

Source: PG&E, 2012.



- 12 kV Distribution Reconductoring
- Fulton No. 1 60 kV
- Proposed Substation Site 8
- Sonoma County Airport
- Town Boundary

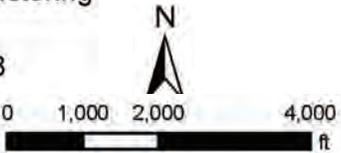


Figure 4-1

Project Overview Map



Source: PG&E, 2012.



- Proposed 115 kV Loop (Initially 60 kV Loop)
- Site 8
- Fulton No. 1 60 kV

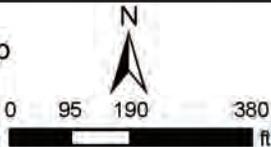
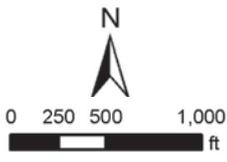
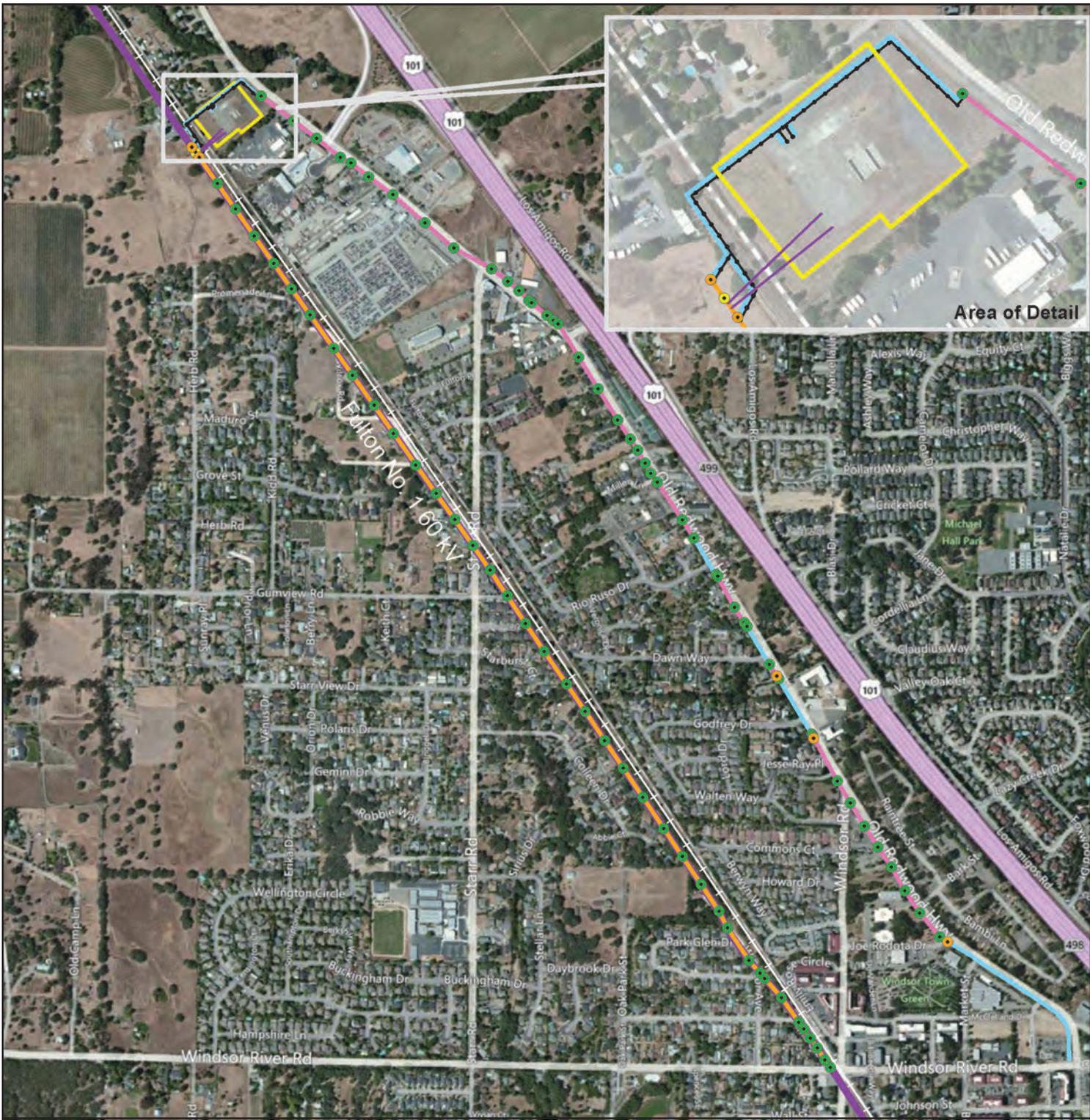


photo: April 2009

Figure 4-2

Windsor Substation Site - Aerial Map



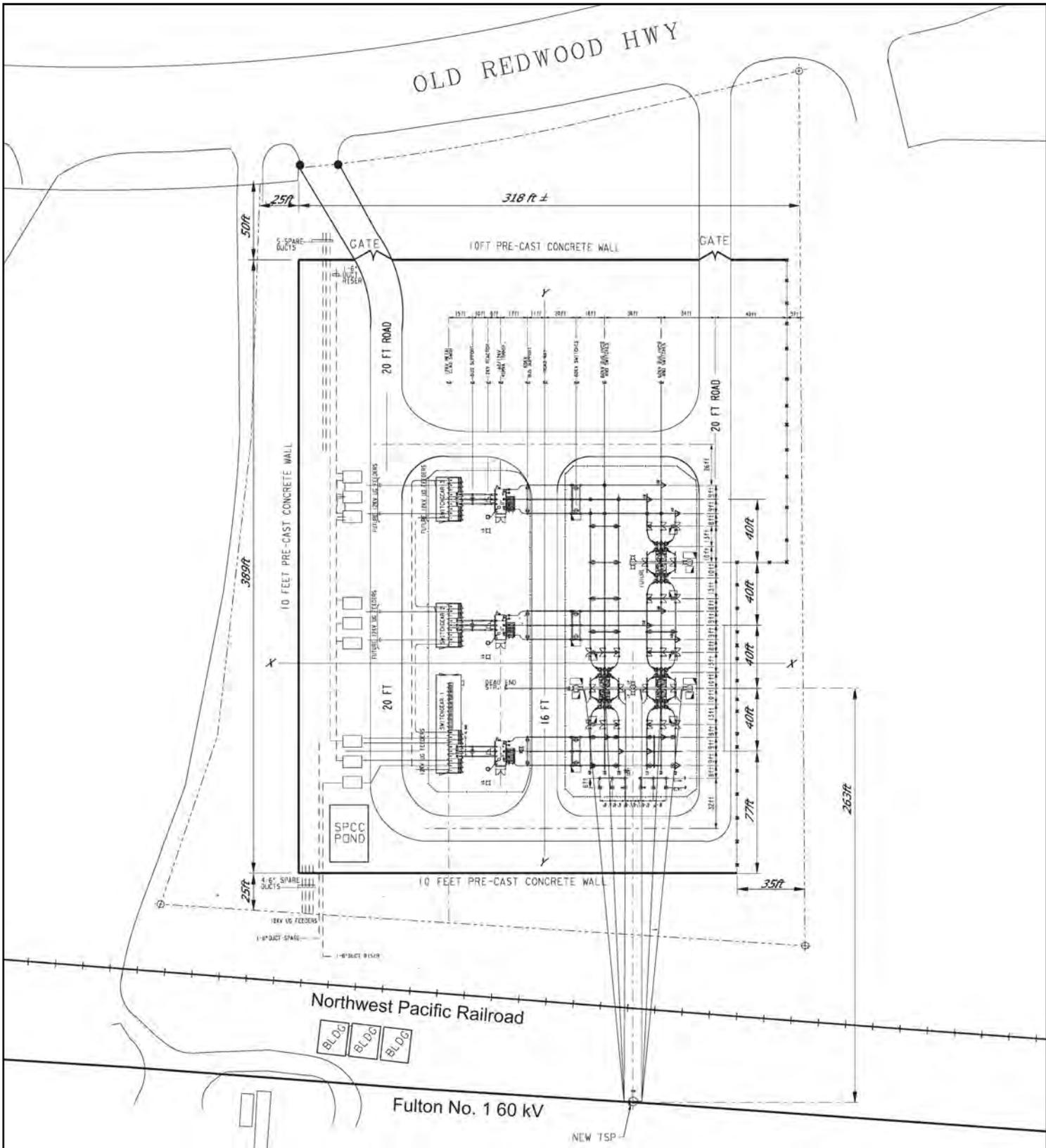
Source: PG&E, 2012.



