	CP	Good	
176	coast redwood	*Sequoia sempervirens*	20	20	48	P	CP	Good	
177	coast redwood	*Sequoia sempervirens*	20	18	50	P	CP	Good	
178	Raywood ash	*Fraxinus angustifolia*	16	25	40	P	CP	Fair	
179	coast redwood	*Sequoia sempervirens*	18	18	50	P	CP	Fair	
180	coast redwood	*Sequoia sempervirens*	14	18	45	P	CP	Fair	
181	coast redwood	*Sequoia sempervirens*	17	18	48	P	CP	Fair	
182	ornamental pear	*Pyrus calleryana*	21	36	34	P	CP	Good	
183	Raywood ash	*Fraxinus angustifolia*	20	25	25	P	-	Fair	
185	London plane tree	*Platanus x acerifolia*	22	35	40	P	CP	Good	
187	American sycamore	*Platanus occidentalis*	4	15	20	-	-	Good	
188	London plane tree	*Platanus x acerifolia*	30	55	50	P	R	Good	Remove for structure placement
189	London plane tree	*Platanus x acerifolia*	20	42	42	P	CP	Good	
190	London plane tree	*Platanus x acerifolia*	18	40	42	P	CP	Good	
191	Italian stone pine	*Pinus pinea*	35	30	42	P	CP	Good	
192	Italian stone pine	*Pinus pinea*	35	32	42	P	CP	Good	
193	London plane tree	*Platanus x acerifolia*	18	28	38	P	CP	Good	
194	London plane tree	*Platanus x acerifolia*	19	36	30	P	CP	Good	
195	olive	*Olea europea*	13	18	18	P	-	Fair	
196	European white birch	*Betula pendula*	9	16	22	-	-	Good	
197	olive	*Olea europea*	14	20	25	P	-	Fair	
198	European white birch	*Betula pendula*	12	20	35	P	CP	Good	
199	olive	*Olea europea*	10+9+15	26	22	P	-	Fair	
200	olive	*Olea europea*	12+8+8	26	22	P	-	Fair	
201	olive	*Olea europea*	22	25	24	P	-	Fair	
202	olive	*Olea europea*	12+7+11+14	26	26	P	CP	Fair	
203	Mexican fan palm	*Washingtonia robusta*	18	14	30	P	R	Good	Remove for Line clearance
204	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5+3+3+3+3	15	24	-	-	Good	
205	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5+4+3+3+3	14	18	-	-	Good	
206	Mexican fan palm	*Washingtonia robusta*	16	10	20	P	-	Good	
207	Mexican fan palm	*Washingtonia robusta*	18	10	22	P	-	Good	
208	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	4+5+3+4	15	20	-	-	Good	

[1] Project Impact code: **R** = May need to be removed for pole placement or line clearance, **CP** = May require pruning for line clearance, **(-)** = No impacts expected.

[2] Condition: **Good** = 80-100% healthy foliage and no significant defects; **Fair** = 50-79% healthy foliage and/or minor defects; **Poor** = 5-49% healthy foliage and/or other significant defects; **Dead** = less than 5% healthy foliage.

Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
209	Mexican fan palm	*Washingtonia robusta*	16	8	22	P	-	Fair	
210	Mexican fan palm	*Washingtonia robusta*	18	9	25	P	-	Good	
211	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	4+5+5+5+3+3+3+3+3	15	20	-	R	Good	Remove for structure placement
212	Australian willow	*Geijera parviflora*	8	20	24	-	R	Good	Remove for structure placement
213	Australian willow	*Geijera parviflora*	6+4+4+3+4+5	20	22	-	CP	Fair	support cable embedded in tree trunk
214	Australian willow	*Geijera parviflora*	7	15	20	-	-	Good	
215	Grecian laurel	*Laurus nobilis*	5	8	12	-	-	Good	
216	Grecian laurel	*Laurus nobilis*	7	10	12	-	-	Good	
217	coast redwood	*Sequoia sempervirens*	17	18	60	P	CP	Good	
218	coast redwood	*Sequoia sempervirens*	20	18	62	P	CP	Good	
219	coast redwood	*Sequoia sempervirens*	16	15	55	P	CP	Good	
220	coast redwood	*Sequoia sempervirens*	22	18	55	P	CP	Good	
221	coast redwood	*Sequoia sempervirens*	26	25	54	P	CP	Good	
222	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	6	8	-	-	dead	
223	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	8	5	8	-	-	Poor	hard prune, dead branches
224	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	4	10	-	-	Poor	hard prune, dead branches
225	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	5	8	-	-	dead	
226	Shamel ash	*Fraxinus uhdei*	24	28	46	P	CP	Good	
227	Shamel ash	*Fraxinus uhdei*	28	32	54	P	CP	Good	
228	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5	5	8	-	-	Fair	
229	coast redwood	*Sequoia sempervirens*	22	18	54	P	CP	Good	
230	coast redwood	*Sequoia sempervirens*	17	15	48	P	CP	Fair	
231	coast redwood	*Sequoia sempervirens*	19	20	52	P	CP	Good	
232	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	10	10	-	-	Fair	
233	coast redwood	*Sequoia sempervirens*	19	20	50	P	CP	Good	
234	coast redwood	*Sequoia sempervirens*	23	20	50	P	CP	Good	
235	coast redwood	*Sequoia sempervirens*	20	20	50	P	CP	Good	
236	coast redwood	*Sequoia sempervirens*	22	20	45	P	R	Fair	Remove for Line clearance
237	coast redwood	*Sequoia sempervirens*	25	20	50	P	CP	Good	
238	coast redwood	*Sequoia sempervirens*	19	18	45	P	CP	Fair	
239	coast redwood	*Sequoia sempervirens*	26	20	50	P	CP	Good	
240	Australian willow	*Geijera parviflora*	12	18	38	P	-	Good	
241	Australian willow	*Geijera parviflora*	17	30	30	P	-	Fair	
242	Australian willow	*Geijera parviflora*	14	22	32	P	-	Good	
243	Australian willow	*Geijera parviflora*	16+18	34	38	P	-	Fair	
244	coast redwood	*Sequoia sempervirens*	23	18	58	P	CP	Good	

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Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
245	coast redwood	*Sequoia sempervirens*	21	16	56	P	CP	Good	
246	coast redwood	*Sequoia sempervirens*	18	16	55	P	CP	Good	
247	coast redwood	*Sequoia sempervirens*	22	18	55	P	CP	Good	
248	coast redwood	*Sequoia sempervirens*	24	22	55	P	CP	Good	
249	coast redwood	*Sequoia sempervirens*	26	26	55	P	CP	Good	
250	coast redwood	*Sequoia sempervirens*	22	18	55	P	R	Good	Remove for Line clearance
251	coast redwood	*Sequoia sempervirens*	20	20	52	P	CP	Good	
252	coast redwood	*Sequoia sempervirens*	20	16	54	P	-	Good	
253	coast redwood	*Sequoia sempervirens*	10	14	36	P	-	Fair	
254	coast redwood	*Sequoia sempervirens*	21	18	54	P	CP	Good	
255	Mexican fan palm	*Washingtonia robusta*	20	10	55	P	R	Good	Remove for Line clearance
256	Mexican fan palm	*Washingtonia robusta*	20	10	55	P	R	Good	Remove for Line clearance
257	Mexican fan palm	*Washingtonia robusta*	20	10	40	P	R	Good	Remove for Line clearance
258	Mexican fan palm	*Washingtonia robusta*	20	10	50	P	R	Good	Remove for Line clearance
259	Mexican fan palm	*Washingtonia robusta*	20	10	36	P	R	Good	Remove for Line clearance
260	Mexican fan palm	*Washingtonia robusta*	20	10	45	P	R	Good	Remove for Line clearance
261	Mexican fan palm	*Washingtonia robusta*	12	6	8	P	-	Good	
262	Mexican fan palm	*Washingtonia robusta*	20	10	45	P	R	Good	Remove for Line clearance
263	Mexican fan palm	*Washingtonia robusta*	22	10	50	P	R	Good	Remove for Line clearance
264	olive	*Olea europea*	3+3+3+3+3+2+ 2+2+2	20	18	P	-	Fair	
265	Mexican fan palm	*Washingtonia robusta*	18	12	25	P	-	Good	
266	Mexican fan palm	*Washingtonia robusta*	18	10	25	P	R	Good	Remove for Line clearance
267	Mexican fan palm	*Washingtonia robusta*	20	12	25	P	R	Good	Remove for Line clearance
269	Mexican fan palm	*Washingtonia robusta*	16	10	12	P	-	Good	
270	holly oak	*Quercus ilex*	8+3	20	22	P	-	Fair	
271	olive	*Olea europea*	5+3+2	15	12	P	-	Good	
272	olive	*Olea europea*	4+3+4+2	12	14	P	-	Good	
273	olive	*Olea europea*	3+2+2+2	10	10	P	-	Good	
274	olive	*Olea europea*	3+4+3	14	12	P	-	Good	
275	olive	*Olea europea*	28	28	25	P	-	Fair	
276	camphor tree	*Cinnamomum camphora*	16	26	26	P	-	Good	
277	crape myrtle	*Lagerstroemia indica*	3	6	12	-	-	Poor	thin canopy
278	Chinese elm	*Ulmus parvifolia*	3	8	12	-	-	Fair	thin trunk and canopy
280	European white birch	*Betula pendula*	11	20	24	-	-	Fair	
281	European white birch	*Betula pendula*	7+5	18	25	-	-	Fair	

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Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
282	European white birch	*Betula pendula*	16	25	28	P	R	Good	Remove for structure placement
283	incense cedar	*Calocedrus decurrens*	23	20	32	P	CP	Fair	
284	camphor tree	*Cinnamomum camphora*	21	44	30	P	CP	Good	
285	carob	*Ceratonia siliqua*	20	25	25	P	CP	Good	
286	carob	*Ceratonia siliqua*	18	20	20	P	-	Good	
287	giant yucca	*Yucca elephantipes*	12+16	10	18	P	-	Fair	
288	European white birch	*Betula pendula*	7	10	20	-	-	Good	
289	liquidambar	*Liquidambar styraciflua*	15	28	20	P	-	Fair	
290	coast redwood	*Sequoia sempervirens*	23	24	40	P	CP	Good	
314	N. Calif. black walnut	*Juglans hindsii*	5+5+4+4+4+4	20	18	-	-	Fair	
329	juniper	*Juniperus sp.*	4	7	8	-	-	Good	
330	tree of heaven	*Ailanthus altissima*	5	10	20	-	-	Fair	
331	tree of heaven	*Ailanthus altissima*	5+6+4+4+3	12	24	-	-	Fair	
332	London plane tree	*Platanus x acerifolia*	7	12	30	-	CP	Good	
333	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	15	18	-	-	Good	
334	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	8	16	18	-	R	Good	Remove for structure placement
335	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	20	-	-	Good	
336	New Zealand Christm	*Metrosideros excelsus*	5+3+3	12	10	-	-	Fair	
337	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	20	-	R	Good	Remove for structure placement
338	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	18	-	-	Good	
339	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	20	-	-	Good	
340	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	12	20	-	-	Good	
341	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	14	20	-	-	Good	
342	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	16	-	-	Good	
343	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	18	-	-	Good	
344	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5	10	18	-	-	Good	
345	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	18	-	-	Good	
346	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5	10	18	-	-	Good	
347	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	10	16	-	-	Good	
348	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	16	-	-	Good	
349	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	12	18	-	-	Good	
350	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	18	-	-	Good	
351	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	18	-	CP	Good	
352	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	18	-	-	Good	
353	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	16	-	-	Good	
354	American sycamore	*Platanus occidentalis*	14	30	36	P	-	Good	

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Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
355	American sycamore	*Platanus occidentalis*	14	28	20	P	-	Good	
356	American sycamore	*Platanus occidentalis*	13	25	20	P	-	Fair	
357	American sycamore	*Platanus occidentalis*	13	26	20	P	-	Fair	
358	American sycamore	*Platanus occidentalis*	14	30	32	P	CP	Good	
359	American sycamore	*Platanus occidentalis*	13	28	32	P	CP	Good	
360	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	15	16	-	-	Good	
361	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5+5	14	16	-	-	Good	
362	American sycamore	*Platanus occidentalis*	16	32	30	P	CP	Good	
363	American sycamore	*Platanus occidentalis*	17	36	32	P	CP	Good	
364	American sycamore	*Platanus occidentalis*	7	18	20	-	-	Good	
365	American sycamore	*Platanus occidentalis*	17	42	34	P	CP	Good	
366	American sycamore	*Platanus occidentalis*	18	45	30	P	CP	Good	
367	crape myrtle	*Lagerstroemia indica*	4	14	15	-	-	Good	
368	American sycamore	*Platanus occidentalis*	17	38	30	P	CP	Good	
369	American sycamore	*Platanus occidentalis*	11	26	36	-	-	Good	
370	American sycamore	*Platanus occidentalis*	18	40	26	P	CP	Good	
371	American sycamore	*Platanus occidentalis*	15	36	34	P	CP	Good	
372	American sycamore	*Platanus occidentalis*	14	22	24	P	-	Good	
373	American sycamore	*Platanus occidentalis*	17	40	26	P	CP	Good	
374	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	10	16	20	-	-	Good	
375	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	8	14	12	-	-	Fair	
376	American sycamore	*Platanus occidentalis*	16	34	30	P	CP	Good	
377	American sycamore	*Platanus occidentalis*	5	14	24	-	-	Good	
378	American sycamore	*Platanus occidentalis*	17	40	30	P	CP	Good	
379	American sycamore	*Platanus occidentalis*	6	16	24	-	-	Good	
380	American sycamore	*Platanus occidentalis*	16	34	22	P	-	Good	
381	American sycamore	*Platanus occidentalis*	16	30	22	P	-	Good	
382	American sycamore	*Platanus occidentalis*	17	32	24	P	-	Good	
383	American sycamore	*Platanus occidentalis*	18	40	22	P	-	Fair	
384	American sycamore	*Platanus occidentalis*	6	14	22	-	-	Good	
385	American sycamore	*Platanus occidentalis*	17	38	32	P	CP	Good	
386	American sycamore	*Platanus occidentalis*	18	45	30	P	CP	Good	
387	American sycamore	*Platanus occidentalis*	6	14	26	-	-	Good	
388	American sycamore	*Platanus occidentalis*	16	42	30	P	R	Good	Remove for structure placement
389	American sycamore	*Platanus occidentalis*	15	35	30	P	CP	Good	
390	American sycamore	*Platanus occidentalis*	17	38	25	P	-	Good	
391	sweet cherry	*Prunus avium*	3	8	8	-	-	Fair	