- Wood-to-Wood Pole Replacement
- Wood-to-Steel Pole Replacement
- New Riser Pole
- Future Underground Distribution Line Conduits
- Overhead Double Circuit 12 kV Distribution Line Underbuild of Existing Fulton No. 1 60 kV Power Line
- Overhead Double Circuit Reconductoring of Existing 12 kV Distribution Line
- Underground Double Circuit Reconductoring of Existing 12 kV Distribution Line
- Proposed 115 kV Loop (Initially 60 kV Loop)
- Site 8
- Fulton No. 1 60 kV

Figure 4-3

**Windsor Substation
 Associated Reconductoring**

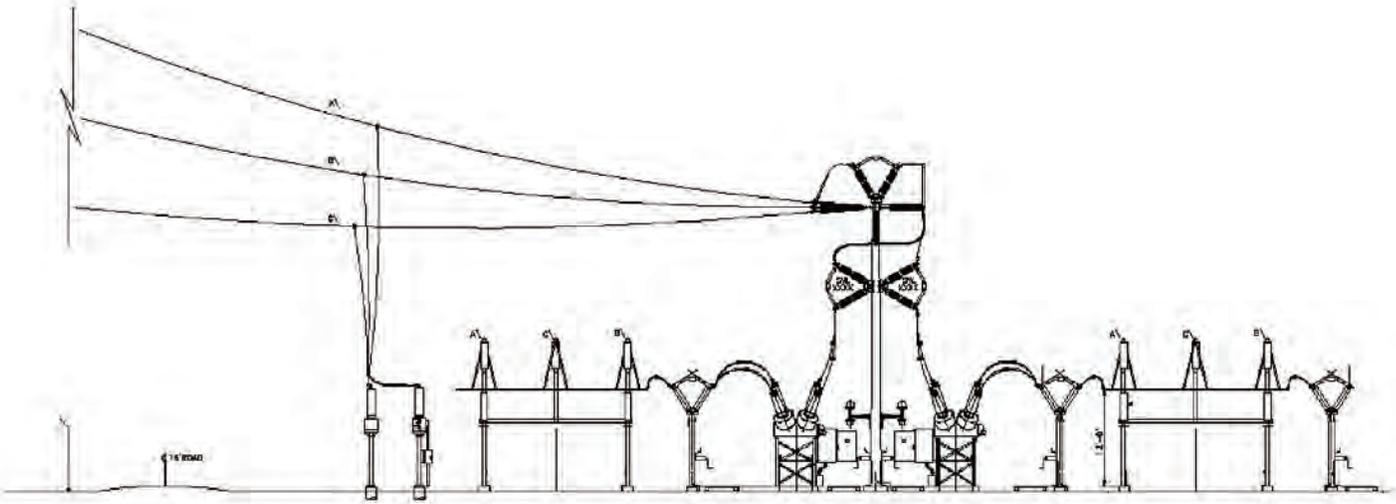


Source: PG&E, 2012.



Figure 4-4

Typical Three Bank Substation



Source: PG&E, 2010.



Figure 4-5

Typical Three Bank Substation Profile



1. Old Redwood Highway near Highway 101 offramp looking north



2. Old Redwood Highway near corner of site looking north



3. Old Redwood Highway near Bisacno Road looking south *



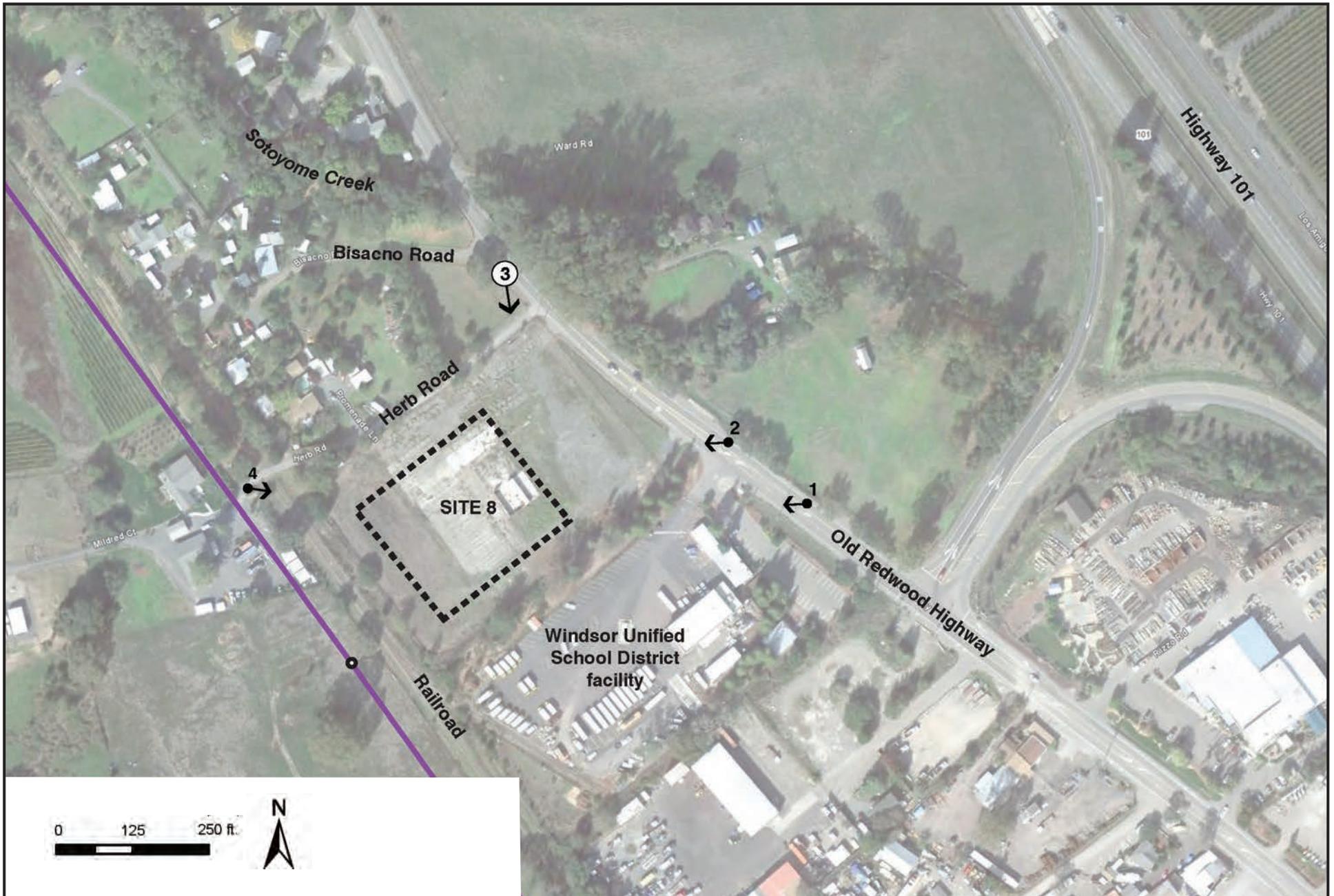
4. Herb Road near corner of site looking east



*Simulation view

Source: PG&E, 2011.