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Tree #	Common Name	*Scientific Name*	Diameter (inches) at 48" above grade	Canopy Spread (feet)	Tree Height (feet)	Santa Clara Protected Tree (P)	Project Impact Code[1]	General Condition[2]	Comments
392	Mexican fan palm	*Washingtonia robusta*	18	10	28	P	R	Good	Remove for structure placement
393	Mexican fan palm	*Washingtonia robusta*	18	10	42	P	R	Good	Remove for structure placement
394	N. Calif. black walnut	*Juglans hindsii*	5+7+7+4	26	22	-	CP	Fair	
395	coast redwood	*Sequoia sempervirens*	17	22	28	P	R	Good	Remove for structure placement
396	coast redwood	*Sequoia sempervirens*	10	15	28	P	CP	Good	
397	liquidambar	*Liquidambar styraciflua*	16	20	28	P	CP	Good	
398	liquidambar	*Liquidambar styraciflua*	15	18	28	P	CP	Good	
399	liquidambar	*Liquidambar styraciflua*	17	18	28	P	CP	Good	
442	crape myrtle	*Lagerstroemia indica*	5	15	18	-	-	Good	
443	crape myrtle	*Lagerstroemia indica*	5	16	18	-	-	Good	
444	crape myrtle	*Lagerstroemia indica*	5	18	18	-	-	Good	
445	holly oak	*Quercus ilex*	7	12	25	P	-	Good	
446	European white birch	*Betula pendula*	8	14	24	-	-	Dead	
447	Mondell pine	*Pinus brutia var. eldarica*	15	28	26	P	CP	Fair	
448	Mexican fan palm	*Washingtonia robusta*	16	10	24	P	-	Fair	
497	crape myrtle	*Lagerstroemia indica*	6	16	20	-	-	Good	
498	crape myrtle	*Lagerstroemia indica*	5	15	20	-	-	Good	
499	glossy privet	*Ligustrum lucidum*	8+6+6+6+4+3+2	15	24	-	-	Good	
500	N. Calif black walnut	*Juglans hindsii*	4+2+2	14	14	-	-	Fair	
501	N. Calif black walnut	*Juglans hindsii*	5	12	12	-	-	Fair	
502	N. Calif black walnut	*Juglans hindsii*	18+22	56	35	P	CP	Good	
503	English walnut	*Juglans regia*	4	12	13	-	-	Poor	Fence imbedded in trunk, decay, failed branches
504	Lombardy poplar	*Populus nigra 'Italica'*	5+4+4+3	16	22	-	-	Poor	Water sprouts from base with decay
505	almond	*Prunus dulcis*	3	8	15	-	-	Poor	Supressed, thin canopy and trunk
506	holly oak	*Quercus ilex*	5+5+4+4	15	18	P	-	Fair	
507	N. Calif black walnut	*Juglans hindsii*	9+6	14	22	-	-	Fair	
508	holly oak	*Quercus ilex*	5+4+2	15	15	P	-	Fair	
509	N. Calif black walnut	*Juglans hindsii*	6+5+4	18	17	-	-	Fair	
510	Mexican fan palm	*Washingtonia robusta*	18	10	12	P	-	Good	
527	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	5	9	14	-	-	Good	
528	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	12	16	-	-	Good	
529	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	6	14	18	-	-	Good	
530	purple -leaf plum	*Prunus cerasifera 'Atropurp.'*	7	14	18	-	-	Good	

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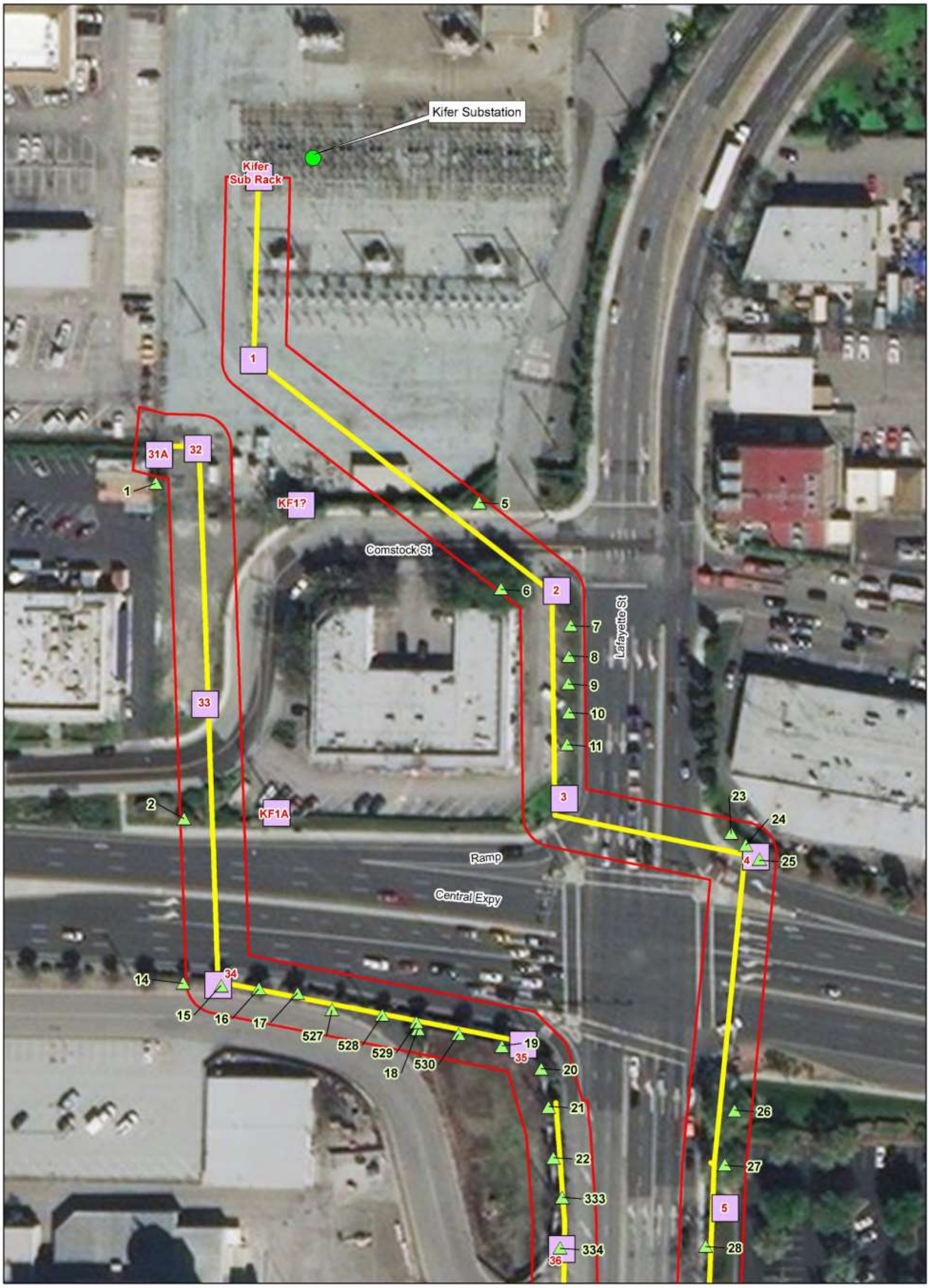
Attachment B: Tree Location Maps



Map Extent

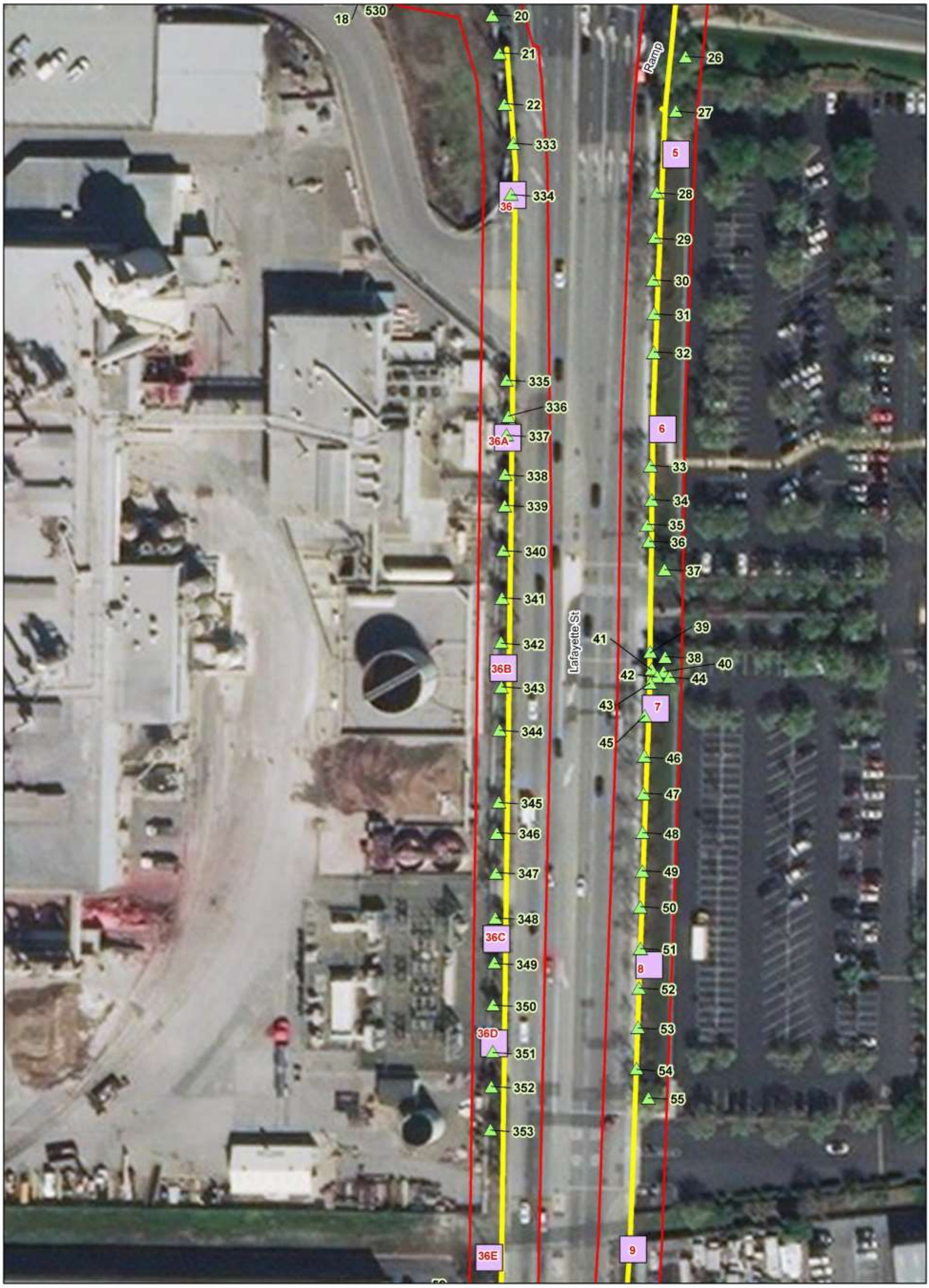
Substations
New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 1 of 23

Date: 9/13/2019



New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 2 of 23

Date: 9/13/2019

Map Extent

New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission Line

Surveyed Tree

Tree Survey Area

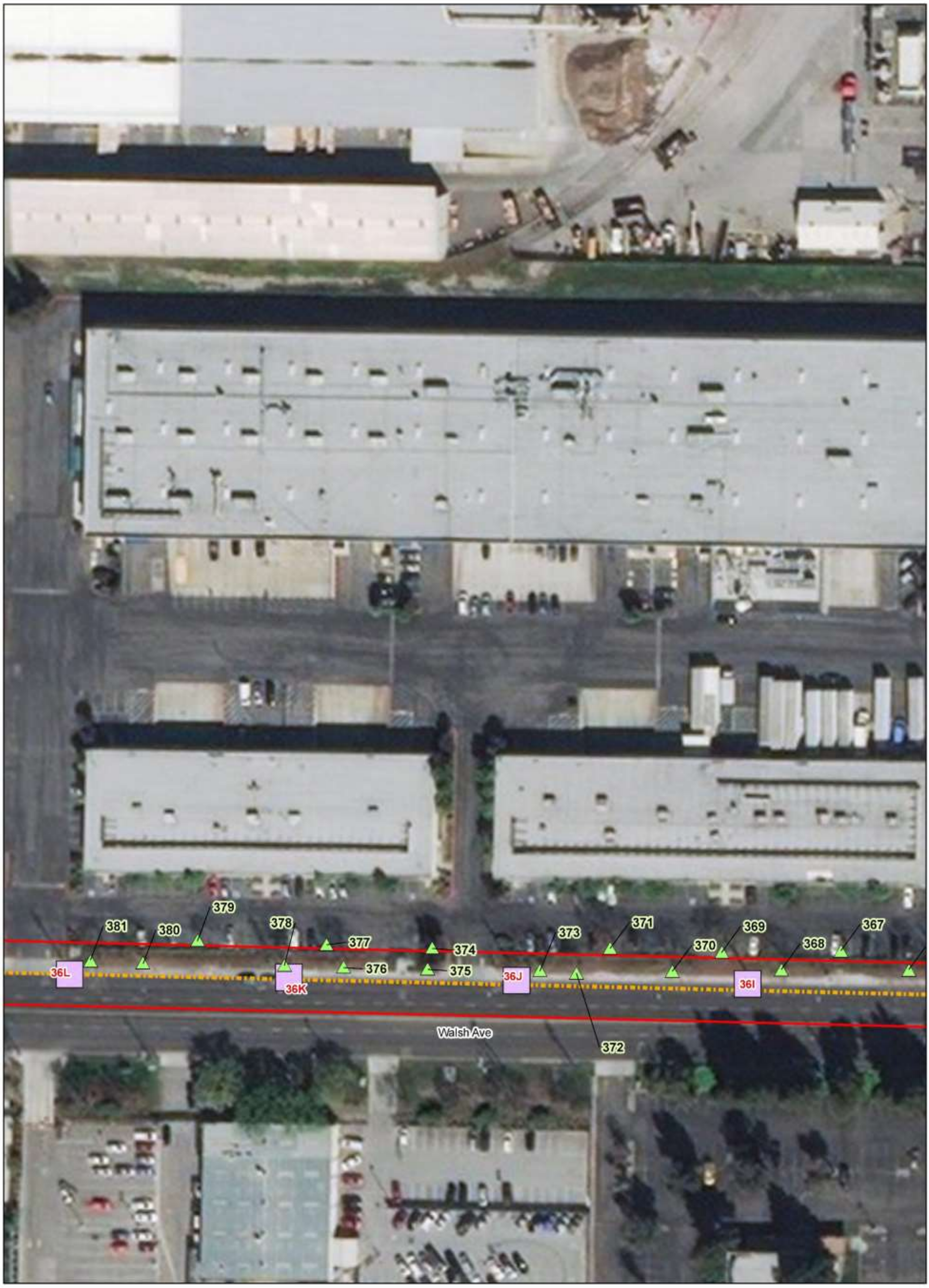
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 3 of 23

Date: 9/13/2019



Map Extent

New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

Surveyed Tree

Tree Survey Area

Preferred Alignment

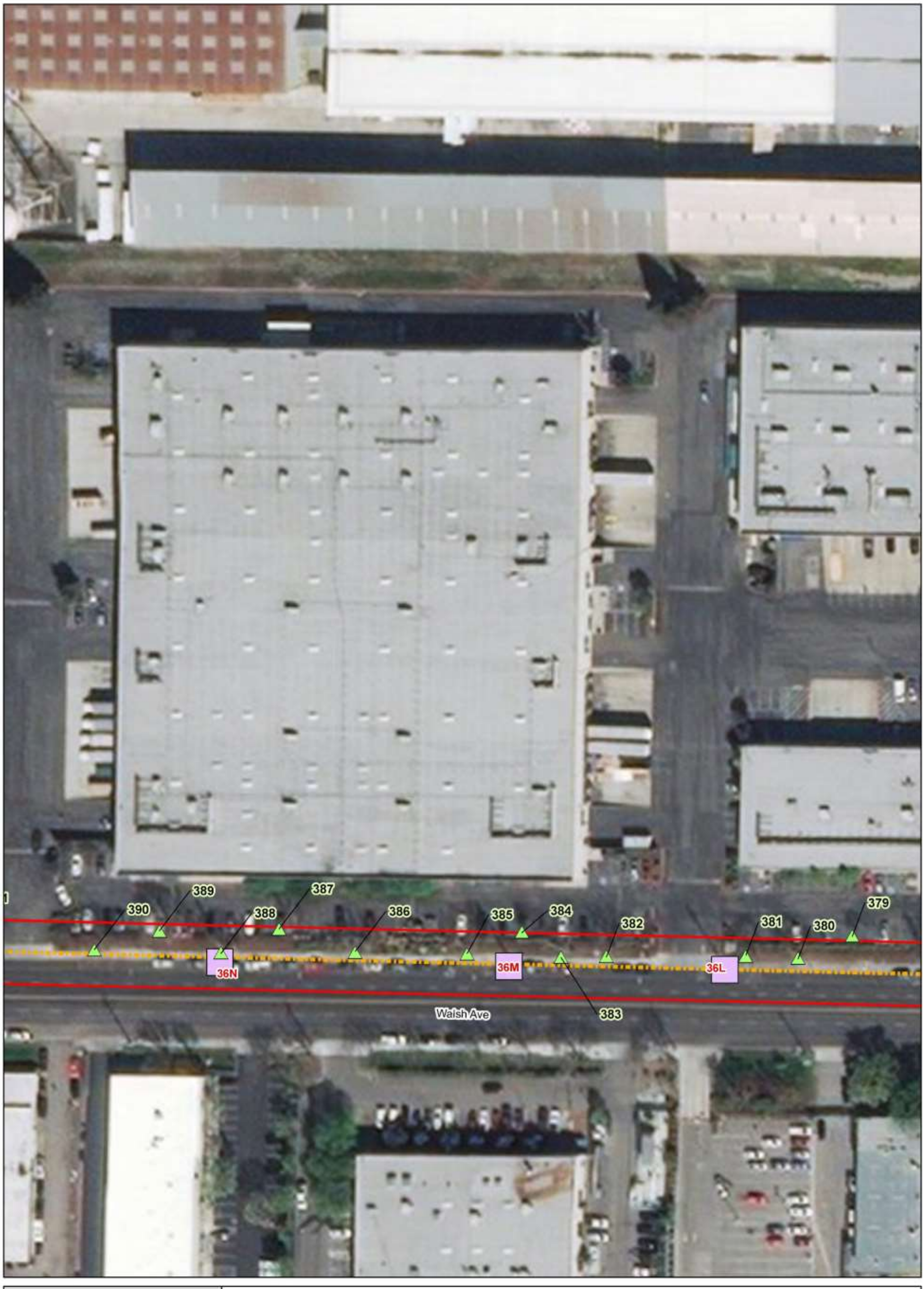
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 4 of 23