Figure 5.1-1
Windsor Substation
Site Photographs

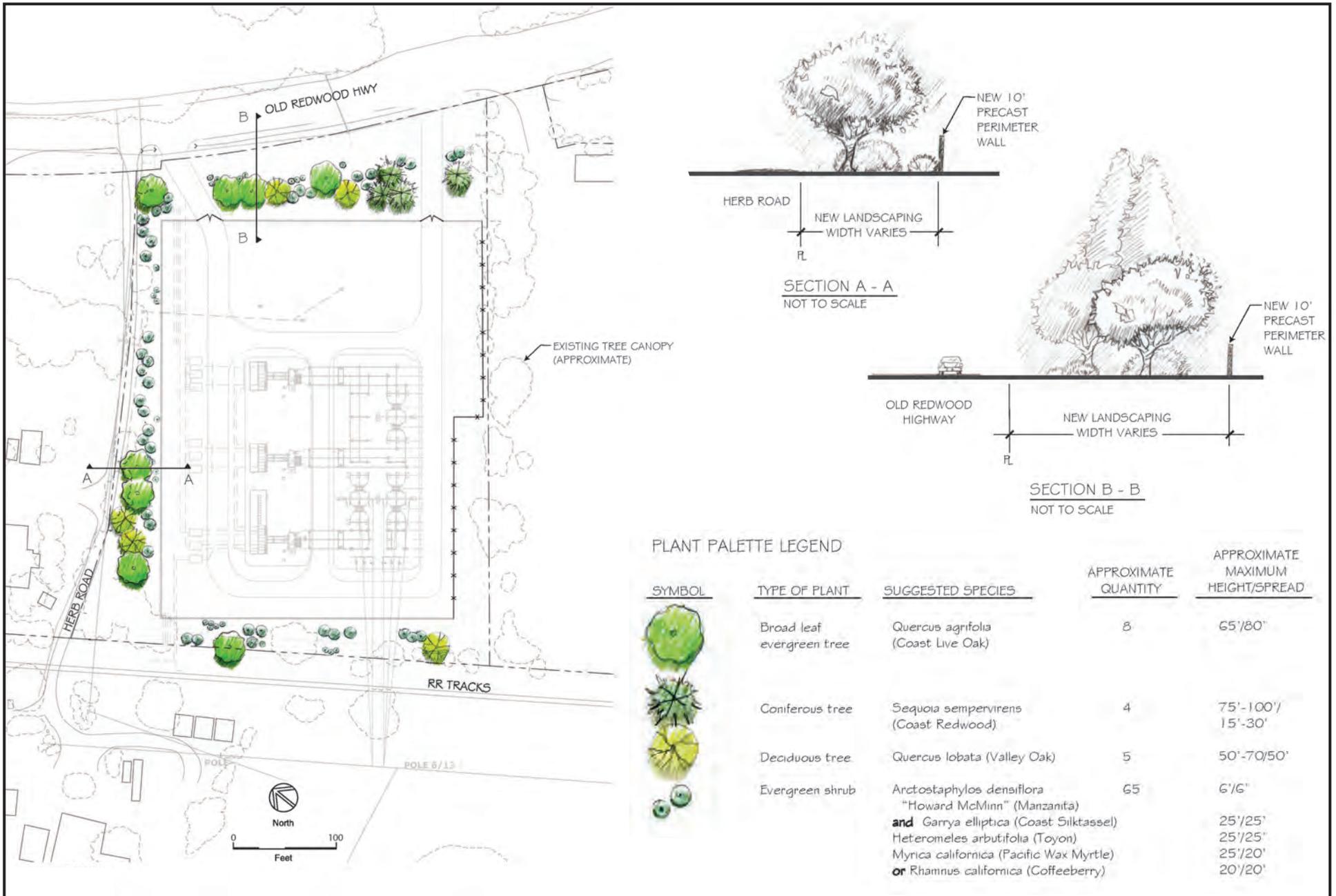


Source: PG&E, 2011.

- ←③ Simulation Viewpoint
- ←●1 Photo Viewpoints (1-4)
- Fulton No. 1 60 kV

- Interconnect Pole
- Site 8

Figure 5.1-2
Windsor Substation
Site Photo Viewpoints





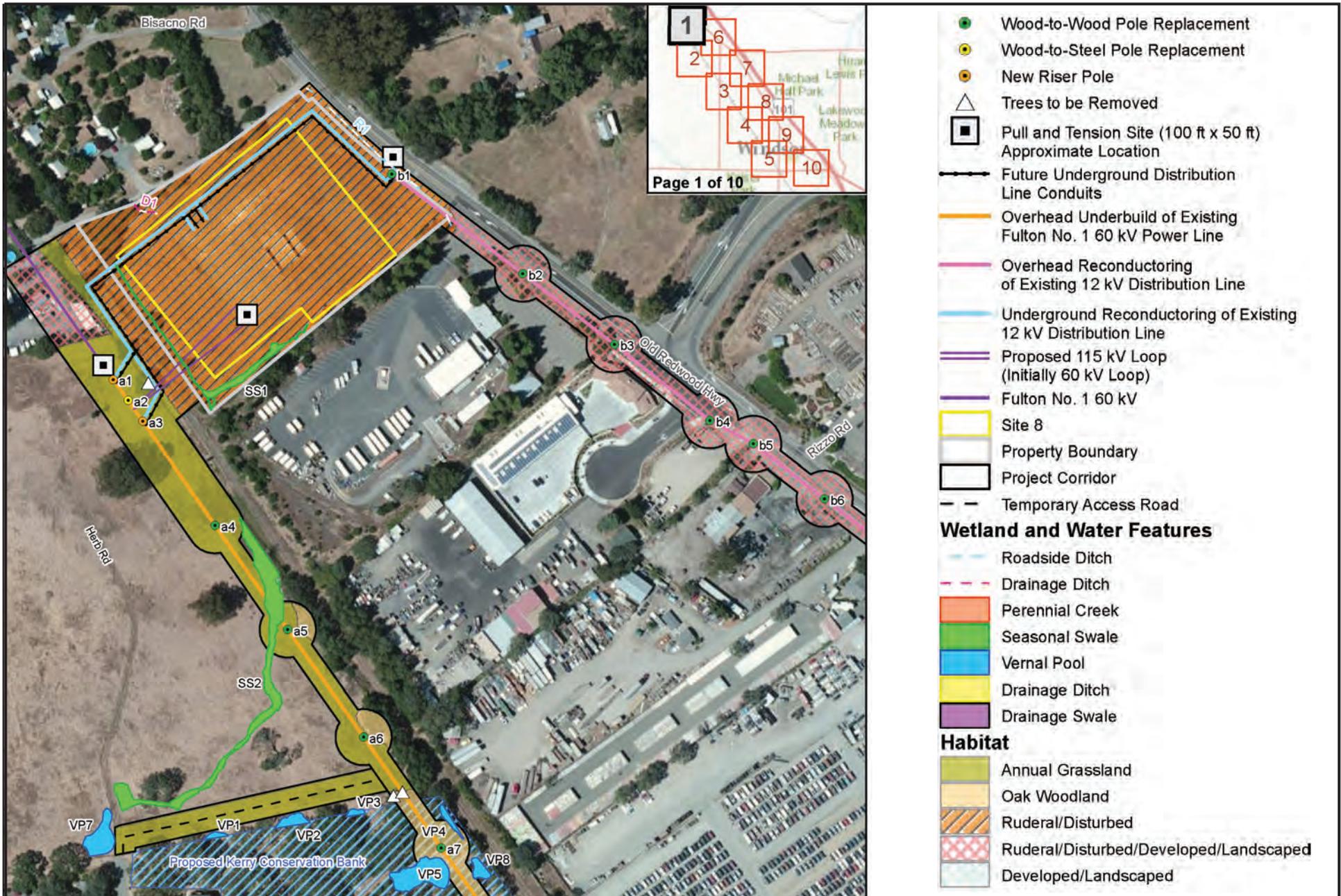
Existing view from Old Redwood Highway looking south



Visual simulation of proposed project without landscaping



Visual simulation of proposed project with landscaping shown at 8 years maturity



Source: PG&E, 2012.