Date: 9/13/2019



New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

Surveyed Tree

Tree Survey Area

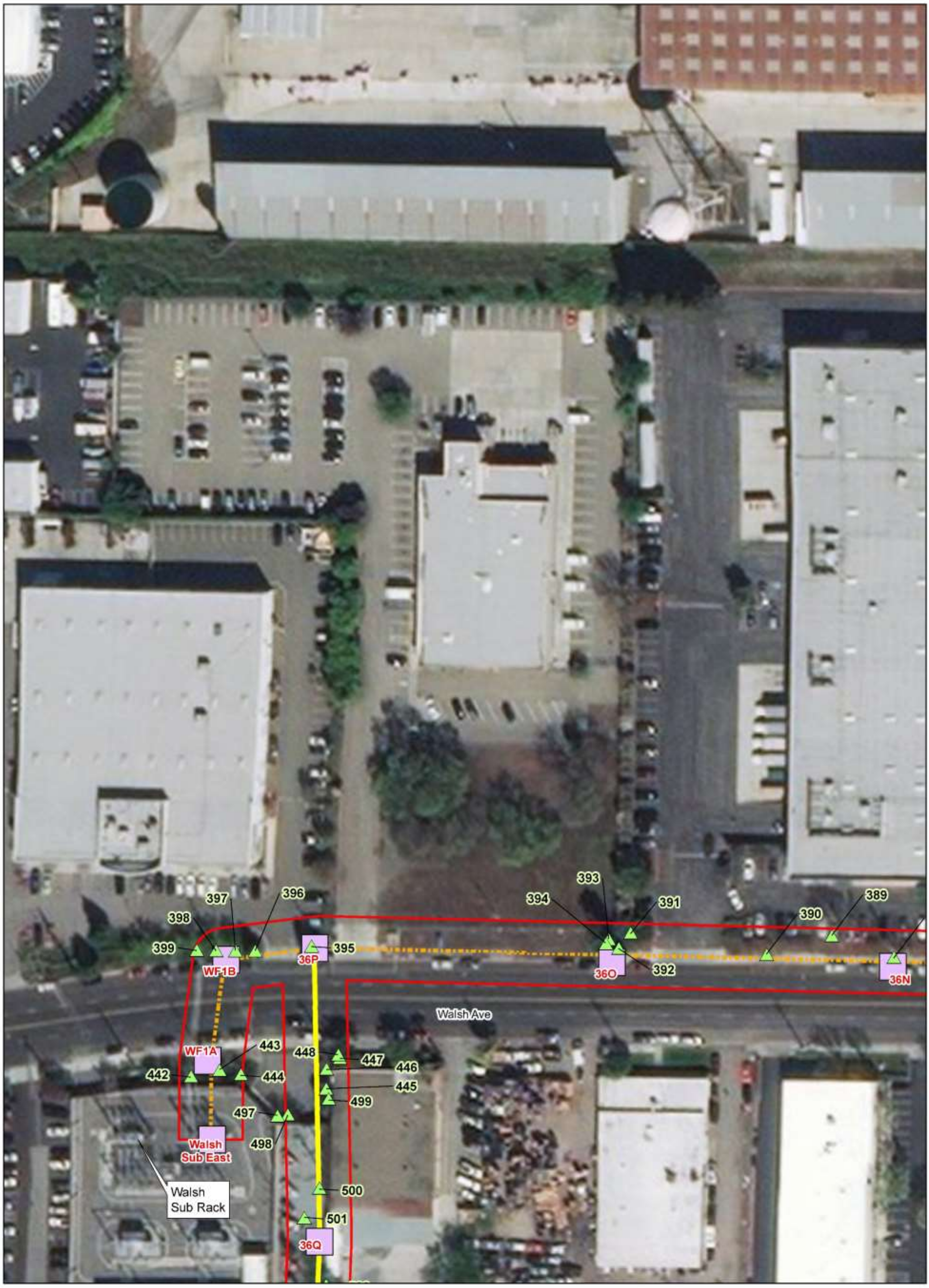
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 5 of 23

Date: 9/13/2019



Map Extent

New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission Line

Surveyed Tree

Tree Survey Area

Preferred Alignment

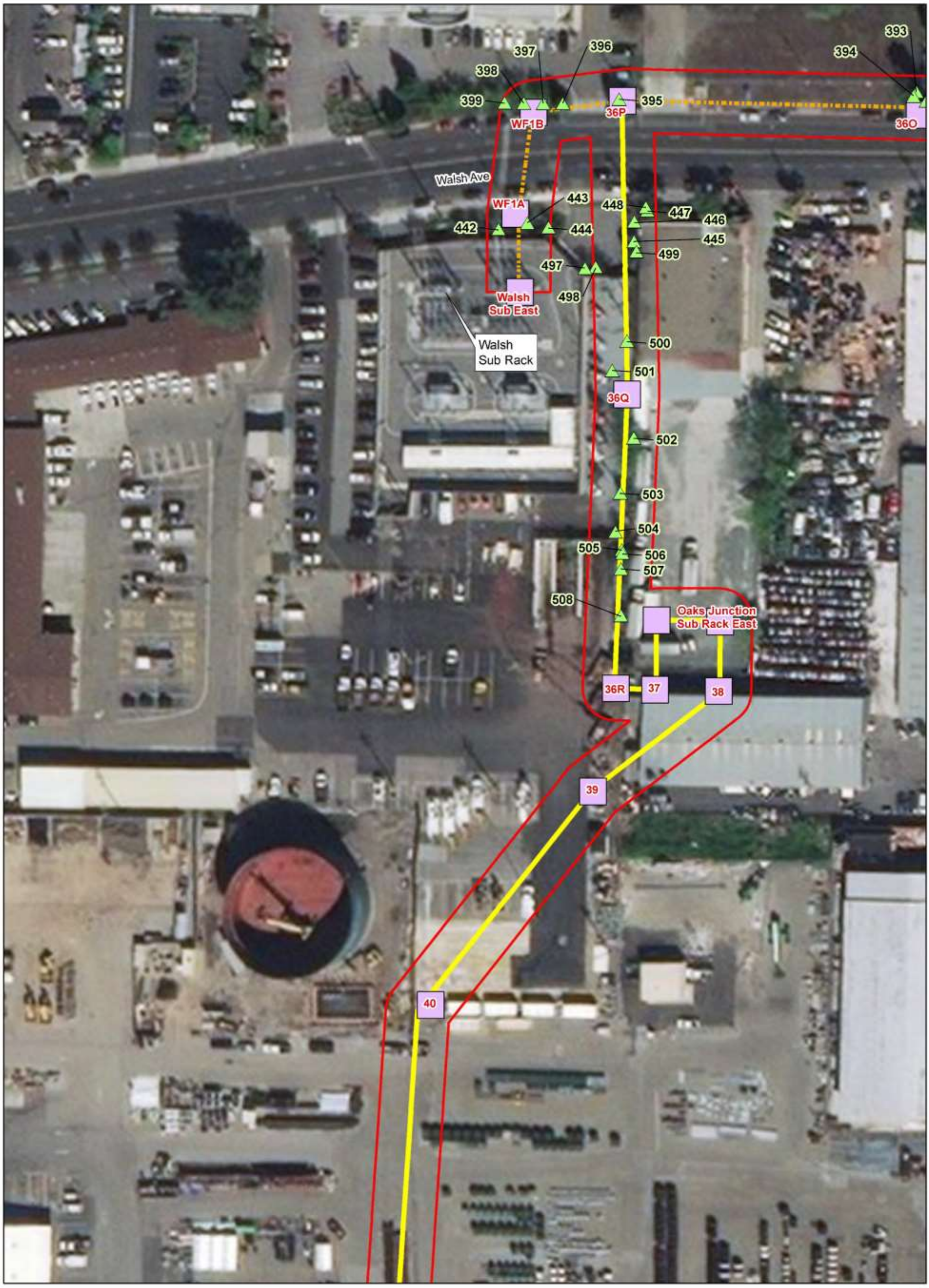
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 6 of 23

Date: 9/13/2019



Map Extent

New Structure Location

New East Loop Overhead Transmission Line (overbuilt on new towers; existing towers to be removed)

New East Loop Overhead Transmission Line

Surveyed Tree

Tree Survey Area

Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 7 of 23

Date: 9/13/2019

New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

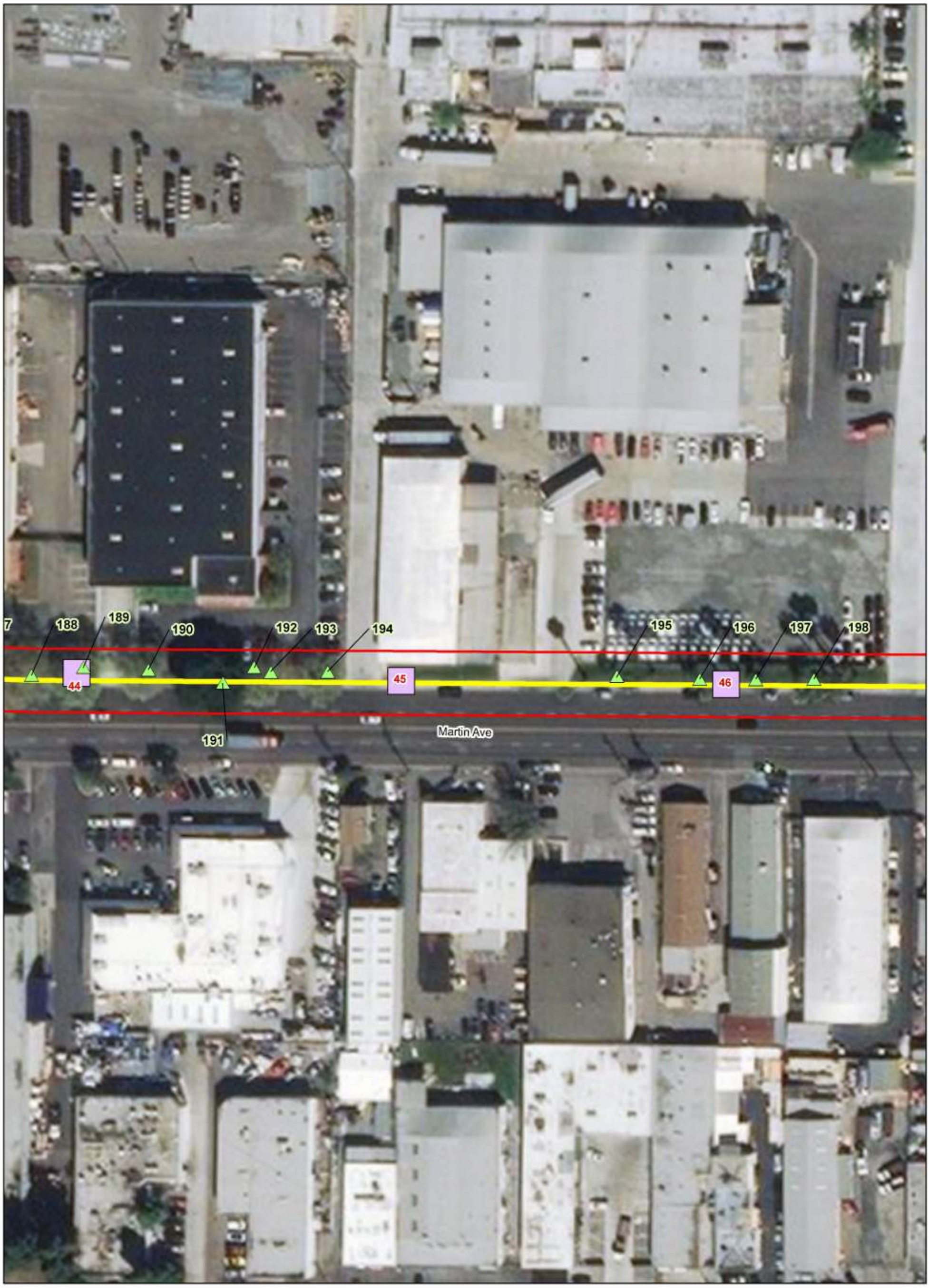
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 8 of 23

Date: 9/13/2019



New Structure Location
New East Loop Overhead Transmission Line

Surveyed Tree
Tree Survey Area
Preferred Alignment

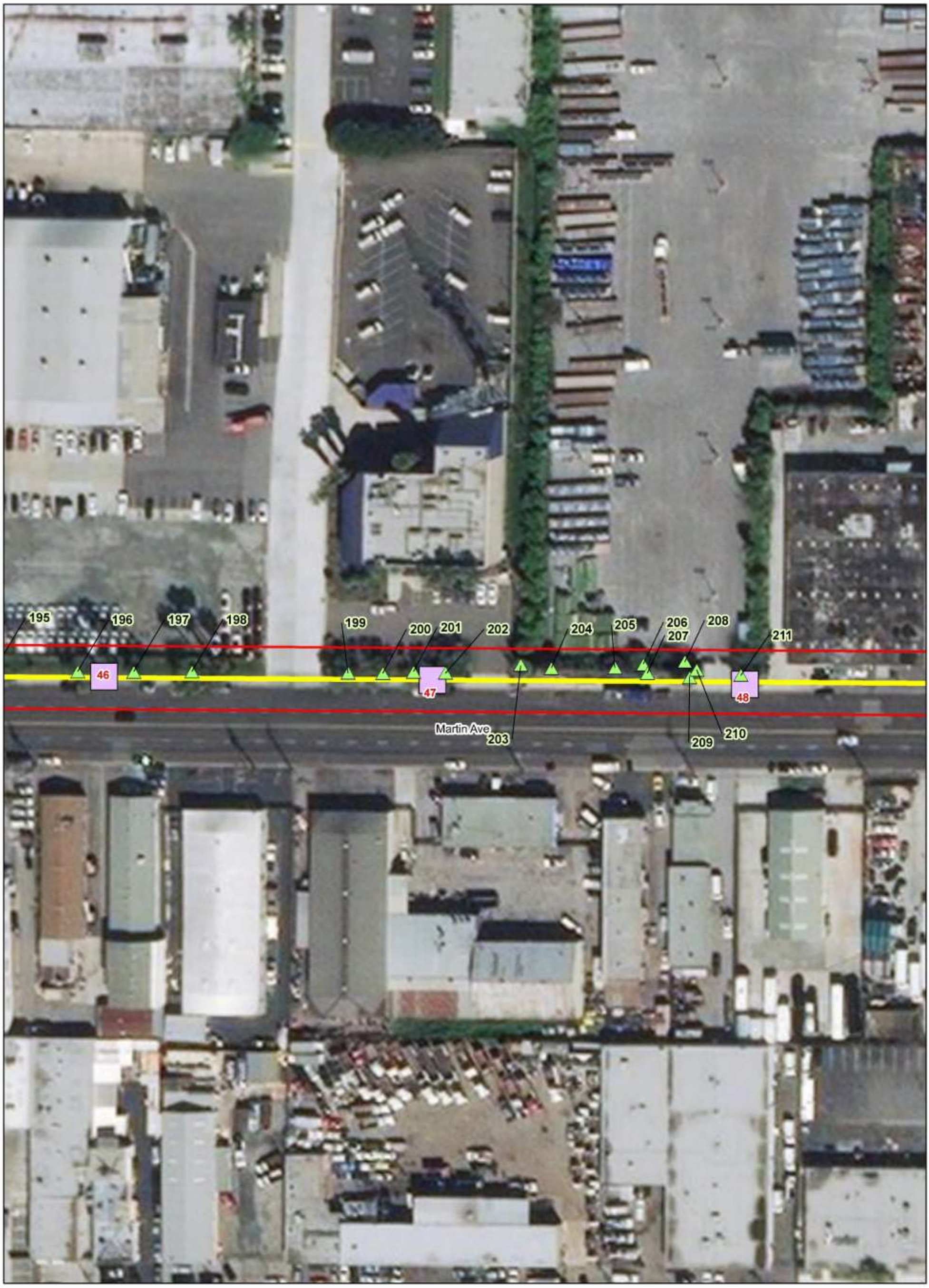
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 9 of 23

Date: 9/13/2019



New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 10 of 23

Date: 9/13/2019

Map Extent

New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 11 of 23

Date: 9/13/2019

Map Extent

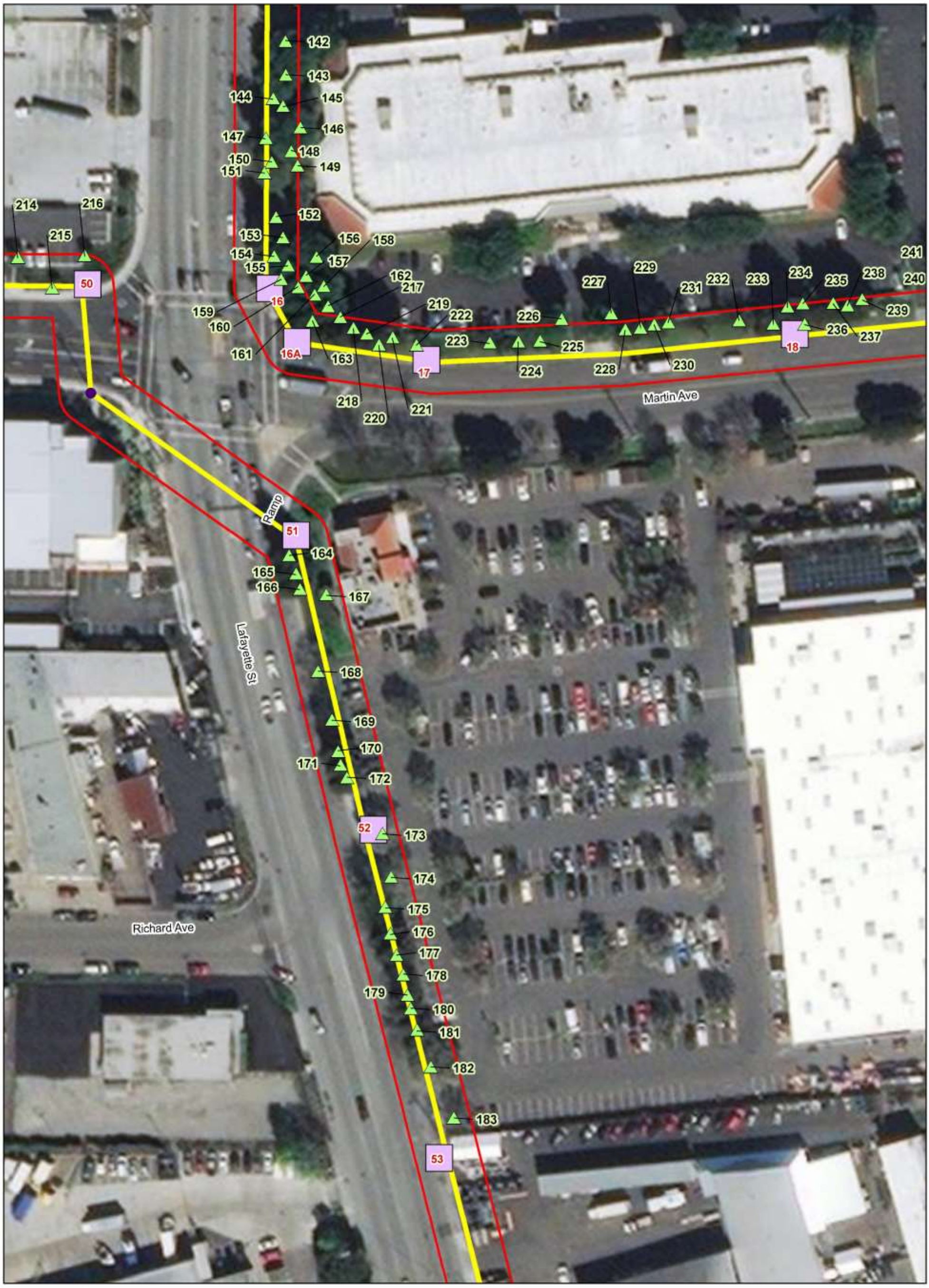
New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 12 of 23

Date: 9/13/2019



Map Extent

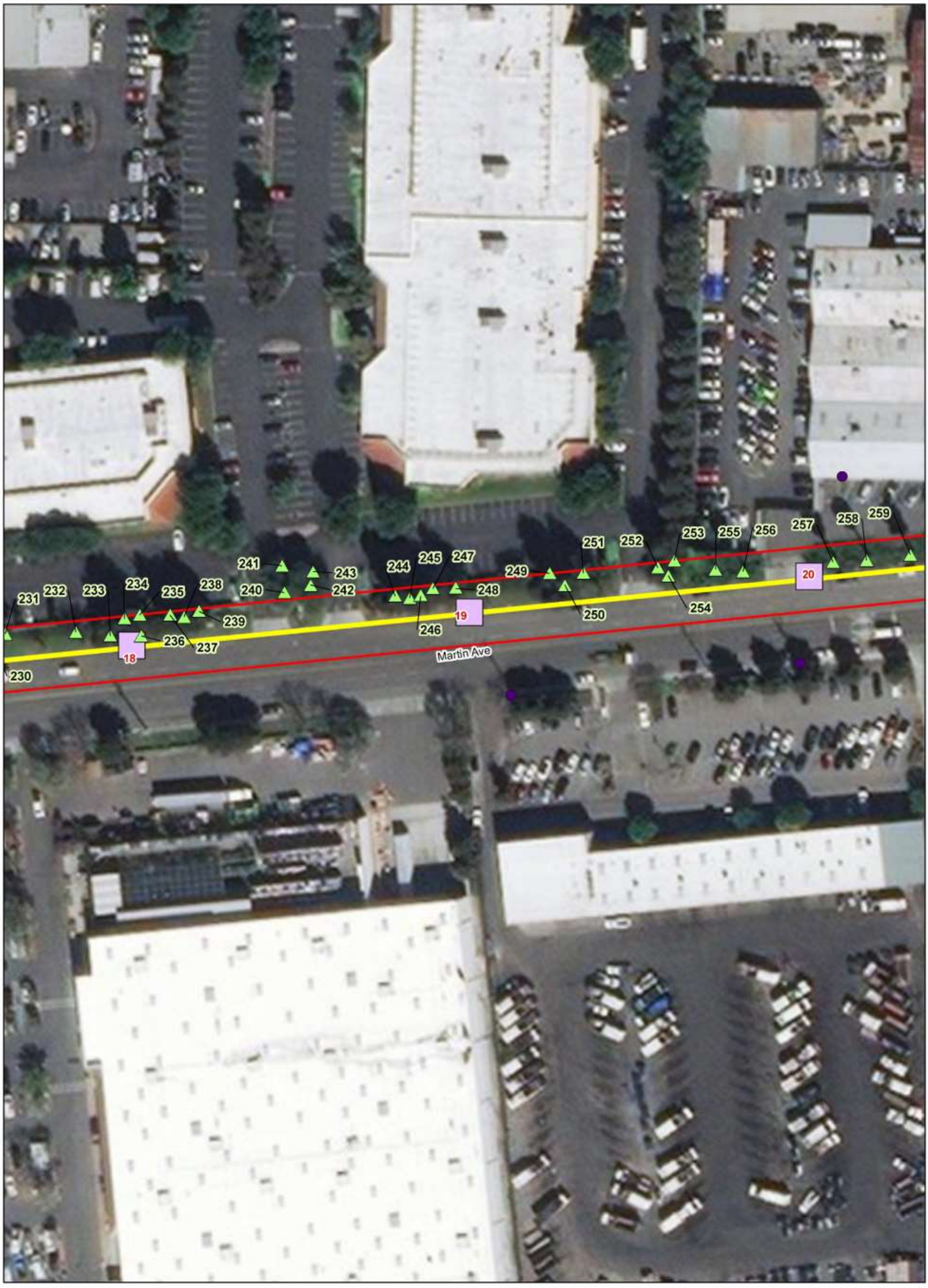
New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 13 of 23

Date: 9/13/2019



New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

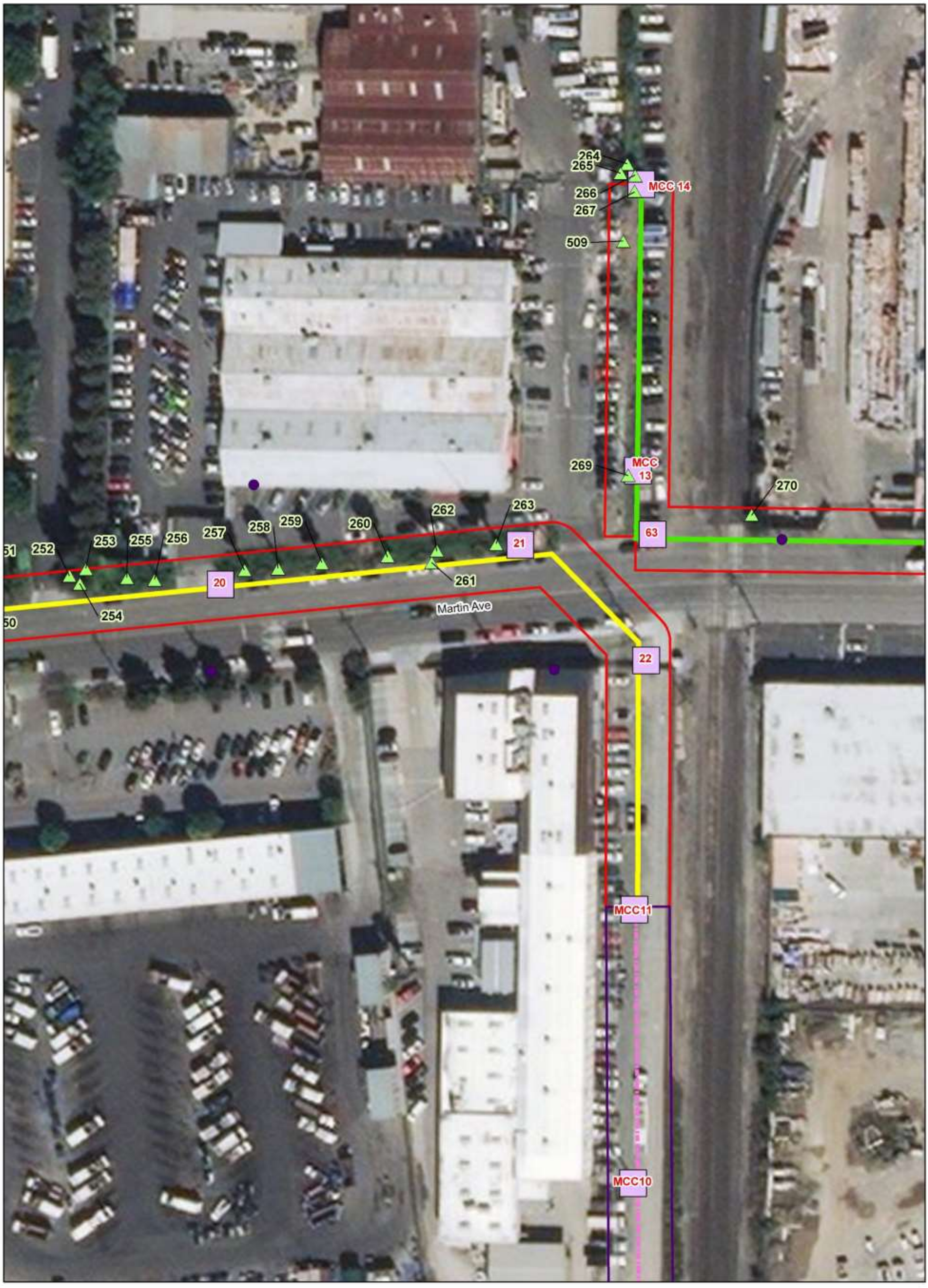
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 14 of 23

Date: 9/13/2019



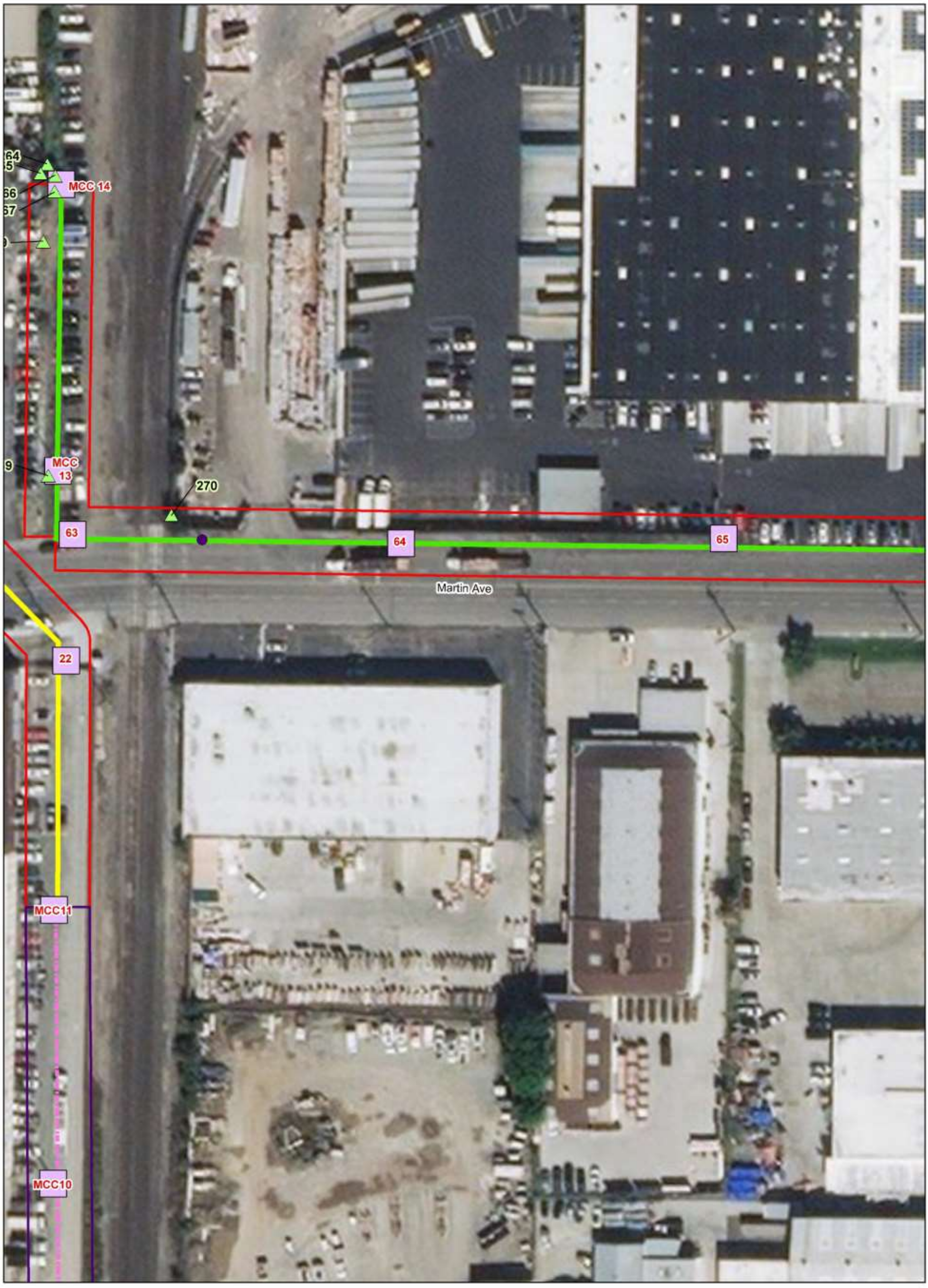
New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
New South Loop Overhead Transmission Line
Existing 60 kV Transmission Line (to be reconductored)
Surveyed Tree
Tree Survey Area
Preferred Alignment
Select ExistingTransmission Line