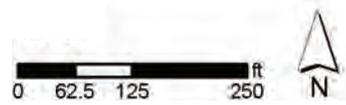
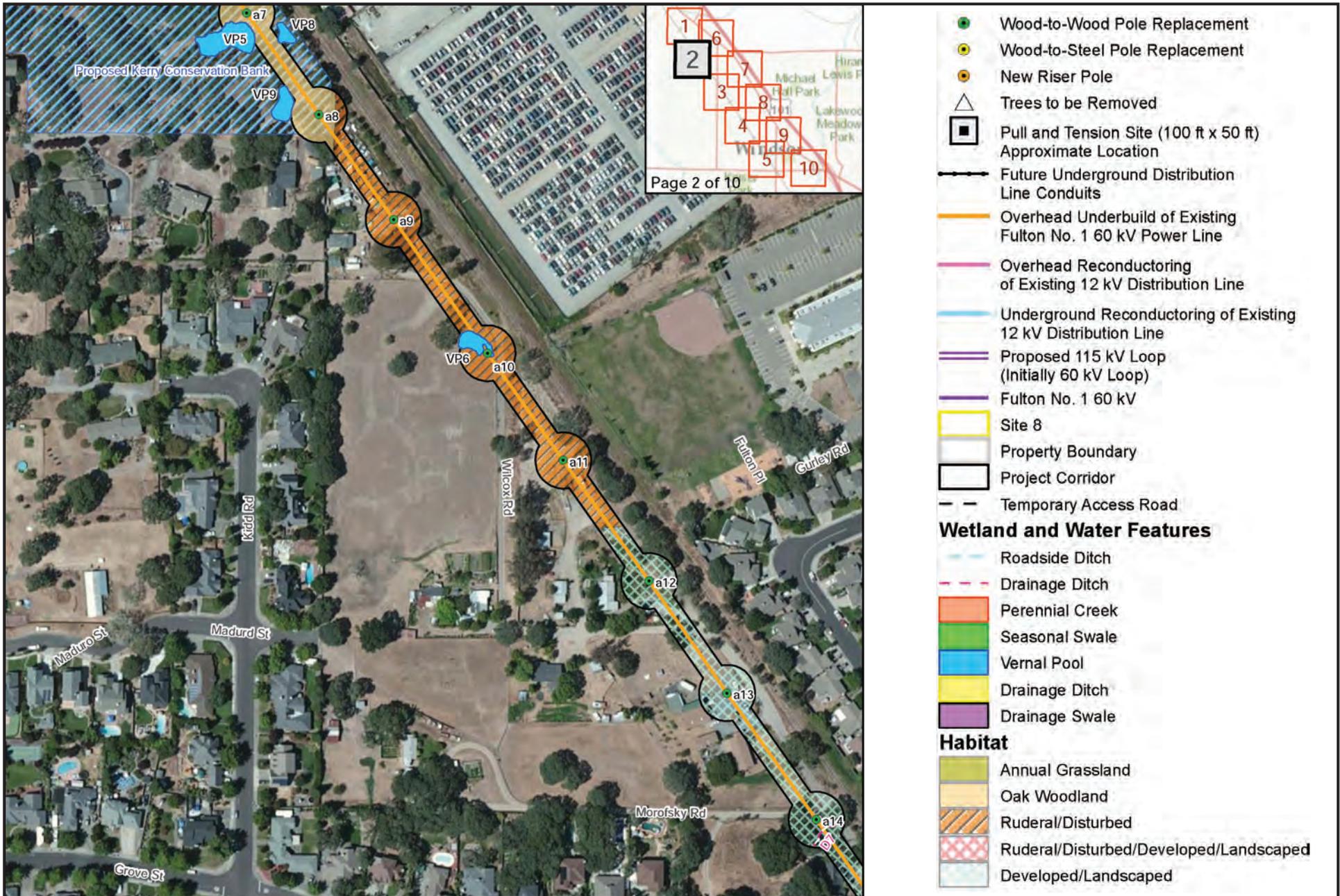


Figure 5.4-1
Windsor Substation Project
Biological Resources Mapset
Map 1



- Wood-to-Wood Pole Replacement
 - Wood-to-Steel Pole Replacement
 - New Riser Pole
 - △ Trees to be Removed
 - Pull and Tension Site (100 ft x 50 ft) Approximate Location
 - Future Underground Distribution Line Conduits
 - Overhead Underbuild of Existing Fulton No. 1 60 kV Power Line
 - Overhead Reconductoring of Existing 12 kV Distribution Line
 - Underground Reconductoring of Existing 12 kV Distribution Line
 - Proposed 115 kV Loop (Initially 60 kV Loop)
 - Fulton No. 1 60 kV
 - Site 8
 - Property Boundary
 - Project Corridor
 - - Temporary Access Road
- Wetland and Water Features**
- Roadside Ditch
 - - Drainage Ditch
 - Perennial Creek
 - Seasonal Swale
 - Vernal Pool
 - Drainage Ditch
 - Drainage Swale
- Habitat**
- Annual Grassland
 - Oak Woodland
 - Ruderal/Disturbed
 - Ruderal/Disturbed/Developed/Landscaped
 - Developed/Landscaped



Source: PG&E, 2012.



Figure 5.4-1
Windsor Substation Project
Biological Resources Mapset
Map 2



Figure 5.4-1

Windsor Substation Project
Biological Resources Mapset
Map 3



Figure 5.4-1

**Windsor Substation Project
Biological Resources Mapset
Map 4**

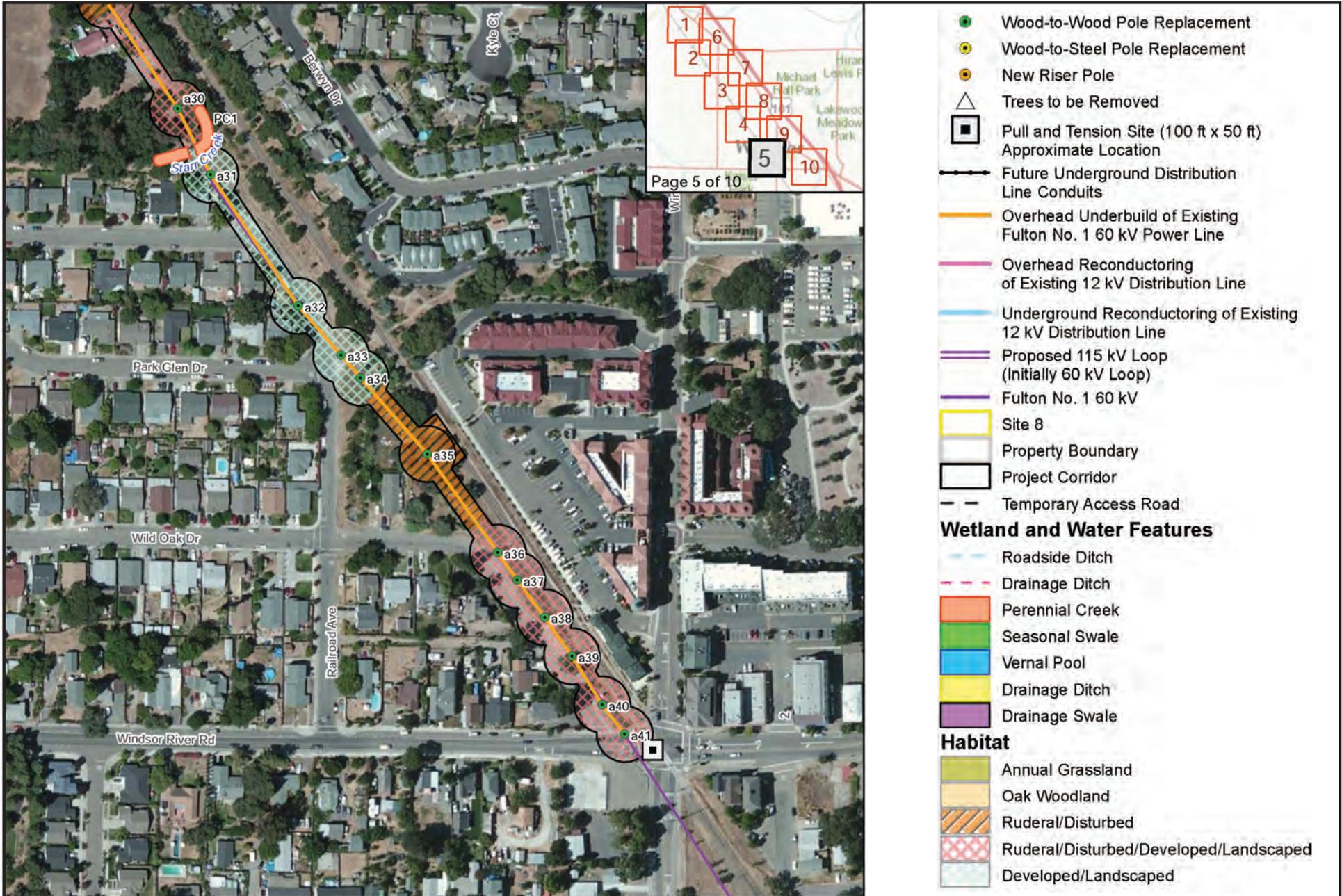
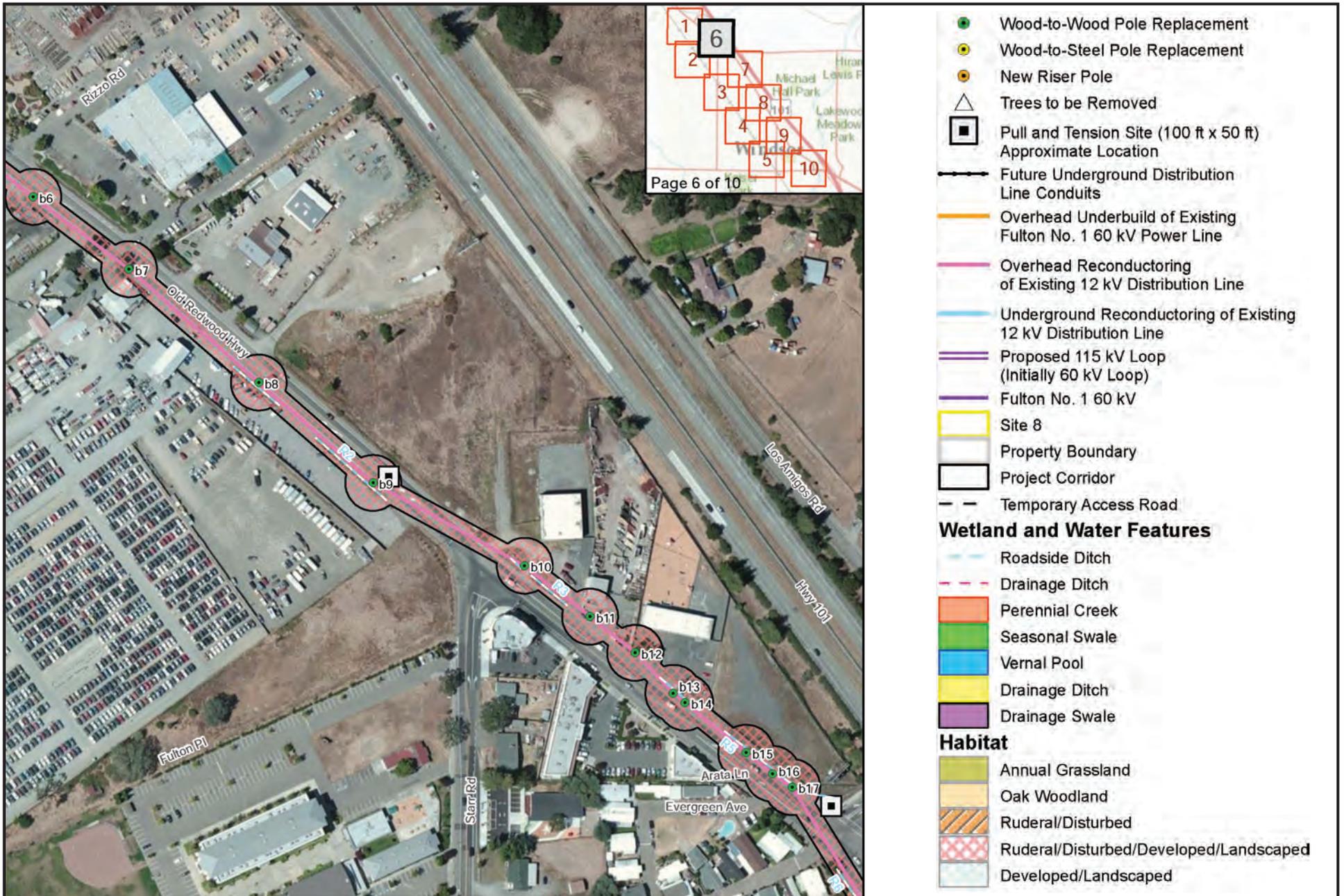