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 15 of 23

Date: 9/13/2019



Map Extent

New Structure Location
Existing Pole
New East Loop Overhead Transmission Line
New South Loop Overhead Transmission Line
Existing 60 kV Transmission Line (to be reconductored)
Surveyed Tree
Tree Survey Area
Preferred Alignment
Select ExistingTransmission Line

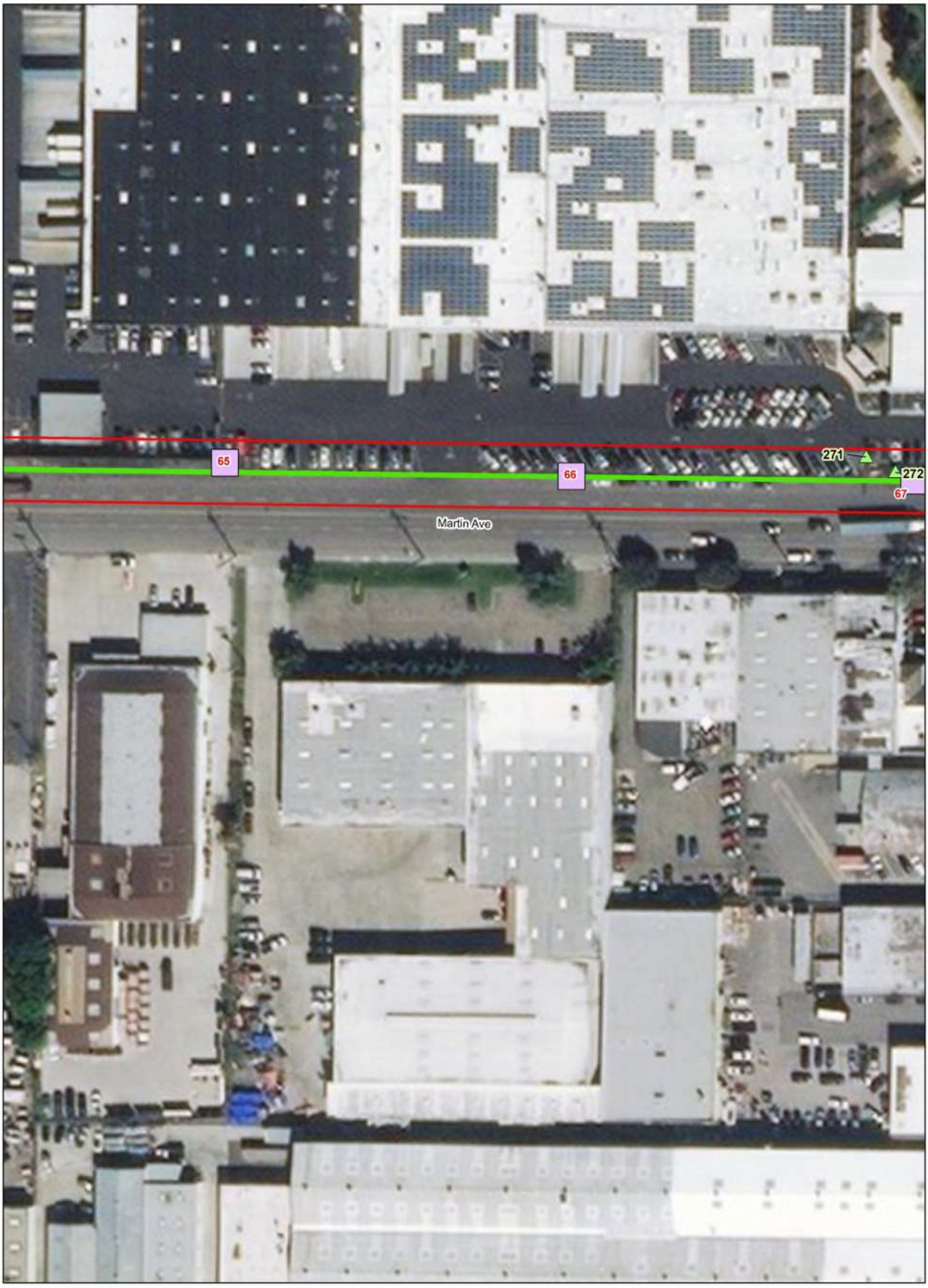
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 16 of 23

Date: 9/13/2019



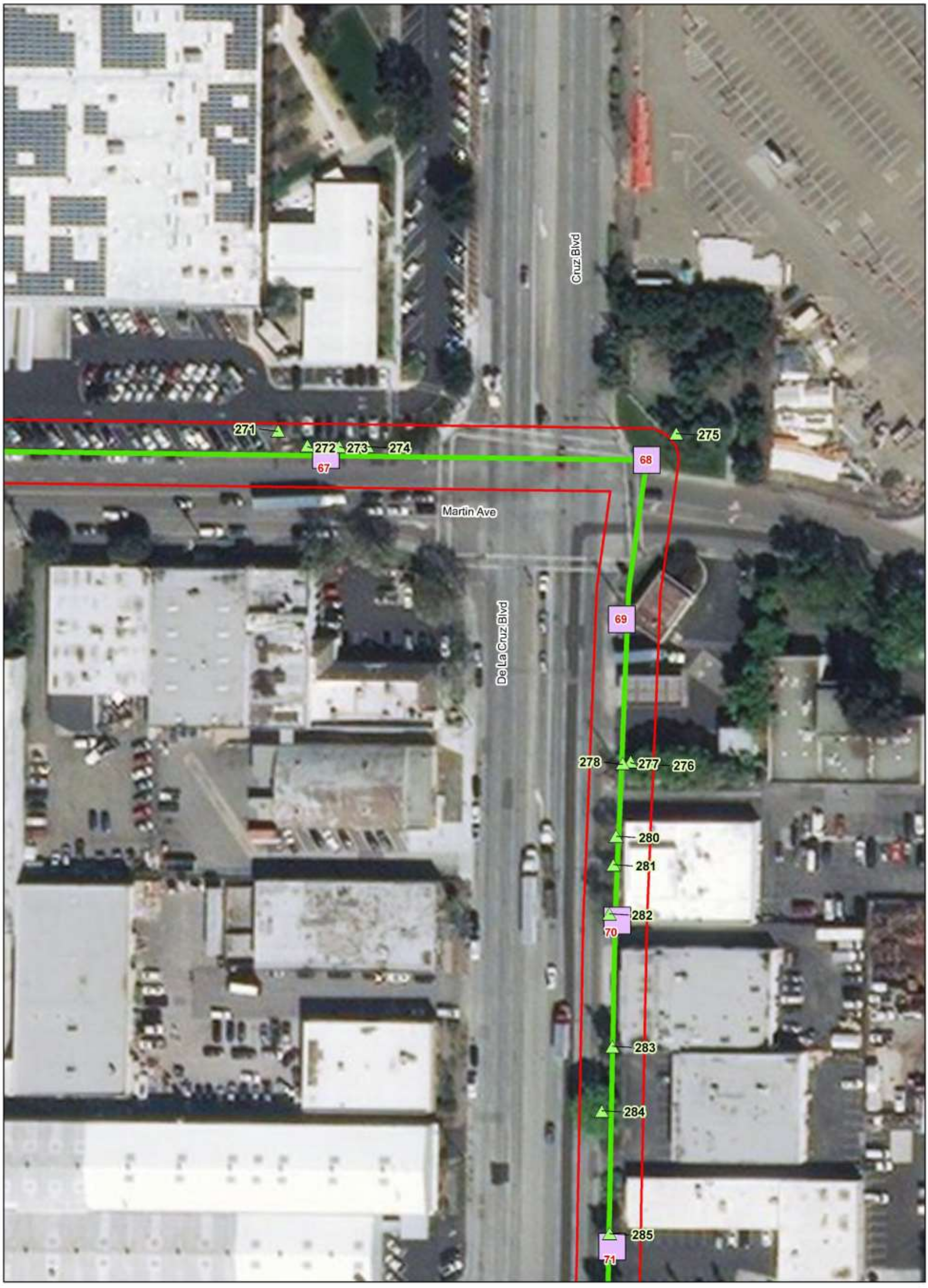
New Structure Location
New South Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 17 of 23

Date: 9/13/2019



Map Extent

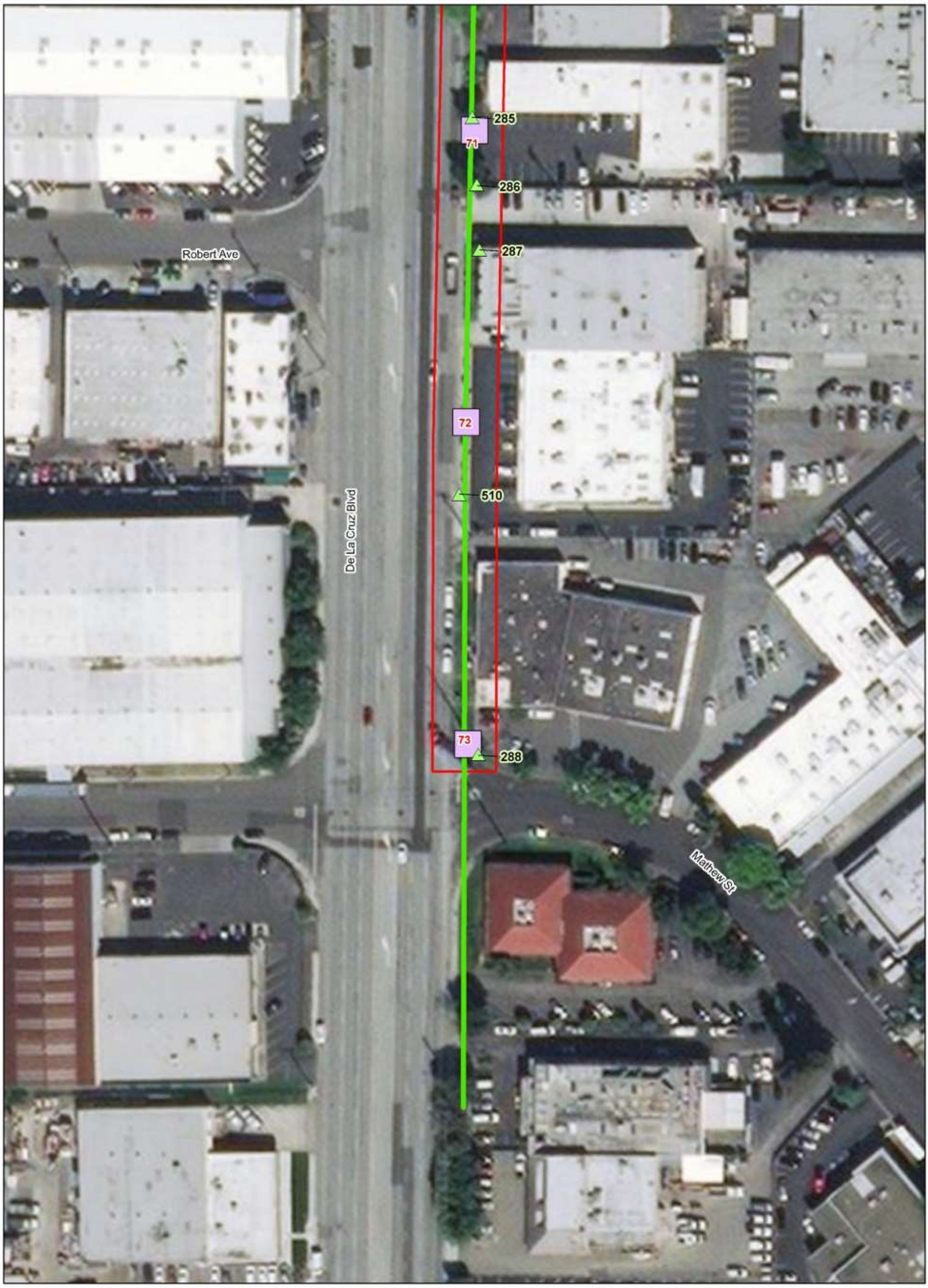
New Structure Location
New South Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 18 of 23

Date: 9/13/2019



New Structure Location
New South Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

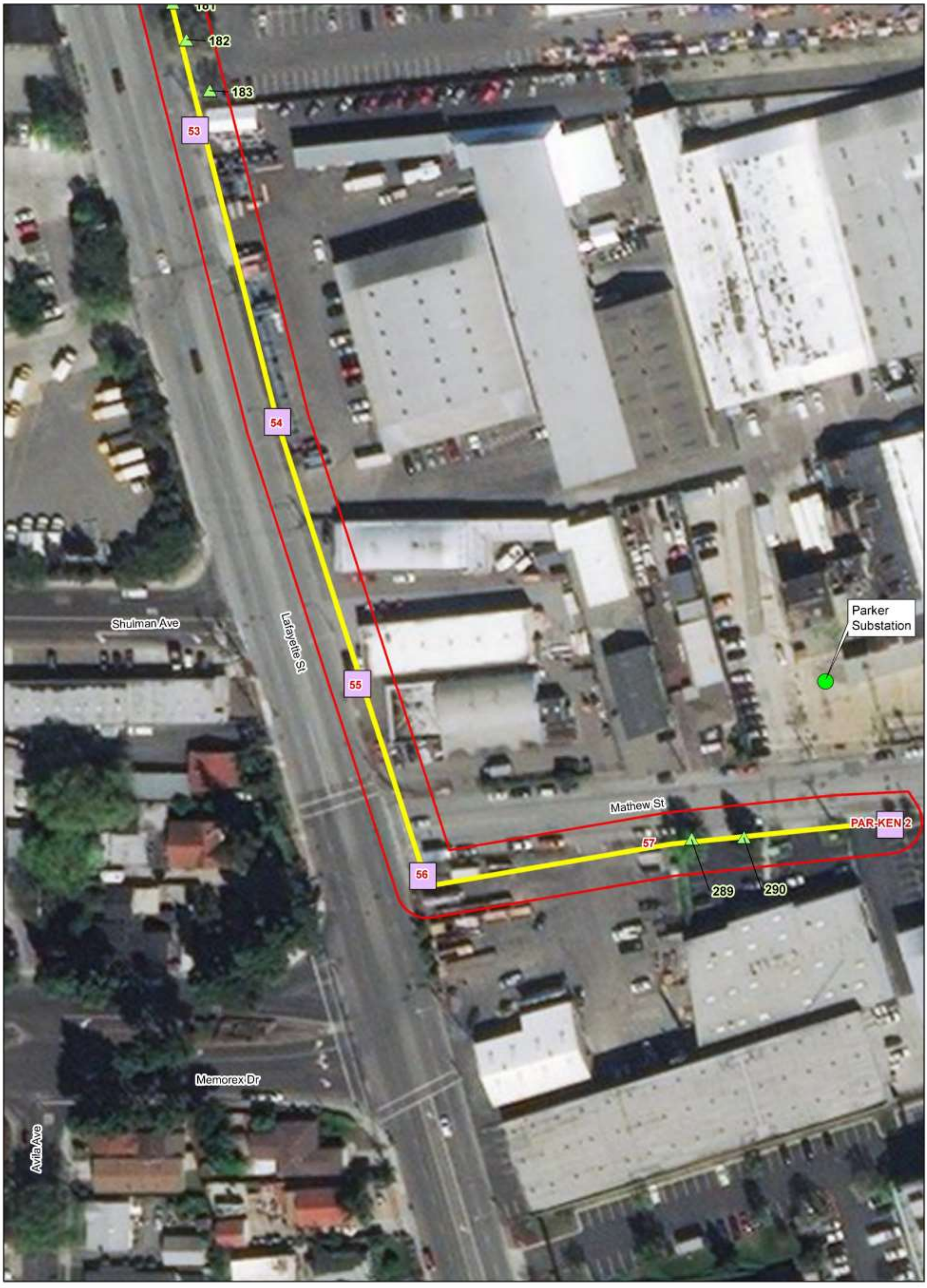
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 19 of 23