Figure 5.4-1

Windsor Substation Project
Biological Resources Mapset
Map 5



Page 6 of 10



Source: PG&E, 2012.

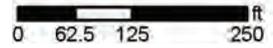
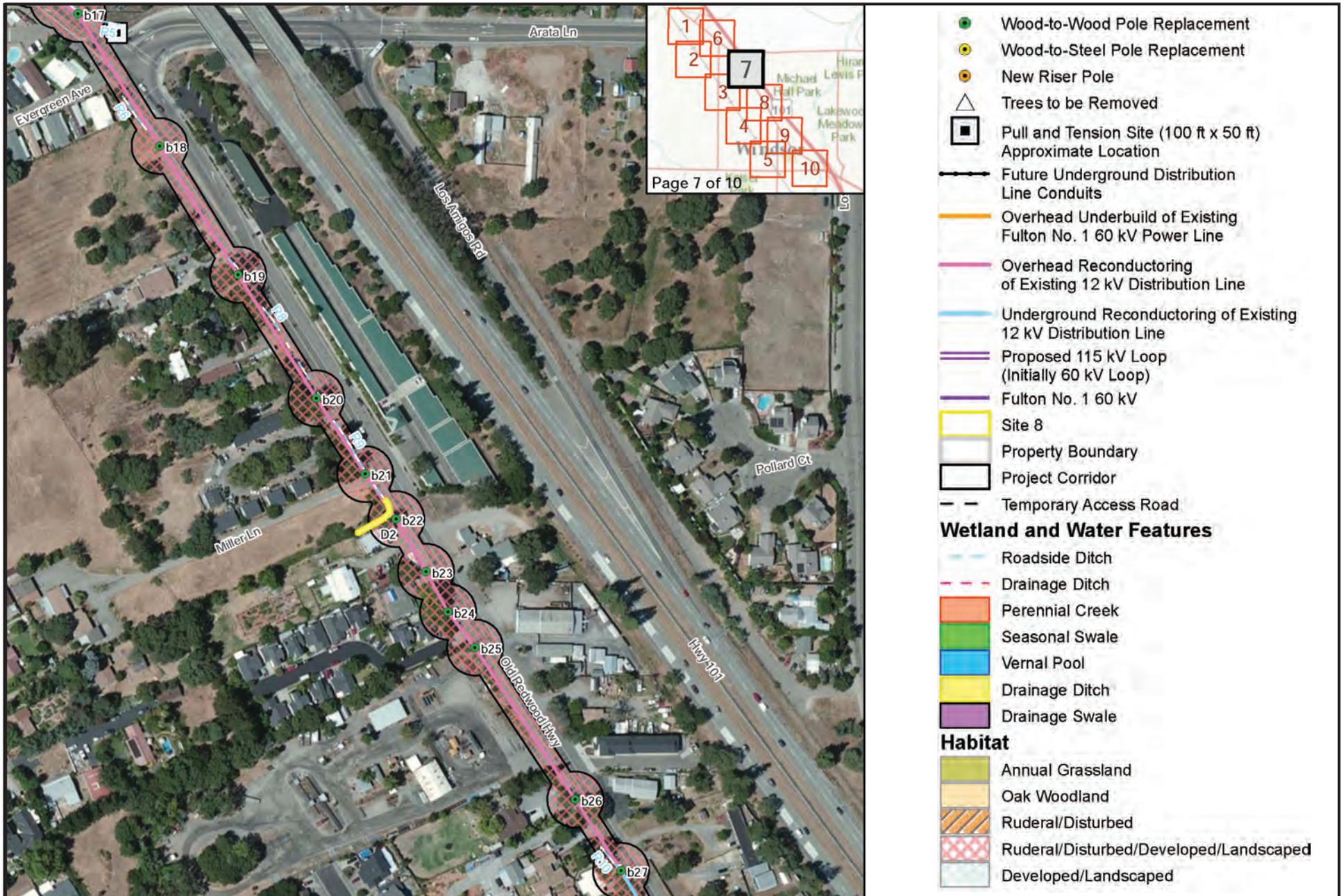