Date: 9/13/2019



Map Extent

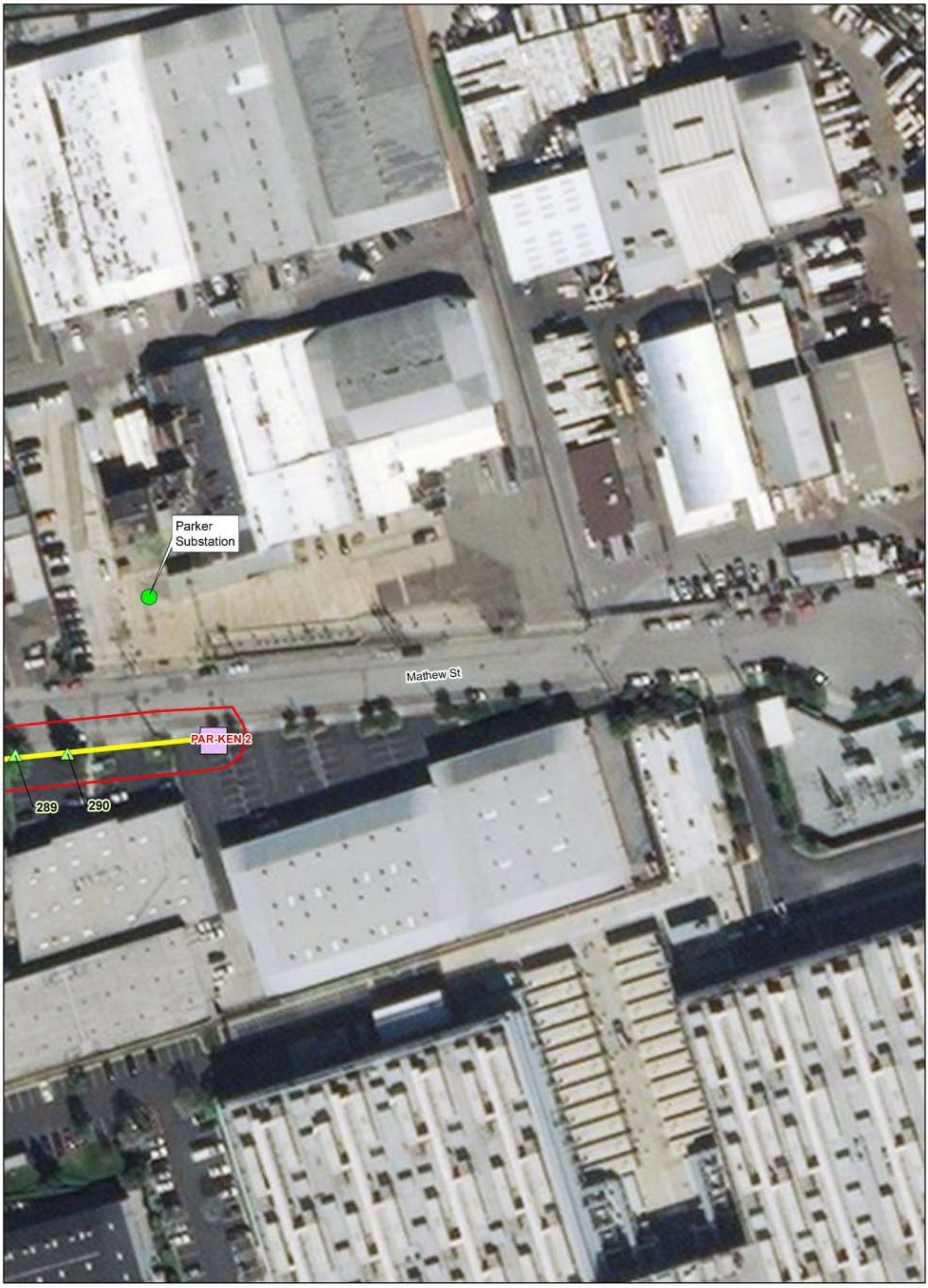
Substations
New Structure Location
New East Loop Overhead Transmission Line
Surveyed Tree
Tree Survey Area
Preferred Alignment

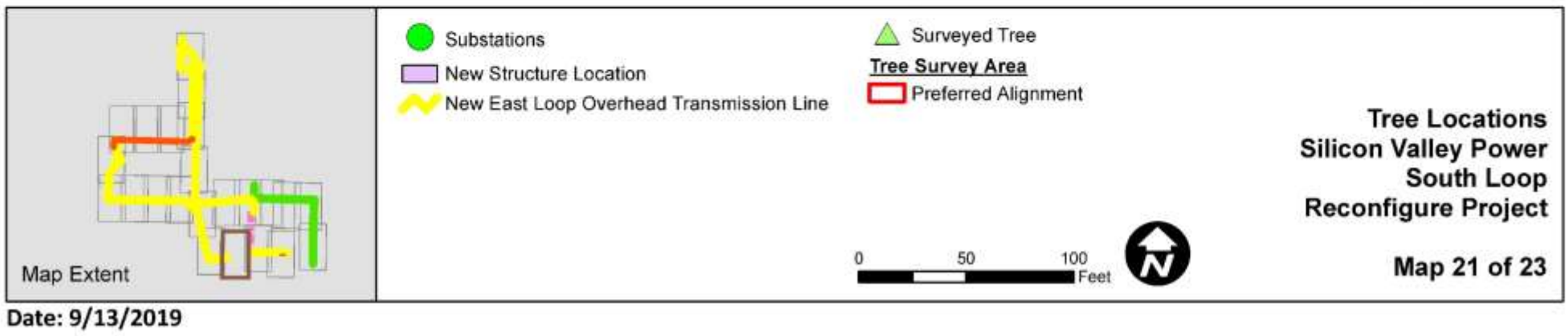
0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 20 of 23

Date: 9/13/2019





Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 21 of 23

Date: 9/13/2019

New Structure Location
New East Loop Overhead Transmission Line
Existing 60 kV Transmission Line (to be reconductored)

Surveyed Tree
Tree Survey Area
Preferred Alignment
Select ExistingTransmission Line

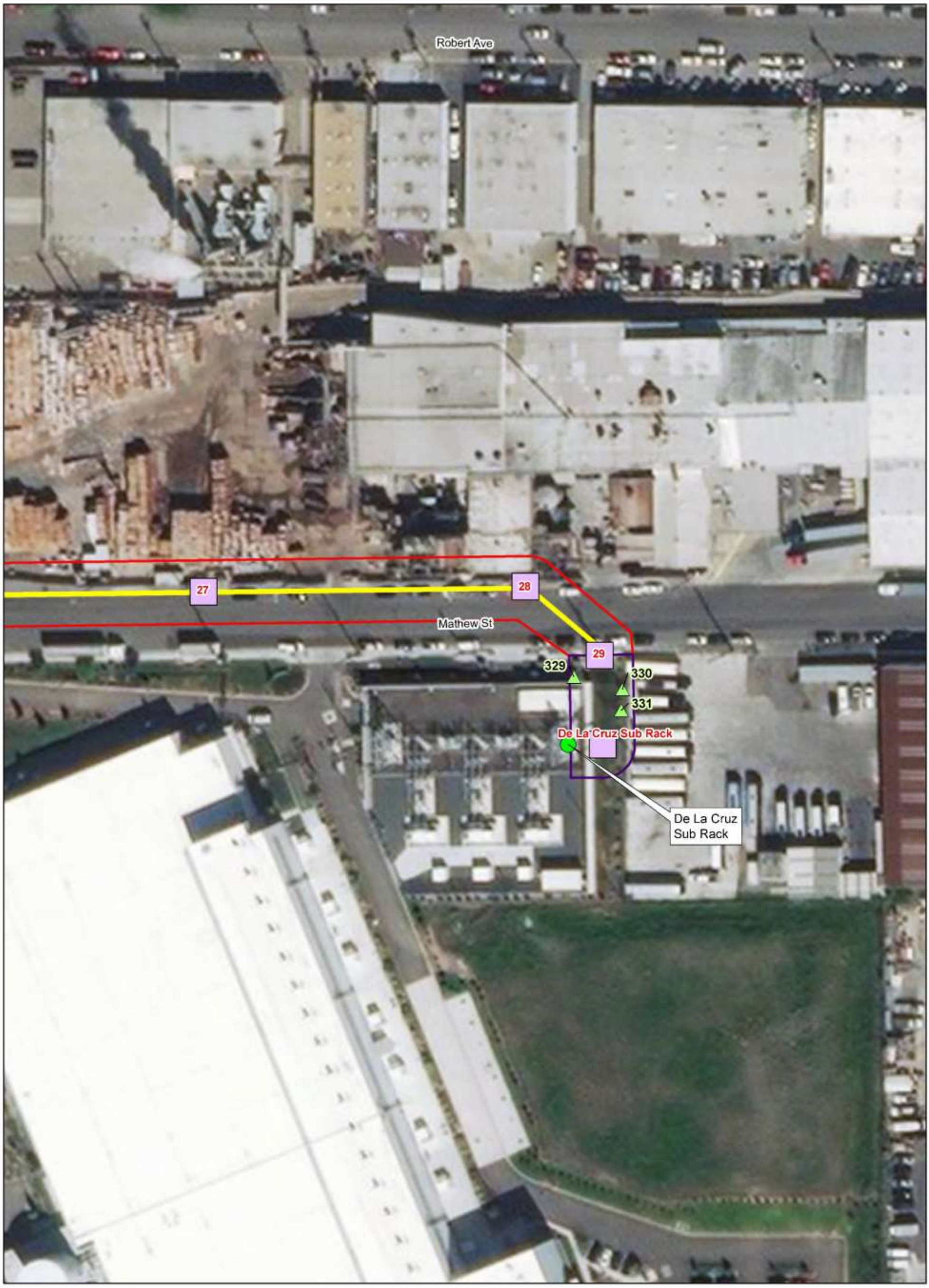
0 50 100 Feet

N

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 22 of 23

Date: 9/13/2019



Substations
New Structure Location
New East Loop Overhead Transmission Line

Surveyed Tree
Tree Survey Area
Preferred Alignment
Select ExistingTransmission Line

0 50 100 Feet

Tree Locations
Silicon Valley Power
South Loop
Reconfigure Project

Map 23 of 23

Date: 9/13/2019

Attachment C: City of Santa Clara Heritage Tree Inventory

8.10 HERITAGE TREE INVENTORY

8.10 HERITAGE TREE INVENTORY

The following table is the Heritage Tree Inventory as adopted by the City.

TABLE 8.10-1: HERITAGE TREE INVENTORY

Location/Property Description	*Record # or Tree Plaque*	*Tree Description*
Agnews State Hospital land		Elms and Palms
Alviso and Franklin Street between Lafayette and The Alameda and East Lafayette between Alviso and Santa Clara Street (both sides)		Sycamore trees
Brokaw Road between Coleman Avenue and Santa Clara Railroad Station (both sides)		Eucalyptus trees
City Park properties		Each tree to be evaluated
500 El Camino Real - Santa Clara University		Trees on campus
Fremont Park – north of the intersection of Fremont and Madison Streets	17	Two Linden Trees
1303 Fremont Street – Senior Center	16	Dawn Redwood
2566 Homestead Road –Rumbolz property at Homestead Road and Caldwell Place	8	Oak and redwood trees
373 Jefferson Street – Berryessa Adobe	Plaque	Olive tree
1098 Lexington Street Branch Library	3	European Elms, Bill Wilson Plaque, Vietnam Veteran Memorial Tree
1000 Lincoln Street – Carmelite Monestary	6	Each tree to be evaluated
Pomeroy Avenue (between Pruneridge and Forbes Avenue)	9	Oak in Planter
1149 Santa Clara Street – Warburton Property – Santa Clara and Main	11	Magnolia Tree
1000 Scott Boulevard		Oaks Coast live tree
3346 Solano Court	22	White Oak tree
3260 The Alameda – Santa Clara Woman's Club Adobe	13, Plaque	Redwood tree, large deodora cedar, large olive tree
Washington Street and Benton Street (northwest corner) – Dr. Paul House		Crepe Myrtle
1124 Washington Street - between Benton and Fremont Street – west side of street.	18	Large Bay Leaf tree Removed 2000 due to disease
1866 Washington Street	1	2 Live Oaks

TABLE 8.10-1: HERITAGE TREE INVENTORY

Location/Property Description	*Record # or Tree Plaque*	*Tree Description*
Wilson School - Homestead Rd.	14	Redwood trees - Documented but not photographed
420 North Winchester Boulevard - City of Santa Clara Cemetery	2	Various trees (each to be evaluated)

Appendix E

Special Status Species in the Project Area

Appendix E
Special-Status Species in the Project Area

Table E-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Study Area
Plants			
Alkali milk-vetch *Astragalus tener* var. *tener*	1B.2	Alkali playa, valley and foothill grassland, vernal pools	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Arcuate bush-mallow *Malacothamnus arcuatus*	1B.2	Chaparral, Cismontane woodland	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Contra Costa goldfields *Lasthenia conjugens*	1B.1 FE	Cismontane woodland, playas, valley and foothill grassland, vernal pools.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Hairless popcornflower *Plagiobothrys glaber*	1A	Meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Hall's bush-mallow *Malacothamnus hallii*	1B.2	Chaparral and some populations on serpentine.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	1B.1	Vernal Pools	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Point Reyes salty bird's-beak *Chloropyron maritimum* ssp. *palustre*	1B.2	Coastal Salt Marsh	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Robust spineflower *Chorizanthe robusta* var. *robust*	1B.1 FE	Cismontane woodland, coastal dunes, coastal scrub. Sandy terraces and bluffs or in loose sand.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Saline clover *Trifolium hydrophilum*	1B.2	Marshes and swamps, valley and foothill grassland, vernal pools.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Invertebrates			
Crotch bumble bee *Bombus crotchii*	S1, S2	Open grasslands and scrub.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Mimic tryonia (California brackish water snail) *Tryonia imitator*	S2	Brackish water	**None.** The project area is developed/disturbed. No suitable habitat to support this species**.**
Obscure bumble bee *Bombus caliginosus*	S1, S2	Coastal scrub and grasslands in humid and foggy areas.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Western bumble bee *Bombus occidentalis*	S1	Underground rodent burrows in open west-southwest slopes bordered by trees.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.

Table E-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Study Area
Amphibians			
California tiger salamander *Ambystoma californiense*	FT/ST	Vernal pools or other seasonal water sources for breeding. Upland grasslands with underground refuges (often ground squirrel burrows)	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Foothill yellow-legged frog *Rana boylii*	SC	Rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Reptiles			
Alameda whipsnake *Masticophis lateralis euryxanthus*	FT/ST	Chaparral and scrub habitats. Will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Northern California legless lizard *Anniella pulchra*	SSC	Moist warm loose soil with plant cover. Sparsely vegetated areas of beach dunes, chaparral, pine0oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Western pond turtle *Emys marmorata*	SSC	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Need basking sites and upland habitat up to 0.5 kilometer from water for egg laying.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Birds			
Alameda song sparrow *Melospiza melodia pusillula*	SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
American peregrine falcon *Falco peregriunus anatum*	FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Burrowing owl *Athene cunicularia*	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent on burrowing mammals, most notably, the California ground squirrel.	**Low potential to occur.** There are known populations of burrowing owl at the San Jose International Airport near the project area; however, there is no suitable habitat to support this species in the project area.
California black rail *Laterallus jamaicensis coturniculus*	ST/FP	Saltwater marshes and shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
California Ridgway's rail *Rallus obsoletus obsoletus*	FE/SE FP	Saltwater marshes and freshwater marshes.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.