Figure 5.4-1

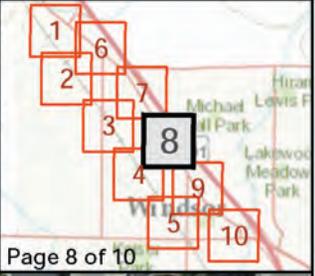
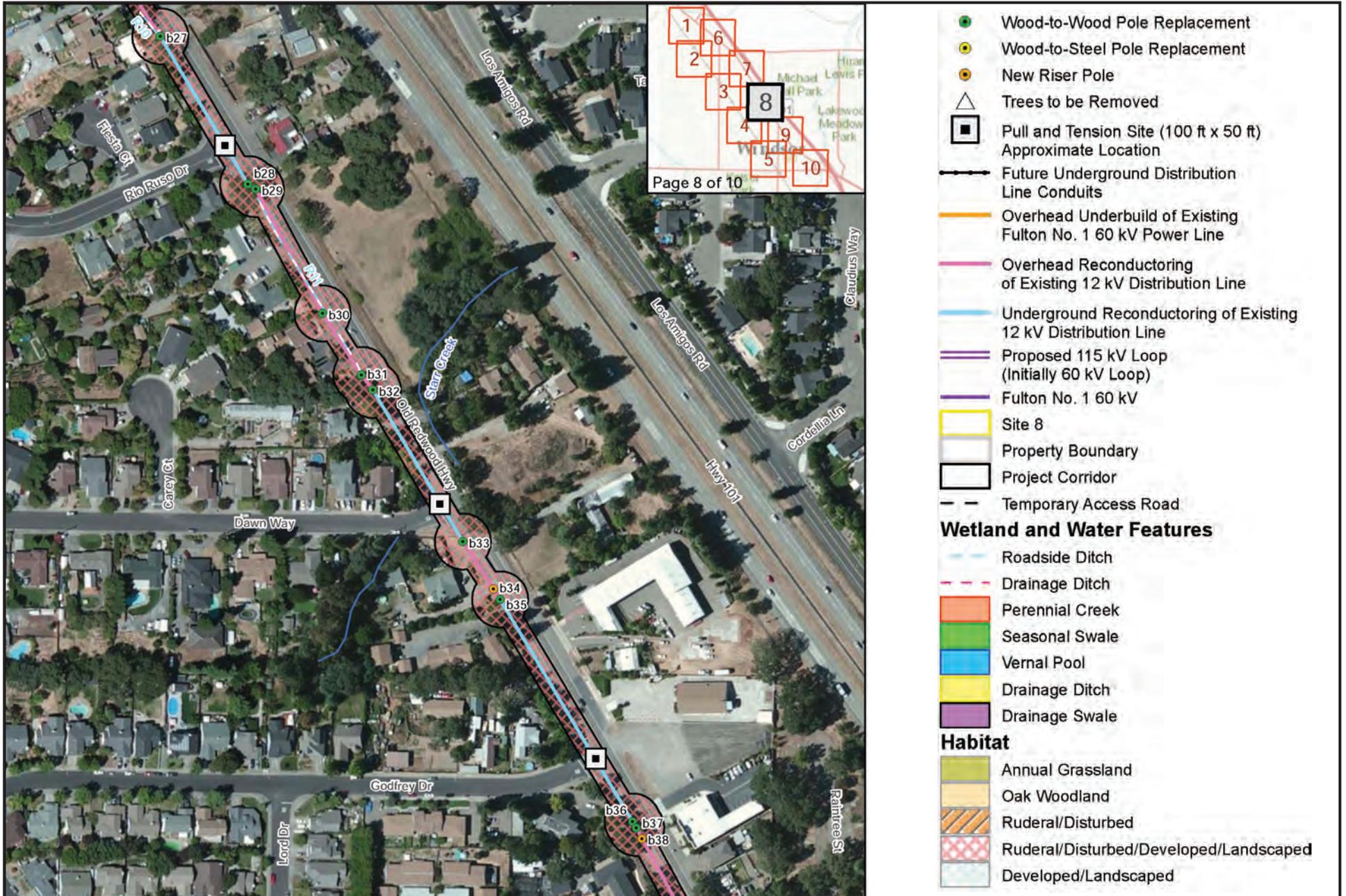
**Windsor Substation Project
Biological Resources Mapset
Map 6**



Source: PG&E, 2012.



Figure 5.4-1
Windsor Substation Project
Biological Resources Mapset
Map 7



Source: PG&E, 2012.

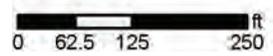


Figure 5.4-1
Windsor Substation Project
Biological Resources Mapset
Map 8

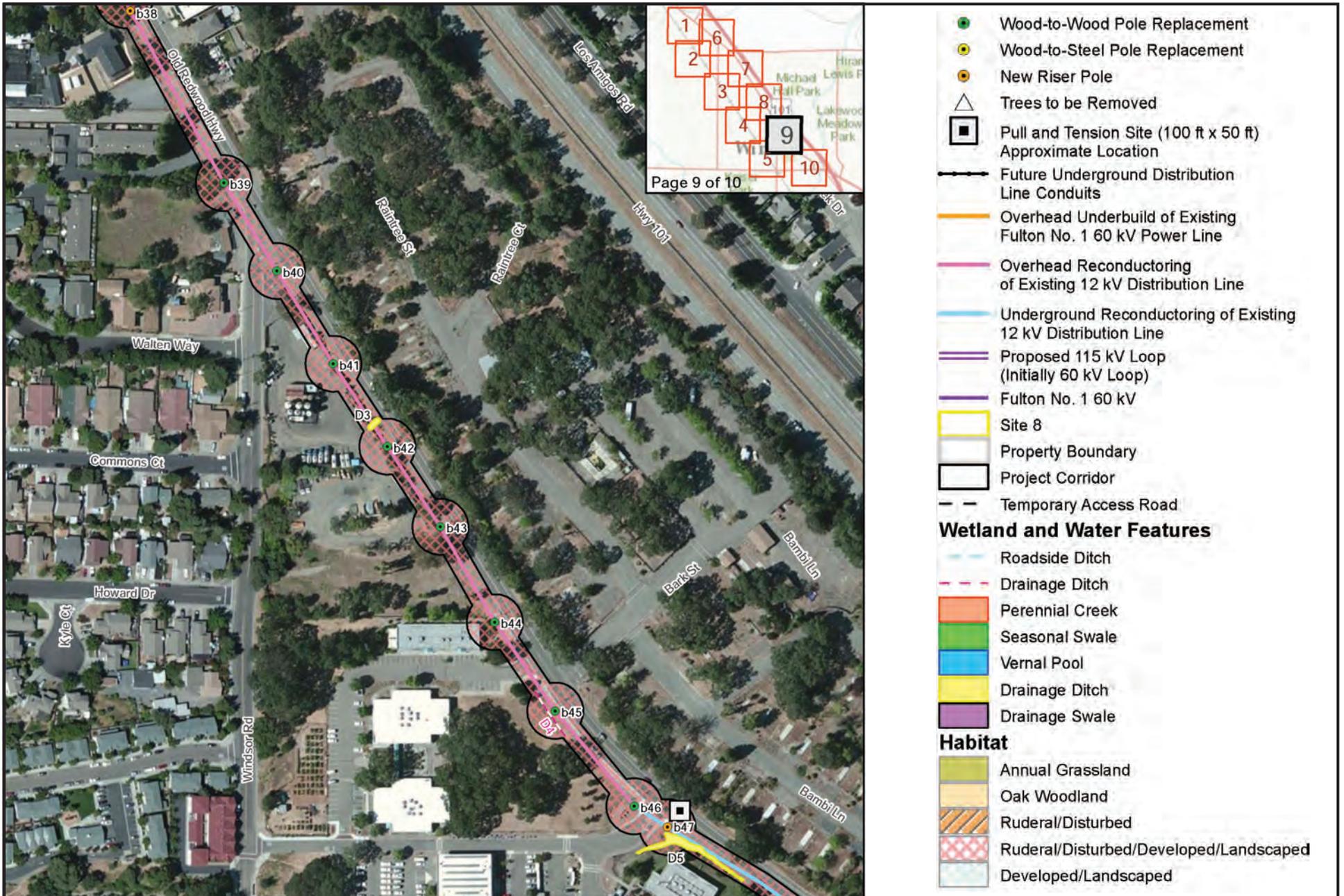
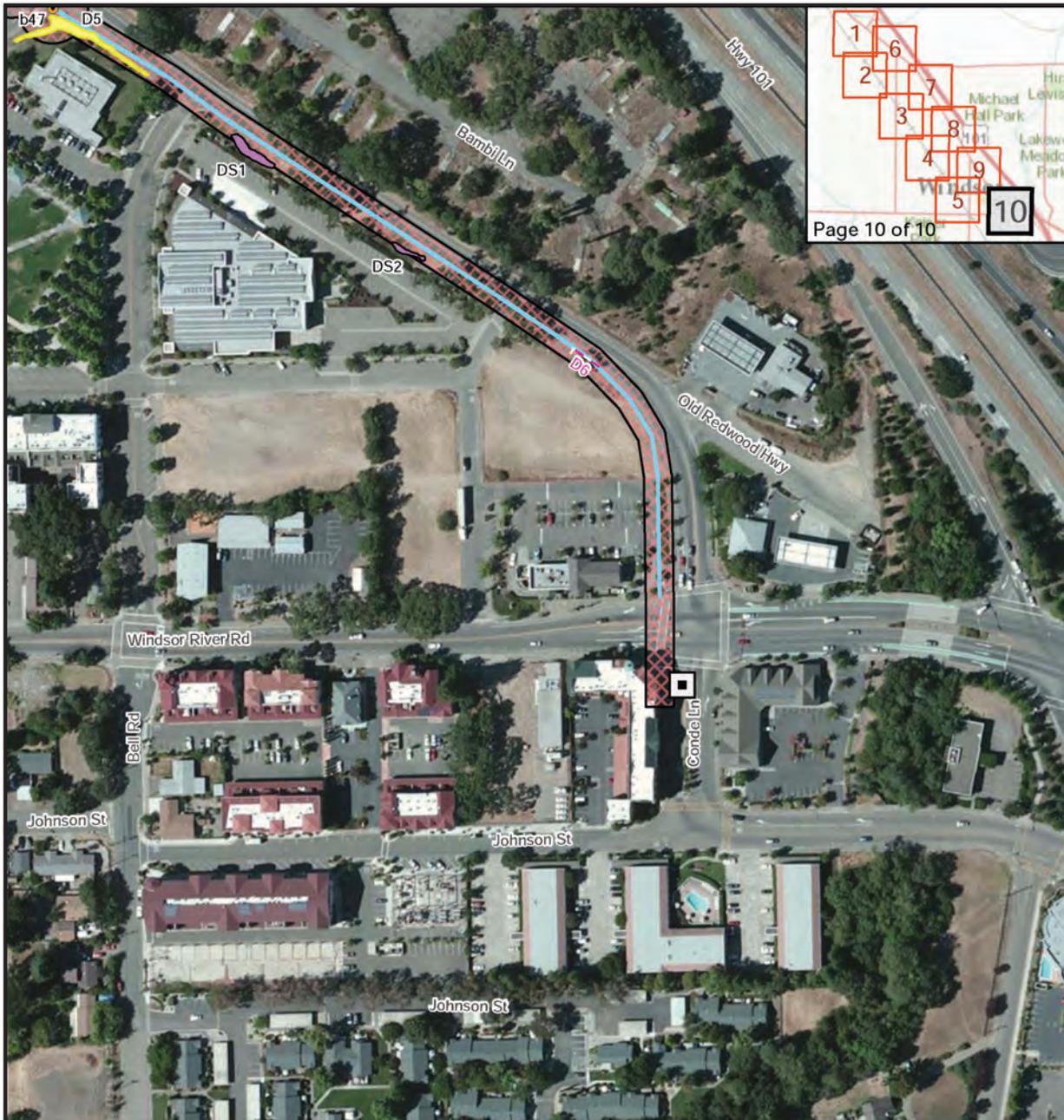


Figure 5.4-1

Windsor Substation Project
Biological Resources Mapset
Map 9



- Wood-to-Wood Pole Replacement
 - Wood-to-Steel Pole Replacement
 - New Riser Pole
 - Trees to be Removed
 - Pull and Tension Site (100 ft x 50 ft) Approximate Location
 - Future Underground Distribution Line Conduits
 - Overhead Underbuild of Existing Fulton No. 1 60 kV Power Line
 - Overhead Reconducting of Existing 12 kV Distribution Line
 - Underground Reconducting of Existing 12 kV Distribution Line
 - Proposed 115 kV Loop (Initially 60 kV Loop)
 - Fulton No. 1 60 kV
 - Site 8
 - Property Boundary
 - Project Corridor
 - Temporary Access Road
- Wetland and Water Features**
- Roadside Ditch
 - Drainage Ditch
 - Perennial Creek
 - Seasonal Swale
 - Vernal Pool
 - Drainage Ditch
 - Drainage Swale
- Habitat**
- Annual Grassland
 - Oak Woodland
 - Ruderal/Disturbed
 - Ruderal/Disturbed/Developed/Landscaped
 - Developed/Landscaped



Source: PG&E, 2012.

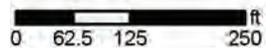
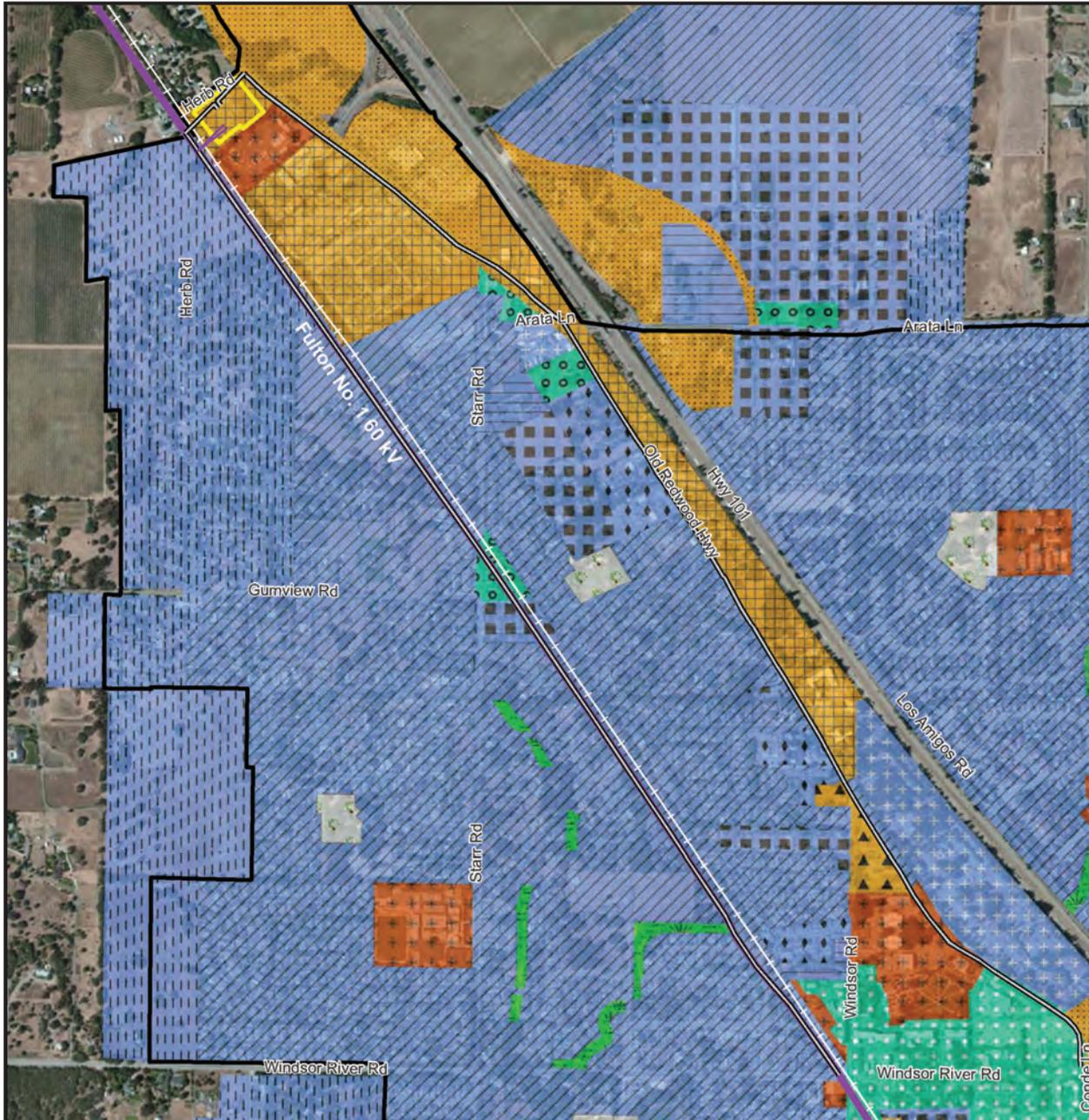
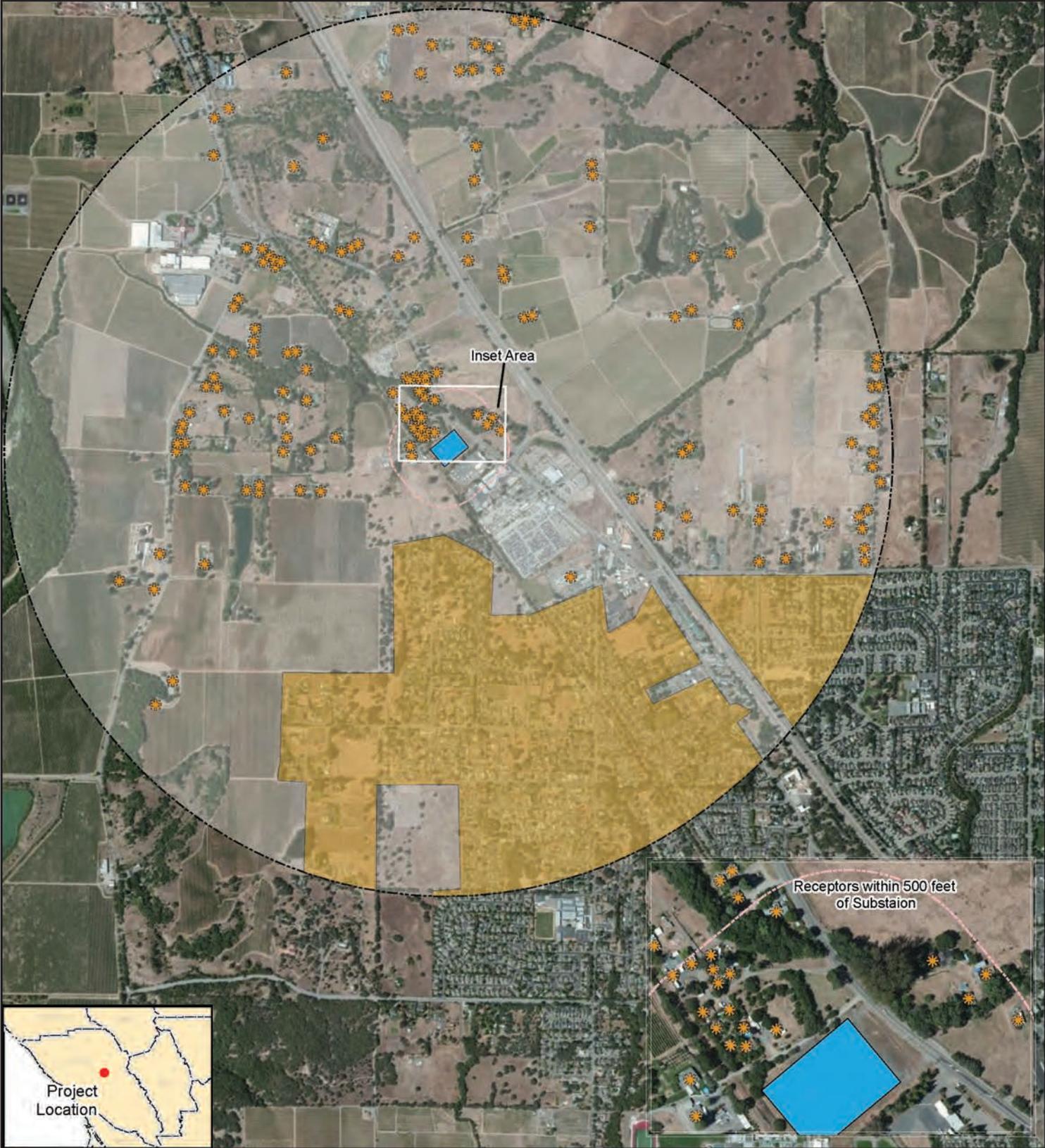


Figure 5.4-1

**Windsor Substation Project
Biological Resources Mapset
Map 10**



- 12 kV Distribution Reconductoring
 - Proposed 115 kV Loop
(Initially 60 kV Loop)
 - Fulton No. 1 60 kV
 - Site 8
 - Town Boundary
- Town of Windsor Land Use Categories**
- RESIDENTIAL**
- High Density Residential
 - Medium-High Density Residential
 - Mobile Home Park
 - Village Residential
 - Surrounding Residential
 - Estate Residential
- MIXED USE**
- Town Center/Mixed Use
 - Neighborhood Center/Mixed Use
- COMMERCIAL/INDUSTRIAL**
- Retail Commercial
 - Service Commercial
 - Gateway Commercial
 - Light Industrial
- PARKS/OPEN SPACE**
- Parks
 - Open Space
- PUBLIC/QUASI-PUBLIC/INSTITUTIONAL**
- Cemetary/School/Wastewater-Treatment Plant



Source: PG&E, 2012.



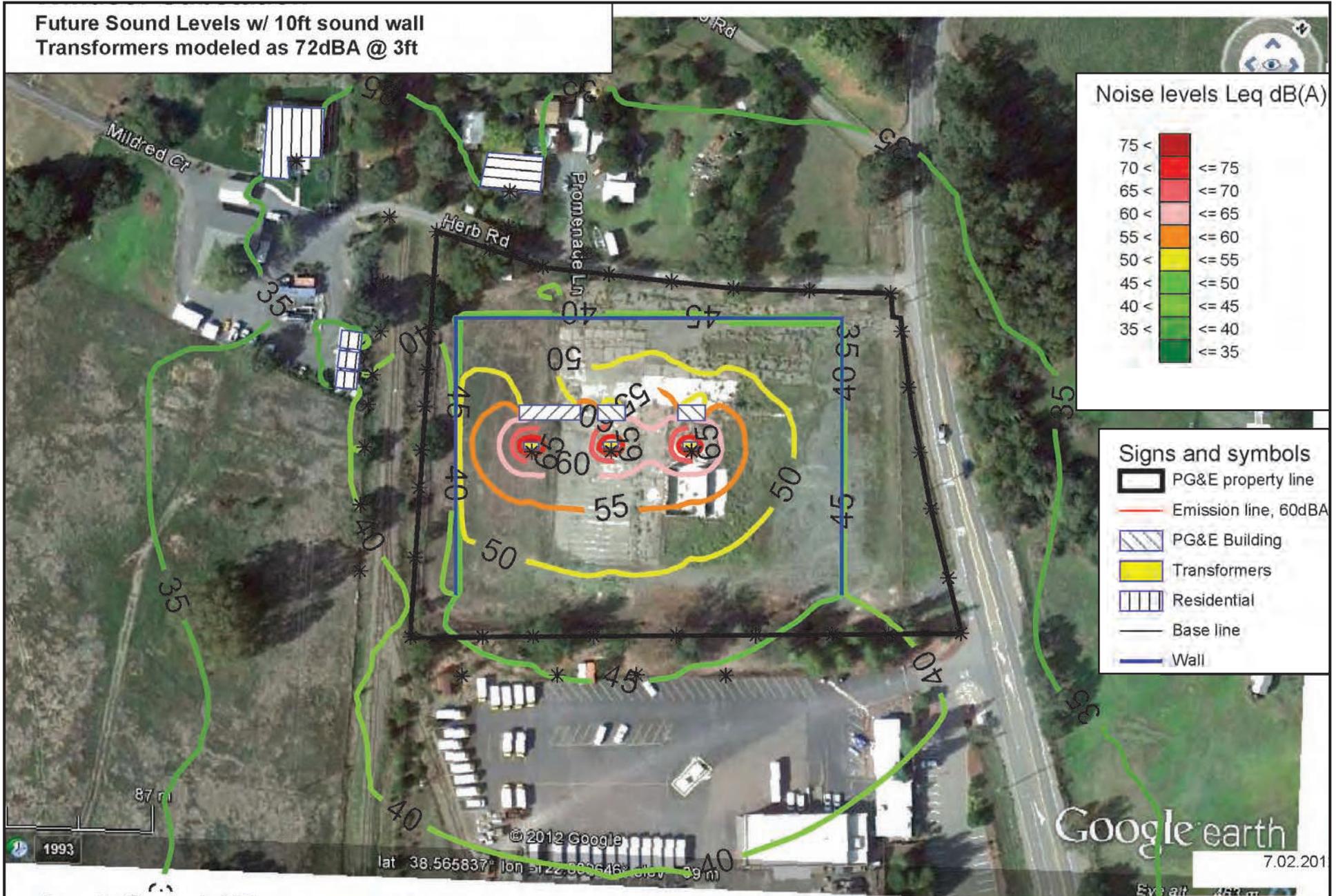
- Windsor Substation Footprint
- Sensitive Receptors
- Residential Developments
- 1-mile buffer
- 500-foot buffer



Figure 5.12-1

Existing Sensitive Receptors

Future Sound Levels w/ 10ft sound wall
Transformers modeled as 72dBA @ 3ft



Noise levels Leq dB(A)

75 <	Red	<= 75
70 <	Dark Red	<= 70
65 <	Light Red	<= 65
60 <	Orange	<= 60
55 <	Yellow	<= 55
50 <	Light Green	<= 50
45 <	Green	<= 45
40 <	Dark Green	<= 40
35 <	Very Dark Green	<= 35

Signs and symbols

- PG&E property line
- Emission line, 60dBA
- PG&E Building
- Transformers
- Residential
- Base line
- Wall



Source: PG&E, 2012.

Figure 5.12-2
Transformer Sound Model Plot