Table E-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Study Area
Cooper's hawk *Accipiter cooperii*	WL	Wooded habitats from deep forests to leafy subdivisions and backyards.	**Low potential to occur.** Potential for marginal foraging habitat.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Swainson's hawk *Buteo swainsoni*	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Tricolored blackbird *Agelaius tricolor*	SSC SC	Highly colonial species, most numerous in Central Valley and vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Western snowy plover *Charadrius alexandrines nivosus*	FT/SSC	Coastal beaches, sand spits, dune-back beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/SE	Riparian habitat, cottonwood and willow trees.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
White-tailed kite *Elanus leucurus*	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Yellow rail *Coturnicops noveboracensis*	SSC	Shallow marshes, and wet meadows; in winter, drier fresh-water and brackish marshes, as well as dense, deep grass, and rice fields.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Mammals			
Pallid bat *Antrozous pallidus*	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Salt-marsh harvest mouse *Reithrodontomys raviventris*	FE/SE FP	Saltmarshes, diked and tidal wetlands, pickleweed	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Salt-marsh wandering shrew Sorex vagrans halicoetes	SSC	Saltmarshes	**None.** The project area is developed/disturbed. No suitable habitat to support this species.

Table E-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in Study Area
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.
Townsend's big-eared bat Corynorhinus townsendii	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**None.** The project area is developed/disturbed. No suitable habitat to support this species.

STATUS CODES:

FT Federally Threatened
FC Federal Candidate
SE State Endangered
SC State Candidate
SSC California Species of Special Concern
FP Fully Protected
WL Watch List

CNPS California Native Plant Society Listing
1A Plants presumed extinct in California
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 Plants about which we need more information – a review list
4 Plants of limited distribution – a watch list
.1 Seriously threatened in California (high degree/immediacy of threat)
.2 Fairly threatened in California (moderate degree/immediacy of threat)
.3 Not very threatened in California (low degree/immediacy of threats or no current threats known)

STATE RANKING The state rank (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

S1 Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.

Appendix F

Air Quality and Greenhouse Gas Emissions Calculations

SVP South Loop

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	248.50	1000sqft	5.70	248,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Light industrial setting, project includes no interior space development

Land Use - Overall work area is sum of approx 152,500 sq ft for wood poles and LDS poles plus 96,000 sq ft for TSPs

Construction Phase - Approx 6 mo duration, 132 days. Ph 1 - Site Prep and Foundations over 2 mo. Ph 2 - Installation and Stringing over 4 mo.

Off-road Equipment - Ph 2 - Installation and Stringing (appx 20 to 24 pcs off-road daily plus trucks), including welders, booms, lifts, pullers, tensioners (as other).

Off-road Equipment - Ph 1 - Foundations (apx 7 pcs off-road daily plus trucks) include loaders, auger attachments and lifts, crane.

Trips and VMT - Ph 1 - apx 18 workers, 2 trips daily. Ph 2 - apx 40 workers 2 trips daily. Hauling HDTrucks around 12 trips per day over 132 days for 6-mo sched.

Grading - Excavation to remove approx 1000 cy.

Vehicle Trips - Negligible operational-phase vehicle activity.

Consumer Products - No operational-phase consumer products.

Area Coating - No operational-phase architectural coatings.

Landscape Equipment - No operational-phase landscaping.

Energy Use - No operational-phase end-use of electricity or nat gas.

Water And Wastewater - No operational-phase end-use of water.

Solid Waste - No operational-phase production of solid waste.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	88.00
tblConstructionPhase	NumDays	10.00	44.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblSolidWaste	SolidWasteGenerationRate	308.14	0.00
tblTripsAndVMT	HaulingTripNumber	125.00	792.00
tblTripsAndVMT	HaulingTripNumber	0.00	792.00
tblTripsAndVMT	WorkerTripNumber	23.00	36.00
tblTripsAndVMT	WorkerTripNumber	104.00	80.00
tblVehicleTrips	ST_TR	1.32	1.0000e-003
tblVehicleTrips	SU_TR	0.68	1.0000e-003
tblVehicleTrips	WD_TR	6.97	1.0000e-003
tblWater	IndoorWaterUseRate	57,465,625.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2720	2.6443	2.2685	4.8800e-003	0.1258	0.1237	0.2495	0.0526	0.1170	0.1696	0.0000	432.8516	432.8516	0.0754	0.0000	434.7374
Maximum	**0.2720**	**2.6443**	**2.2685**	**4.8800e-003**	**0.1258**	**0.1237**	**0.2495**	**0.0526**	**0.1170**	**0.1696**	**0.0000**	**432.8516**	**432.8516**	**0.0754**	**0.0000**	**434.7374**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2720	2.6443	2.2684	4.8800e-003	0.1258	0.1237	0.2495	0.0526	0.1170	0.1696	0.0000	432.8513	432.8513	0.0754	0.0000	434.7371
Maximum	**0.2720**	**2.6443**	**2.2684**	**4.8800e-003**	**0.1258**	**0.1237**	**0.2495**	**0.0526**	**0.1170**	**0.1696**	**0.0000**	**432.8513**	**432.8513**	**0.0754**	**0.0000**	**434.7371**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2020	7-31-2020	0.5986	0.5986
2	8-1-2020	9-30-2020	0.9766	0.9766
		Highest	0.9766	0.9766

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0000e-005	3.2000e-004	9.4000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2800	0.2800	1.0000e-005	0.0000	0.2803
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**3.4000e-004**	**3.2400e-003**	**0.0000**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**7.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.2845**	**0.2845**	**2.0000e-005**	**0.0000**	**0.2850**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0000e-005	3.2000e-004	9.4000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2800	0.2800	1.0000e-005	0.0000	0.2803
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**3.4000e-004**	**3.2400e-003**	**0.0000**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**7.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.2845**	**0.2845**	**2.0000e-005**	**0.0000**	**0.2850**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/29/2020	7/29/2020	5	44	Site Prep and Foundations
2	Building Construction	Building Construction	8/10/2020	12/9/2020	5	88	Installation and Stringing

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	2	6.00	63	0.31
Site Preparation	Bore/Drill Rigs	2	6.00	221	0.50
Site Preparation	Cranes	1	4.00	231	0.29
Site Preparation	Forklifts	1	6.00	89	0.20
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	6	6.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Other General Industrial Equipment	4	6.00	88	0.34
Building Construction	Pumps	1	2.00	84	0.74
Building Construction	Sweepers/Scrubbers	1	2.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	9	36.00	0.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	25	80.00	41.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0364	0.0000	0.0364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4355	0.2933	6.8000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	60.1589	60.1589	0.0195	0.0000	60.6453
Total	**0.0389**	**0.4355**	**0.2933**	**6.8000e-004**	**0.0663**	**0.0198**	**0.0861**	**0.0364**	**0.0182**	**0.0547**	**0.0000**	**60.1589**	**60.1589**	**0.0195**	**0.0000**	**60.6453**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2900e-003	0.1149	0.0235	3.1000e-004	6.7100e-003	3.7000e-004	7.0900e-003	1.8500e-003	3.6000e-004	2.2000e-003	0.0000	30.2032	30.2032	1.3800e-003	0.0000	30.2378
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.8900e-003	0.0198	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.3868	5.3868	1.3000e-004	0.0000	5.3901
Total	**5.9200e-003**	**0.1168**	**0.0434**	**3.7000e-004**	**0.0130**	**4.1000e-004**	**0.0134**	**3.5200e-003**	**4.0000e-004**	**3.9100e-003**	**0.0000**	**35.5900**	**35.5900**	**1.5100e-003**	**0.0000**	**35.6279**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0364	0.0000	0.0364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4355	0.2933	6.8000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	60.1589	60.1589	0.0195	0.0000	60.6453
Total	**0.0389**	**0.4355**	**0.2933**	**6.8000e-004**	**0.0663**	**0.0198**	**0.0861**	**0.0364**	**0.0182**	**0.0547**	**0.0000**	**60.1589**	**60.1589**	**0.0195**	**0.0000**	**60.6453**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2900e-003	0.1149	0.0235	3.1000e-004	6.7100e-003	3.7000e-004	7.0900e-003	1.8500e-003	3.6000e-004	2.2000e-003	0.0000	30.2032	30.2032	1.3800e-003	0.0000	30.2378
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.8900e-003	0.0198	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.3868	5.3868	1.3000e-004	0.0000	5.3901
Total	**5.9200e-003**	**0.1168**	**0.0434**	**3.7000e-004**	**0.0130**	**4.1000e-004**	**0.0134**	**3.5200e-003**	**4.0000e-004**	**3.9100e-003**	**0.0000**	**35.5900**	**35.5900**	**1.5100e-003**	**0.0000**	**35.6279**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2050	1.7633	1.7655	2.7600e-003		0.1019	0.1019		0.0969	0.0969	0.0000	235.7939	235.7939	0.0503	0.0000	237.0522
Total	**0.2050**	**1.7633**	**1.7655**	**2.7600e-003**		**0.1019**	**0.1019**		**0.0969**	**0.0969**	**0.0000**	**235.7939**	**235.7939**	**0.0503**	**0.0000**	**237.0522**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2900e-003	0.1149	0.0235	3.1000e-004	6.7100e-003	3.7000e-004	7.0900e-003	1.8500e-003	3.6000e-004	2.2000e-003	0.0000	30.2032	30.2032	1.3800e-003	0.0000	30.2378
Vendor	7.1500e-003	0.2054	0.0547	4.9000e-004	0.0119	1.0200e-003	0.0129	3.4300e-003	9.7000e-004	4.4000e-003	0.0000	47.1643	47.1643	2.1600e-003	0.0000	47.2184
Worker	0.0117	8.4000e-003	0.0881	2.6000e-004	0.0279	1.8000e-004	0.0281	7.4200e-003	1.7000e-004	7.5900e-003	0.0000	23.9413	23.9413	5.9000e-004	0.0000	23.9559
Total	**0.0221**	**0.3287**	**0.1663**	**1.0600e-003**	**0.0465**	**1.5700e-003**	**0.0481**	**0.0127**	**1.5000e-003**	**0.0142**	**0.0000**	**101.3088**	**101.3088**	**4.1300e-003**	**0.0000**	**101.4121**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2050	1.7633	1.7655	2.7600e-003		0.1019	0.1019		0.0969	0.0969	0.0000	235.7936	235.7936	0.0503	0.0000	237.0519
Total	**0.2050**	**1.7633**	**1.7655**	**2.7600e-003**		**0.1019**	**0.1019**		**0.0969**	**0.0969**	**0.0000**	**235.7936**	**235.7936**	**0.0503**	**0.0000**	**237.0519**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2900e-003	0.1149	0.0235	3.1000e-004	6.7100e-003	3.7000e-004	7.0900e-003	1.8500e-003	3.6000e-004	2.2000e-003	0.0000	30.2032	30.2032	1.3800e-003	0.0000	30.2378
Vendor	7.1500e-003	0.2054	0.0547	4.9000e-004	0.0119	1.0200e-003	0.0129	3.4300e-003	9.7000e-004	4.4000e-003	0.0000	47.1643	47.1643	2.1600e-003	0.0000	47.2184
Worker	0.0117	8.4000e-003	0.0881	2.6000e-004	0.0279	1.8000e-004	0.0281	7.4200e-003	1.7000e-004	7.5900e-003	0.0000	23.9413	23.9413	5.9000e-004	0.0000	23.9559
Total	**0.0221**	**0.3287**	**0.1663**	**1.0600e-003**	**0.0465**	**1.5700e-003**	**0.0481**	**0.0127**	**1.5000e-003**	**0.0142**	**0.0000**	**101.3088**	**101.3088**	**4.1300e-003**	**0.0000**	**101.4121**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.0000e-005	3.2000e-004	9.4000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2800	0.2800	1.0000e-005	0.0000	0.2803
Unmitigated	7.0000e-005	3.2000e-004	9.4000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2800	0.2800	1.0000e-005	0.0000	0.2803

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.25	0.25	0.25	725	725
Total	0.25	0.25	0.25	725	725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003
Unmitigated	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003
Total	**2.2000e-004**	**2.0000e-005**	**2.3000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4400e-003**	**4.4400e-003**	**1.0000e-005**	**0.0000**	**4.7400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4400e-003	4.4400e-003	1.0000e-005	0.0000	4.7400e-003
Total	**2.2000e-004**	**2.0000e-005**	**2.3000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.4400e-003**	**4.4400e-003**	**1.0000e-005**	**0.0000**	**4.7400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SVP South Loop

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	248.50	1000sqft	5.70	248,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Light industrial setting, project includes no interior space development

Land Use - Overall work area is sum of approx 152,500 sq ft for wood poles and LDS poles plus 96,000 sq ft for TSPs

Construction Phase - Approx 6 mo duration, 132 days. Ph 1 - Site Prep and Foundations over 2 mo. Ph 2 - Installation and Stringing over 4 mo.

Off-road Equipment - Ph 2 - Installation and Stringing (appx 20 to 24 pcs off-road daily plus trucks), including welders, booms, lifts, pullers, tensioners (as other).

Off-road Equipment - Ph 1 - Foundations (apx 7 pcs off-road daily plus trucks) include loaders, auger attachments and lifts, crane.

Trips and VMT - Ph 1 - apx 18 workers, 2 trips daily. Ph 2 - apx 40 workers 2 trips daily. Hauling HDTrucks around 12 trips per day over 132 days for 6-mo sched.

Grading - Excavation to remove approx 1000 cy.

Vehicle Trips - Negligible operational-phase vehicle activity.

Consumer Products - No operational-phase consumer products.

Area Coating - No operational-phase architectural coatings.

Landscape Equipment - No operational-phase landscaping.

Energy Use - No operational-phase end-use of electricity or nat gas.

Water And Wastewater - No operational-phase end-use of water.

Solid Waste - No operational-phase production of solid waste.

SVP South Loop - Santa Clara County, Summer

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	88.00
tblConstructionPhase	NumDays	10.00	44.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblSolidWaste	SolidWasteGenerationRate	308.14	0.00
tblTripsAndVMT	HaulingTripNumber	125.00	792.00
tblTripsAndVMT	HaulingTripNumber	0.00	792.00
tblTripsAndVMT	WorkerTripNumber	23.00	36.00
tblTripsAndVMT	WorkerTripNumber	104.00	80.00
tblVehicleTrips	ST_TR	1.32	1.0000e-003
tblVehicleTrips	SU_TR	0.68	1.0000e-003
tblVehicleTrips	WD_TR	6.97	1.0000e-003
tblWater	IndoorWaterUseRate	57,465,625.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	5.1709	47.4156	44.0108	0.0876	3.6239	2.3502	4.5437	1.8202	2.2354	2.6670	0.0000	8,508.4576	8,508.4576	1.3630	0.0000	8,542.5324
Maximum	**5.1709**	**47.4156**	**44.0108**	**0.0876**	**3.6239**	**2.3502**	**4.5437**	**1.8202**	**2.2354**	**2.6670**	**0.0000**	**8,508.4576**	**8,508.4576**	**1.3630**	**0.0000**	**8,542.5324**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	5.1709	47.4156	44.0108	0.0876	3.6239	2.3502	4.5437	1.8202	2.2354	2.6670	0.0000	8,508.4576	8,508.4576	1.3630	0.0000	8,542.5324
Maximum	**5.1709**	**47.4156**	**44.0108**	**0.0876**	**3.6239**	**2.3502**	**4.5437**	**1.8202**	**2.2354**	**2.6670**	**0.0000**	**8,508.4576**	**8,508.4576**	**1.3630**	**0.0000**	**8,542.5324**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.6000e-004	1.7100e-003	5.4900e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.8004	1.8004	6.0000e-005		1.8019
Total	**2.8600e-003**	**1.9500e-003**	**0.0310**	**2.0000e-005**	**1.5300e-003**	**1.1000e-004**	**1.6400e-003**	**4.1000e-004**	**1.1000e-004**	**5.2000e-004**		**1.8548**	**1.8548**	**2.1000e-004**	**0.0000**	**1.8600**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.6000e-004	1.7100e-003	5.4900e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.8004	1.8004	6.0000e-005		1.8019
Total	**2.8600e-003**	**1.9500e-003**	**0.0310**	**2.0000e-005**	**1.5300e-003**	**1.1000e-004**	**1.6400e-003**	**4.1000e-004**	**1.1000e-004**	**5.2000e-004**		**1.8548**	**1.8548**	**2.1000e-004**	**0.0000**	**1.8600**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/29/2020	7/29/2020	5	44	Site Prep and Foundations
2	Building Construction	Building Construction	8/10/2020	12/9/2020	5	88	Installation and Stringing

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	2	6.00	63	0.31
Site Preparation	Bore/Drill Rigs	2	6.00	221	0.50
Site Preparation	Cranes	1	4.00	231	0.29
Site Preparation	Forklifts	1	6.00	89	0.20
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	6	6.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Other General Industrial Equipment	4	6.00	88	0.34
Building Construction	Pumps	1	2.00	84	0.74
Building Construction	Sweepers/Scrubbers	1	2.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	9	36.00	0.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	25	80.00	41.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0136	0.0000	3.0136	1.6555	0.0000	1.6555			0.0000			0.0000
Off-Road	1.7691	19.7941	13.3306	0.0311		0.9011	0.9011		0.8290	0.8290		3,014.2663	3,014.2663	0.9749		3,038.6382
Total	**1.7691**	**19.7941**	**13.3306**	**0.0311**	**3.0136**	**0.9011**	**3.9147**	**1.6555**	**0.8290**	**2.4845**		**3,014.2663**	**3,014.2663**	**0.9749**		**3,038.6382**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1479	5.1185	1.0364	0.0143	0.3146	0.0169	0.3314	0.0862	0.0161	0.1023		1,524.1858	1,524.1858	0.0678		1,525.8817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1251	0.0768	0.9901	2.9100e-003	0.2957	1.8400e-003	0.2976	0.0784	1.7000e-003	0.0801		290.1623	290.1623	7.1000e-003		290.3398
Total	**0.2730**	**5.1953**	**2.0265**	**0.0172**	**0.6103**	**0.0187**	**0.6290**	**0.1647**	**0.0178**	**0.1825**		**1,814.3481**	**1,814.3481**	**0.0749**		**1,816.2216**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0136	0.0000	3.0136	1.6555	0.0000	1.6555			0.0000			0.0000
Off-Road	1.7691	19.7941	13.3306	0.0311		0.9011	0.9011		0.8290	0.8290	0.0000	3,014.2663	3,014.2663	0.9749		3,038.6382
Total	**1.7691**	**19.7941**	**13.3306**	**0.0311**	**3.0136**	**0.9011**	**3.9147**	**1.6555**	**0.8290**	**2.4845**	**0.0000**	**3,014.2663**	**3,014.2663**	**0.9749**		**3,038.6382**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1479	5.1185	1.0364	0.0143	0.3146	0.0169	0.3314	0.0862	0.0161	0.1023		1,524.1858	1,524.1858	0.0678		1,525.8817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1251	0.0768	0.9901	2.9100e-003	0.2957	1.8400e-003	0.2976	0.0784	1.7000e-003	0.0801		290.1623	290.1623	7.1000e-003		290.3398
Total	**0.2730**	**5.1953**	**2.0265**	**0.0172**	**0.6103**	**0.0187**	**0.6290**	**0.1647**	**0.0178**	**0.1825**		**1,814.3481**	**1,814.3481**	**0.0749**		**1,816.2216**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.6596	40.0750	40.1247	0.0627		2.3147	2.3147		2.2016	2.2016		5,907.2342	5,907.2342	1.2609		5,938.7566
Total	**4.6596**	**40.0750**	**40.1247**	**0.0627**		**2.3147**	**2.3147**		**2.2016**	**2.2016**		**5,907.2342**	**5,907.2342**	**1.2609**		**5,938.7566**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0739	2.5592	0.5182	7.1400e-003	0.1573	8.4300e-003	0.1657	0.0431	8.0600e-003	0.0512		762.0929	762.0929	0.0339		762.9409
Vendor	0.1593	4.6107	1.1677	0.0113	0.2776	0.0230	0.3006	0.0799	0.0220	0.1019		1,194.3254	1,194.3254	0.0524		1,195.6353
Worker	0.2781	0.1708	2.2003	6.4700e-003	0.6572	4.1000e-003	0.6613	0.1743	3.7800e-003	0.1781		644.8051	644.8051	0.0158		645.1996
Total	**0.5113**	**7.3407**	**3.8861**	**0.0249**	**1.0921**	**0.0355**	**1.1276**	**0.2973**	**0.0338**	**0.3311**		**2,601.2234**	**2,601.2234**	**0.1021**		**2,603.7758**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.6596	40.0750	40.1247	0.0627		2.3147	2.3147		2.2016	2.2016	0.0000	5,907.2342	5,907.2342	1.2609		5,938.7566
Total	**4.6596**	**40.0750**	**40.1247**	**0.0627**		**2.3147**	**2.3147**		**2.2016**	**2.2016**	**0.0000**	**5,907.2342**	**5,907.2342**	**1.2609**		**5,938.7566**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0739	2.5592	0.5182	7.1400e-003	0.1573	8.4300e-003	0.1657	0.0431	8.0600e-003	0.0512		762.0929	762.0929	0.0339		762.9409
Vendor	0.1593	4.6107	1.1677	0.0113	0.2776	0.0230	0.3006	0.0799	0.0220	0.1019		1,194.3254	1,194.3254	0.0524		1,195.6353
Worker	0.2781	0.1708	2.2003	6.4700e-003	0.6572	4.1000e-003	0.6613	0.1743	3.7800e-003	0.1781		644.8051	644.8051	0.0158		645.1996
Total	**0.5113**	**7.3407**	**3.8861**	**0.0249**	**1.0921**	**0.0355**	**1.1276**	**0.2973**	**0.0338**	**0.3311**		**2,601.2234**	**2,601.2234**	**0.1021**		**2,603.7758**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6000e-004	1.7100e-003	5.4900e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.8004	1.8004	6.0000e-005		1.8019
Unmitigated	4.6000e-004	1.7100e-003	5.4900e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.8004	1.8004	6.0000e-005		1.8019

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.25	0.25	0.25	725	725
Total	0.25	0.25	0.25	725	725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Unmitigated	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Total	**2.4000e-003**	**2.4000e-004**	**0.0255**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0544**	**0.0544**	**1.5000e-004**		**0.0580**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Total	**2.4000e-003**	**2.4000e-004**	**0.0255**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0544**	**0.0544**	**1.5000e-004**		**0.0580**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SVP South Loop

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	248.50	1000sqft	5.70	248,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Light industrial setting, project includes no interior space development

Land Use - Overall work area is sum of approx 152,500 sq ft for wood poles and LDS poles plus 96,000 sq ft for TSPs

Construction Phase - Approx 6 mo duration, 132 days. Ph 1 - Site Prep and Foundations over 2 mo. Ph 2 - Installation and Stringing over 4 mo.

Off-road Equipment - Ph 2 - Installation and Stringing (appx 20 to 24 pcs off-road daily plus trucks), including welders, booms, lifts, pullers, tensioners (as other).

Off-road Equipment - Ph 1 - Foundations (apx 7 pcs off-road daily plus trucks) include loaders, auger attachments and lifts, crane.

Trips and VMT - Ph 1 - apx 18 workers, 2 trips daily. Ph 2 - apx 40 workers 2 trips daily. Hauling HDTrucks around 12 trips per day over 132 days for 6-mo sched.

Grading - Excavation to remove approx 1000 cy.

Vehicle Trips - Negligible operational-phase vehicle activity.

Consumer Products - No operational-phase consumer products.

Area Coating - No operational-phase architectural coatings.

Landscape Equipment - No operational-phase landscaping.

Energy Use - No operational-phase end-use of electricity or nat gas.

Water And Wastewater - No operational-phase end-use of water.

Solid Waste - No operational-phase production of solid waste.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	88.00
tblConstructionPhase	NumDays	10.00	44.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblSolidWaste	SolidWasteGenerationRate	308.14	0.00
tblTripsAndVMT	HaulingTripNumber	125.00	792.00
tblTripsAndVMT	HaulingTripNumber	0.00	792.00
tblTripsAndVMT	WorkerTripNumber	23.00	36.00
tblTripsAndVMT	WorkerTripNumber	104.00	80.00
tblVehicleTrips	ST_TR	1.32	1.0000e-003
tblVehicleTrips	SU_TR	0.68	1.0000e-003
tblVehicleTrips	WD_TR	6.97	1.0000e-003
tblWater	IndoorWaterUseRate	57,465,625.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	5.1990	47.5691	44.0514	0.0867	3.6239	2.3507	4.5440	1.8202	2.2359	2.6672	0.0000	8,412.7891	8,412.7891	1.3675	0.0000	8,446.9773
Maximum	**5.1990**	**47.5691**	**44.0514**	**0.0867**	**3.6239**	**2.3507**	**4.5440**	**1.8202**	**2.2359**	**2.6672**	**0.0000**	**8,412.7891**	**8,412.7891**	**1.3675**	**0.0000**	**8,446.9773**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	5.1990	47.5691	44.0514	0.0867	3.6239	2.3507	4.5440	1.8202	2.2359	2.6672	0.0000	8,412.7891	8,412.7891	1.3675	0.0000	8,446.9772
Maximum	**5.1990**	**47.5691**	**44.0514**	**0.0867**	**3.6239**	**2.3507**	**4.5440**	**1.8202**	**2.2359**	**2.6672**	**0.0000**	**8,412.7891**	**8,412.7891**	**1.3675**	**0.0000**	**8,446.9772**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.0000e-004	1.8300e-003	5.3600e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.6774	1.6774	6.0000e-005		1.6789
Total	**2.8000e-003**	**2.0700e-003**	**0.0309**	**2.0000e-005**	**1.5300e-003**	**1.1000e-004**	**1.6400e-003**	**4.1000e-004**	**1.1000e-004**	**5.2000e-004**		**1.7318**	**1.7318**	**2.1000e-004**	**0.0000**	**1.7369**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.0000e-004	1.8300e-003	5.3600e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.6774	1.6774	6.0000e-005		1.6789
Total	**2.8000e-003**	**2.0700e-003**	**0.0309**	**2.0000e-005**	**1.5300e-003**	**1.1000e-004**	**1.6400e-003**	**4.1000e-004**	**1.1000e-004**	**5.2000e-004**		**1.7318**	**1.7318**	**2.1000e-004**	**0.0000**	**1.7369**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/29/2020	7/29/2020	5	44	Site Prep and Foundations
2	Building Construction	Building Construction	8/10/2020	12/9/2020	5	88	Installation and Stringing

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	2	6.00	63	0.31
Site Preparation	Bore/Drill Rigs	2	6.00	221	0.50
Site Preparation	Cranes	1	4.00	231	0.29
Site Preparation	Forklifts	1	6.00	89	0.20
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	6	6.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Other General Industrial Equipment	4	6.00	88	0.34
Building Construction	Pumps	1	2.00	84	0.74
Building Construction	Sweepers/Scrubbers	1	2.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	9	36.00	0.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	25	80.00	41.00	792.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0136	0.0000	3.0136	1.6555	0.0000	1.6555			0.0000			0.0000
Off-Road	1.7691	19.7941	13.3306	0.0311		0.9011	0.9011		0.8290	0.8290		3,014.2663	3,014.2663	0.9749		3,038.6382
Total	**1.7691**	**19.7941**	**13.3306**	**0.0311**	**3.0136**	**0.9011**	**3.9147**	**1.6555**	**0.8290**	**2.4845**		**3,014.2663**	**3,014.2663**	**0.9749**		**3,038.6382**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1519	5.2434	1.1153	0.0140	0.3146	0.0171	0.3317	0.0862	0.0164	0.1026		1,498.3504	1,498.3504	0.0710		1,500.1262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1331	0.0939	0.9174	2.6800e-003	0.2957	1.8400e-003	0.2976	0.0784	1.7000e-003	0.0801		266.5678	266.5678	6.6100e-003		266.7330
Total	**0.2850**	**5.3372**	**2.0327**	**0.0167**	**0.6103**	**0.0190**	**0.6293**	**0.1647**	**0.0181**	**0.1827**		**1,764.9182**	**1,764.9182**	**0.0776**		**1,766.8592**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0136	0.0000	3.0136	1.6555	0.0000	1.6555			0.0000			0.0000
Off-Road	1.7691	19.7941	13.3306	0.0311		0.9011	0.9011		0.8290	0.8290	0.0000	3,014.2663	3,014.2663	0.9749		3,038.6382
Total	**1.7691**	**19.7941**	**13.3306**	**0.0311**	**3.0136**	**0.9011**	**3.9147**	**1.6555**	**0.8290**	**2.4845**	**0.0000**	**3,014.2663**	**3,014.2663**	**0.9749**		**3,038.6382**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1519	5.2434	1.1153	0.0140	0.3146	0.0171	0.3317	0.0862	0.0164	0.1026		1,498.3504	1,498.3504	0.0710		1,500.1262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1331	0.0939	0.9174	2.6800e-003	0.2957	1.8400e-003	0.2976	0.0784	1.7000e-003	0.0801		266.5678	266.5678	6.6100e-003		266.7330
Total	**0.2850**	**5.3372**	**2.0327**	**0.0167**	**0.6103**	**0.0190**	**0.6293**	**0.1647**	**0.0181**	**0.1827**		**1,764.9182**	**1,764.9182**	**0.0776**		**1,766.8592**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.6596	40.0750	40.1247	0.0627		2.3147	2.3147		2.2016	2.2016		5,907.2342	5,907.2342	1.2609		5,938.7566
Total	**4.6596**	**40.0750**	**40.1247**	**0.0627**		**2.3147**	**2.3147**		**2.2016**	**2.2016**		**5,907.2342**	**5,907.2342**	**1.2609**		**5,938.7566**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0760	2.6217	0.5576	7.0200e-003	0.1573	8.5600e-003	0.1659	0.0431	8.1900e-003	0.0513		749.1752	749.1752	0.0355		750.0631
Vendor	0.1676	4.6639	1.3304	0.0110	0.2776	0.0233	0.3009	0.0799	0.0223	0.1022		1,164.0068	1,164.0068	0.0564		1,165.4175
Worker	0.2958	0.2086	2.0388	5.9500e-003	0.6572	4.1000e-003	0.6613	0.1743	3.7800e-003	0.1781		592.3729	592.3729	0.0147		592.7401
Total	**0.5394**	**7.4942**	**3.9268**	**0.0240**	**1.0921**	**0.0360**	**1.1280**	**0.2973**	**0.0343**	**0.3316**		**2,505.5549**	**2,505.5549**	**0.1066**		**2,508.2206**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.6596	40.0750	40.1247	0.0627		2.3147	2.3147		2.2016	2.2016	0.0000	5,907.2342	5,907.2342	1.2609		5,938.7566
Total	**4.6596**	**40.0750**	**40.1247**	**0.0627**		**2.3147**	**2.3147**		**2.2016**	**2.2016**	**0.0000**	**5,907.2342**	**5,907.2342**	**1.2609**		**5,938.7566**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0760	2.6217	0.5576	7.0200e-003	0.1573	8.5600e-003	0.1659	0.0431	8.1900e-003	0.0513		749.1752	749.1752	0.0355		750.0631
Vendor	0.1676	4.6639	1.3304	0.0110	0.2776	0.0233	0.3009	0.0799	0.0223	0.1022		1,164.0068	1,164.0068	0.0564		1,165.4175
Worker	0.2958	0.2086	2.0388	5.9500e-003	0.6572	4.1000e-003	0.6613	0.1743	3.7800e-003	0.1781		592.3729	592.3729	0.0147		592.7401
Total	**0.5394**	**7.4942**	**3.9268**	**0.0240**	**1.0921**	**0.0360**	**1.1280**	**0.2973**	**0.0343**	**0.3316**		**2,505.5549**	**2,505.5549**	**0.1066**		**2,508.2206**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0000e-004	1.8300e-003	5.3600e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.6774	1.6774	6.0000e-005		1.6789
Unmitigated	4.0000e-004	1.8300e-003	5.3600e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.1000e-004	2.0000e-005	4.3000e-004		1.6774	1.6774	6.0000e-005		1.6789

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.25	0.25	0.25	725	725
Total	0.25	0.25	0.25	725	725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Unmitigated	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Total	**2.4000e-003**	**2.4000e-004**	**0.0255**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0544**	**0.0544**	**1.5000e-004**		**0.0580**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-003	2.4000e-004	0.0255	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0544	0.0544	1.5000e-004		0.0580
Total	**2.4000e-003**	**2.4000e-004**	**0.0255**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0544**	**0.0544**	**1.5000e-004**		**0.0580**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation