

J16 115kV Transmission Line Reconductoring Project

Woonsocket and Cumberland, Rhode Island

PREPARED FOR

The Narragansett Electric Company
280 Melrose Street
Providence, RI 02907

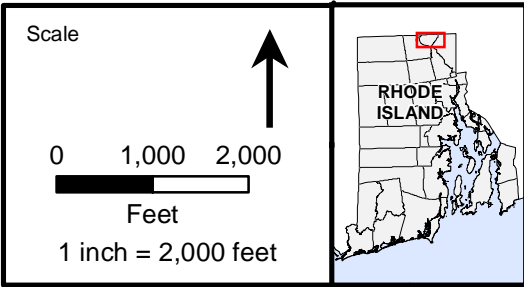
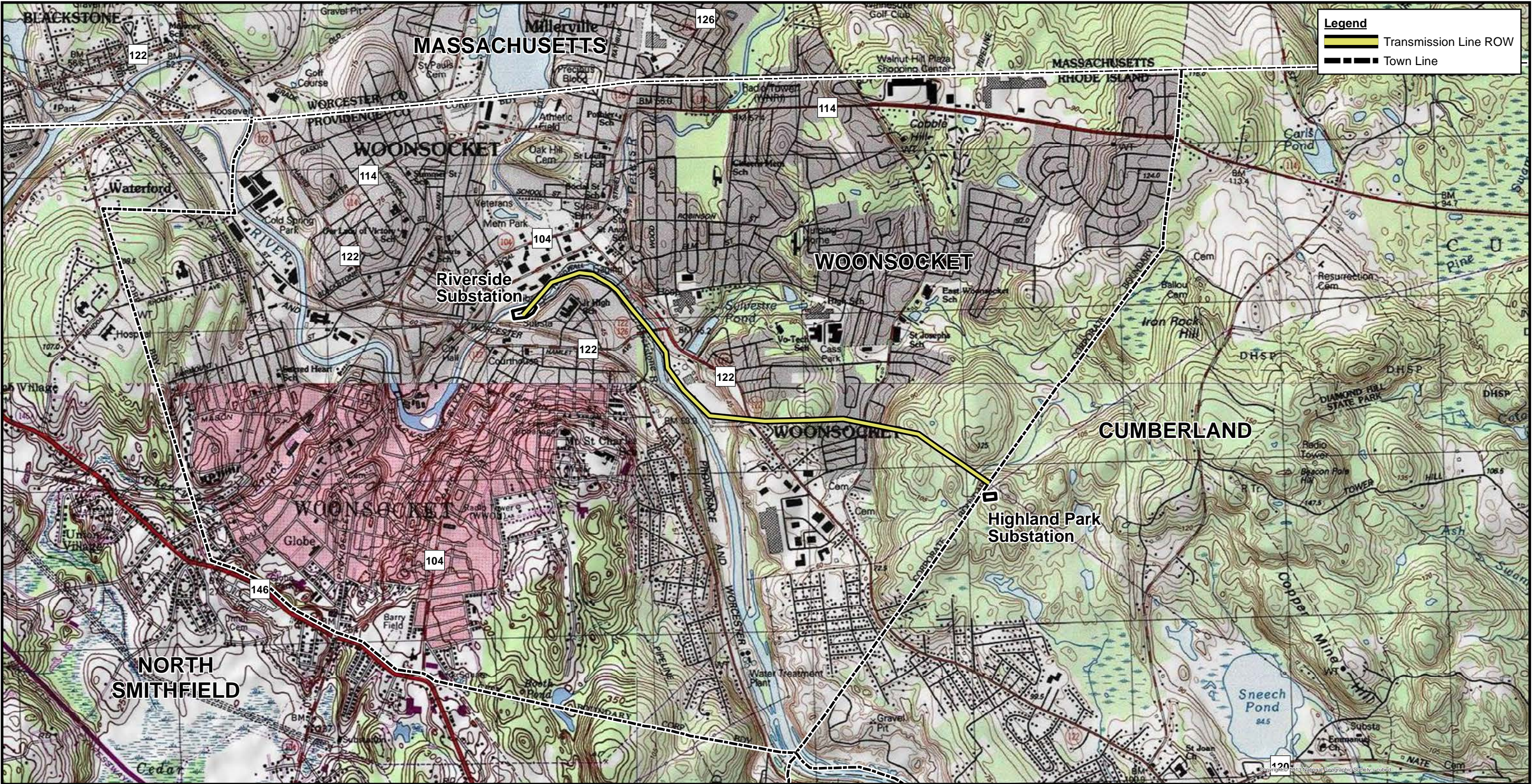
PREPARED BY



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Providence, RI 02093
401.272.8100

JUNE 2015

This document has been reviewed for Critical Energy Infrastructure Information (CEII). June 25, 2015.

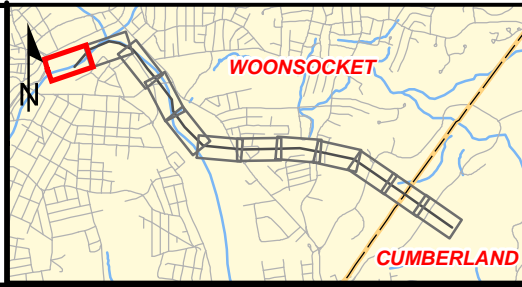
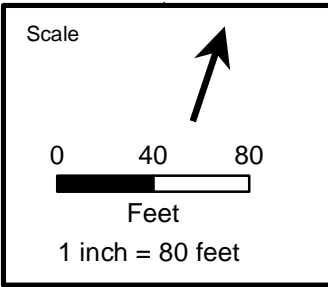
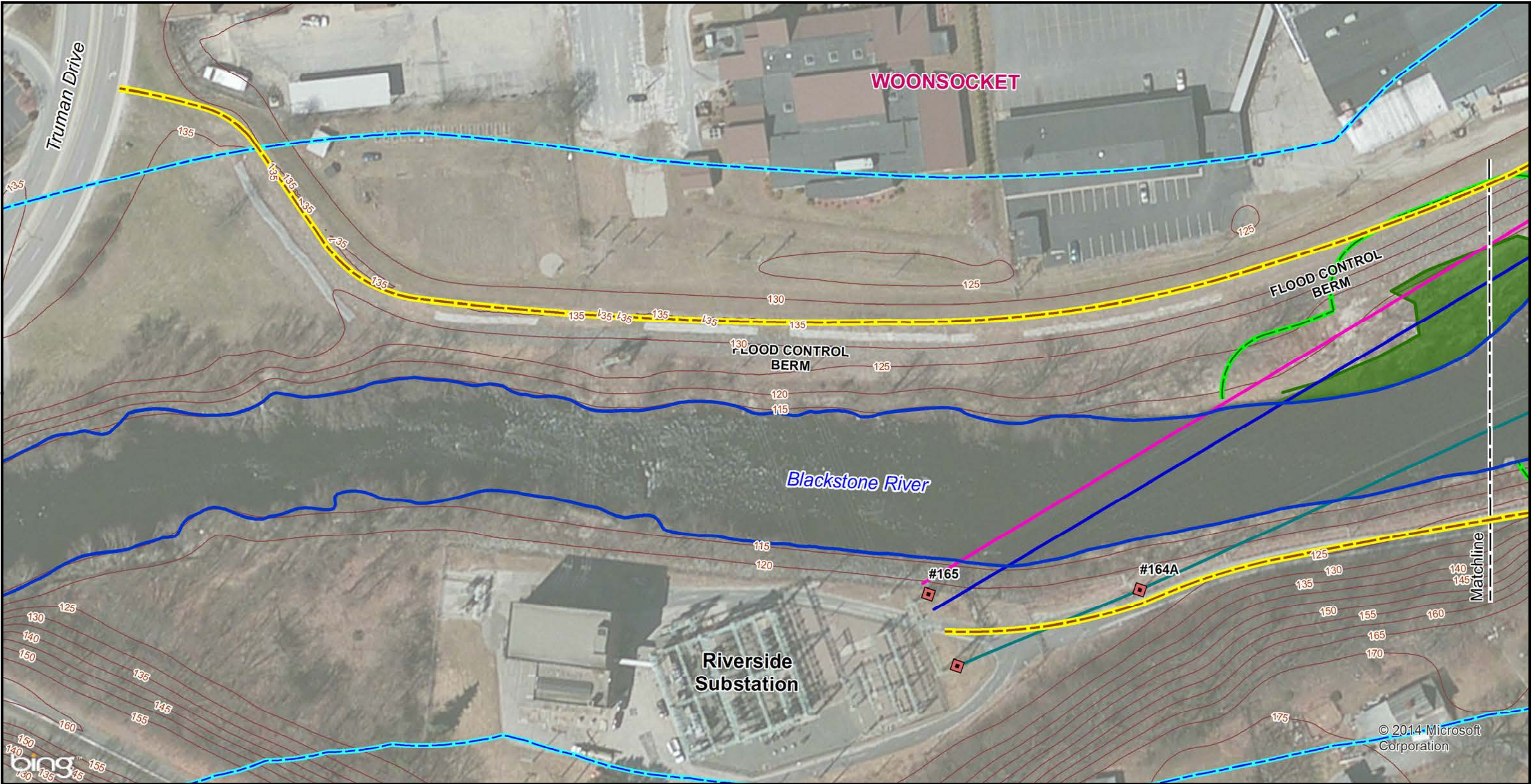


**J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND**

**Site Location Map
Figure 1-1**

Source:
USA Topo Maps





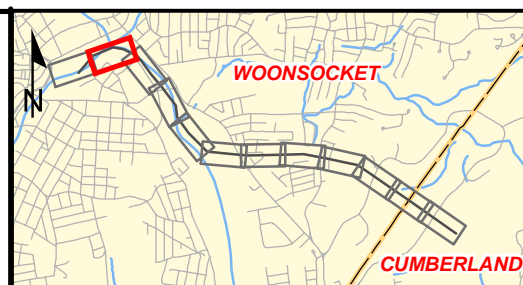
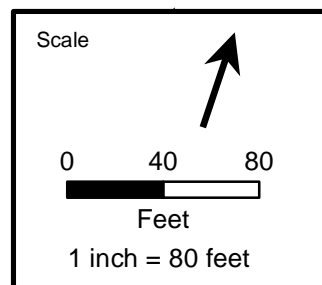
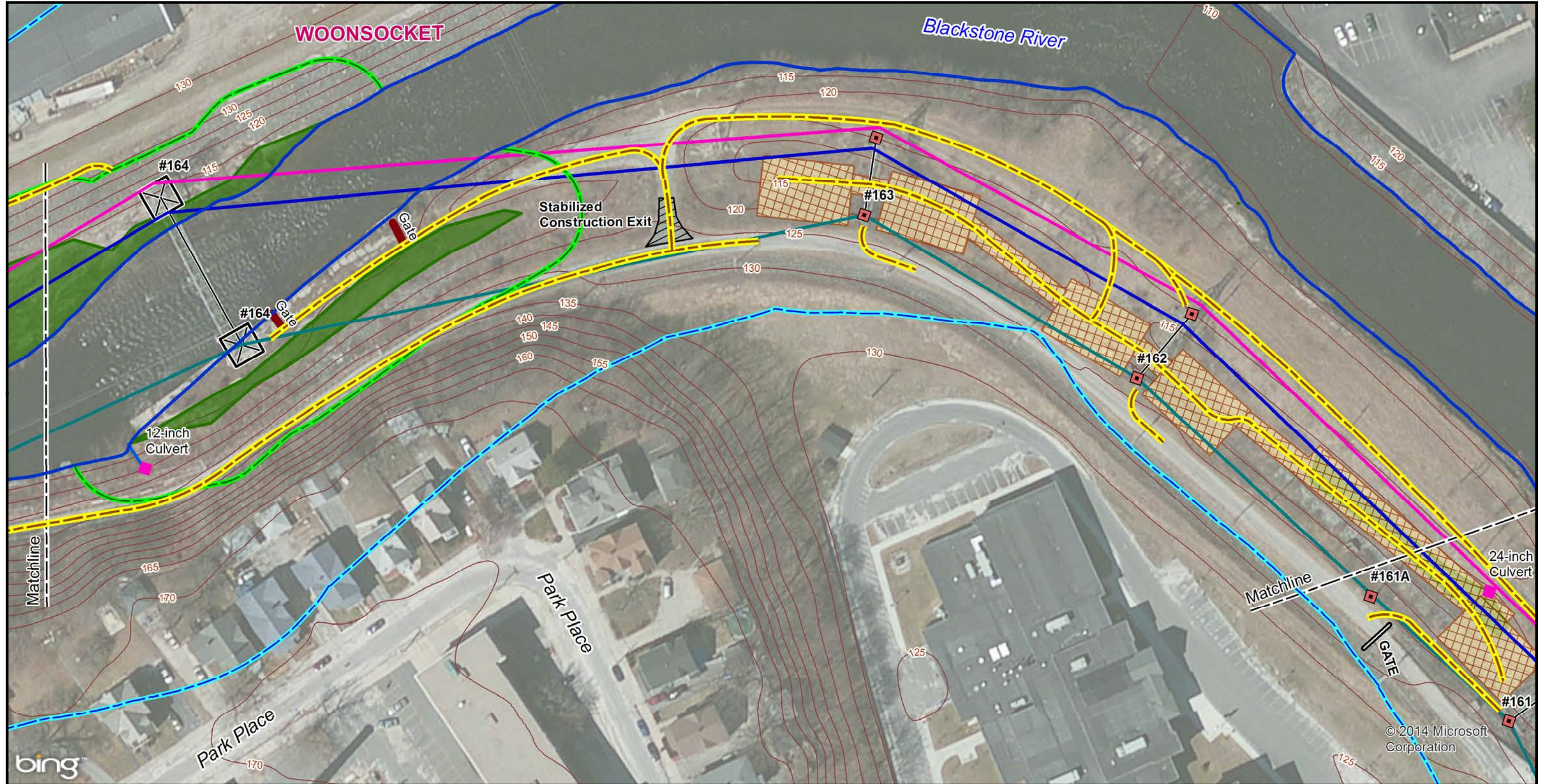
Legend	
— Right-of-Way	Workpad
■ Structure	Compost Filter Sock
— H17 Line	— Delineated Wetland Edge
— R9 Line	— ASSF
— J16 Line	— Fence
— Access	— Culvert
— Town Line	— 50' Perimeter Wetland
— Matting	— 200' Riverbank Wetland

J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 1 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)

nationalgrid
vhb



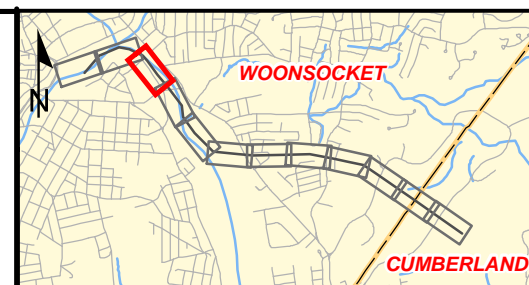
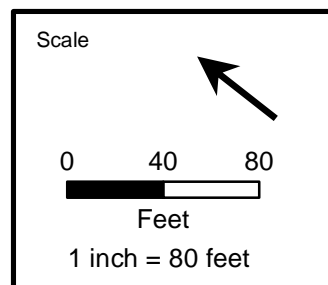
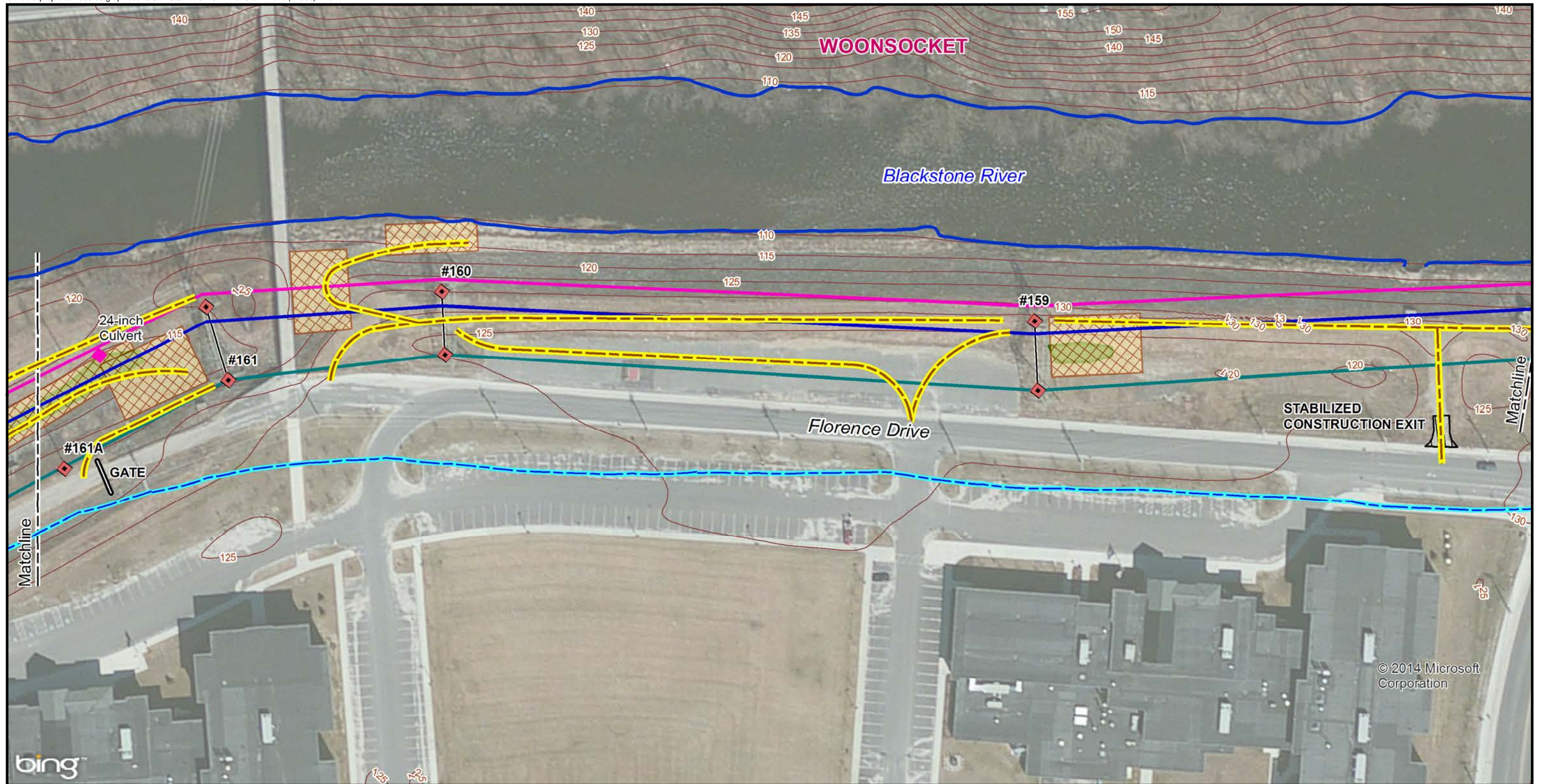
Legend	
— Right-of-Way	Workpad
■ Structure	Compost Filter Sock
— H17 Line	Delineated Wetland Edge
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— J16 Line	Fence
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 2 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





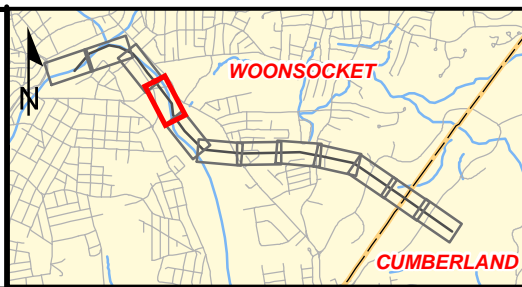
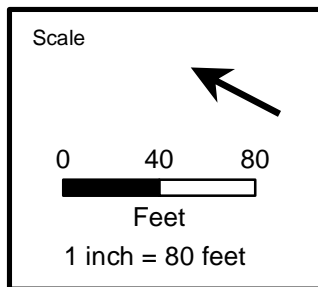
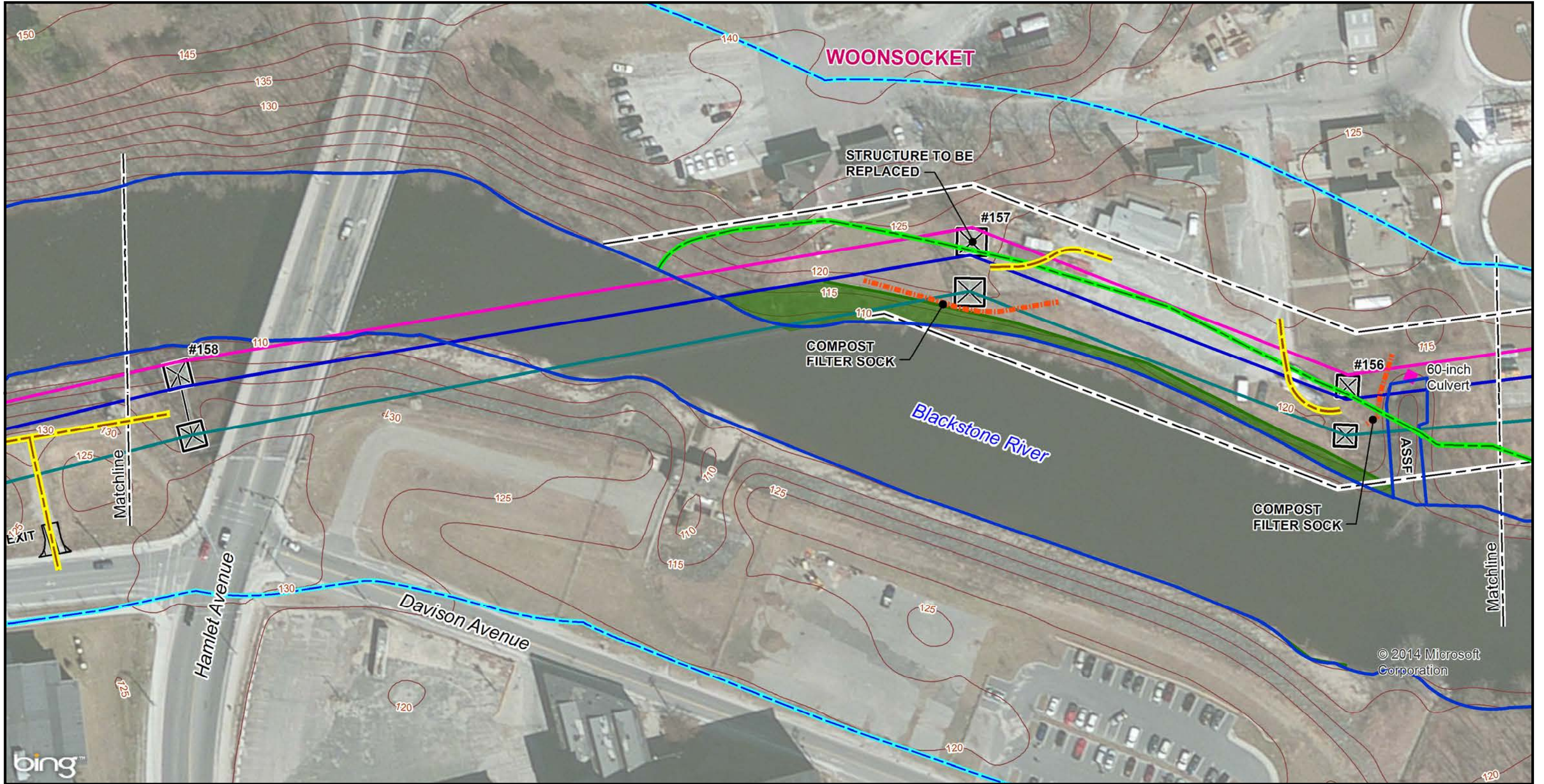
Legend	
— Right-of-Way	Workpad
■ Structure	Compost Filter Sock
— H17 Line	Delineated Wetland Edge
— R9 Line	ASSF
— J16 Line	X — Fence
— Access	■ Culvert
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 3 of 12
 Plans
 Figure 3-1

Source:
 Bing Maps (Aerial Imagery)
 Nation Grid (Right-of-Way)
 VHB (GPS Located Wetlands)





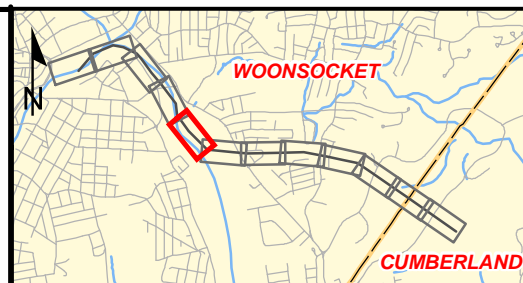
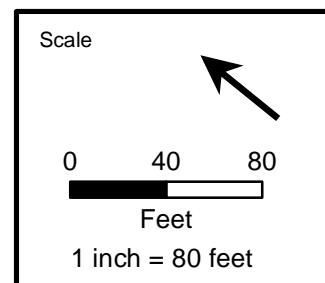
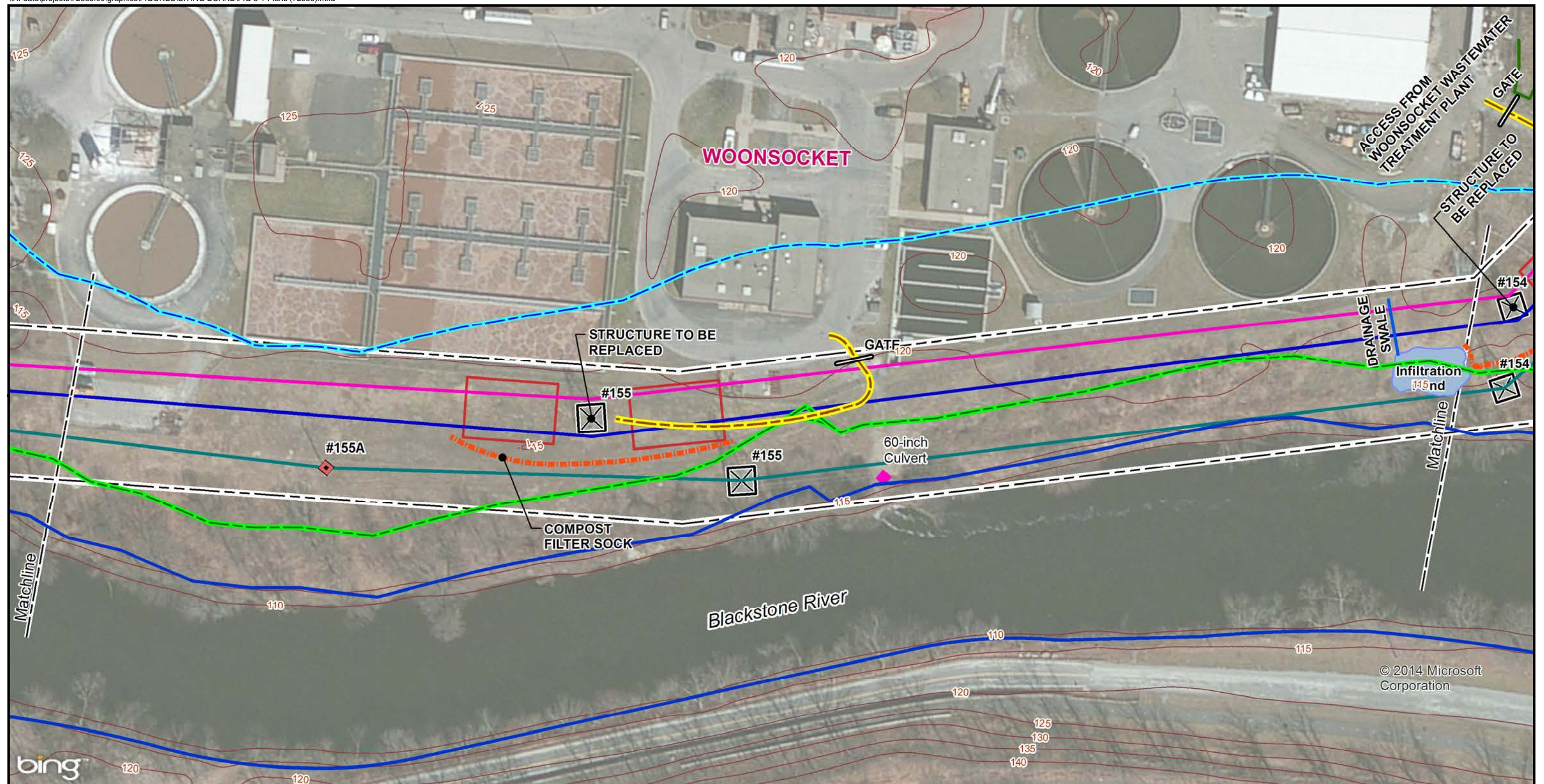
Legend	
Right-of-Way	Workpad
Structure	Compost Filter Sock
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND
















Sheet 4 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





Legend

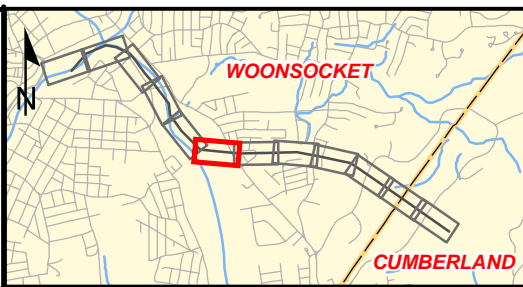
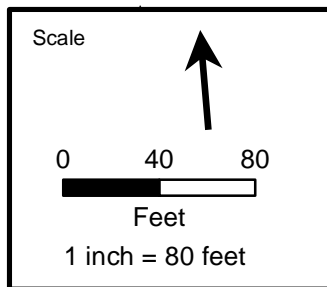
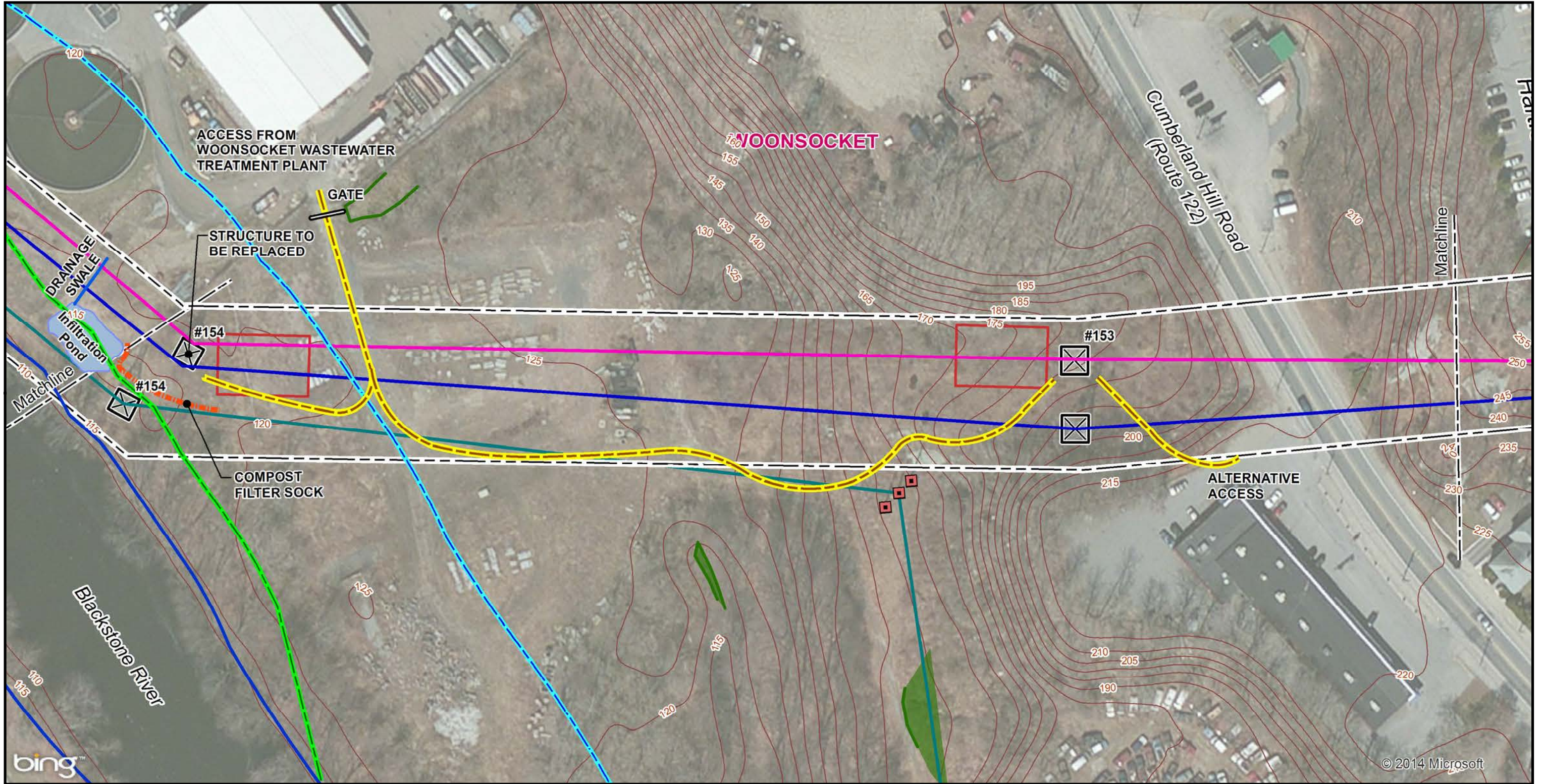
— Right-of-Way	 Workpad
 Structure	 Compost Filter Sock
 H17 Line	 Delineated Wetland Edge
 R9 Line	 ASSF
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 5 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)

nationalgrid
vhb



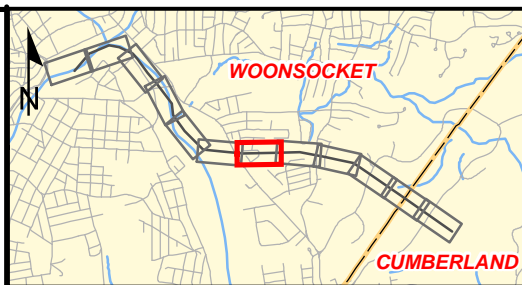
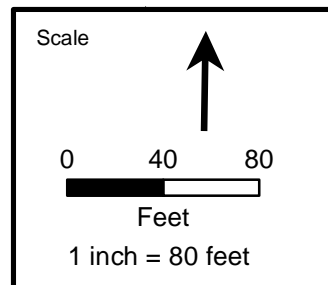
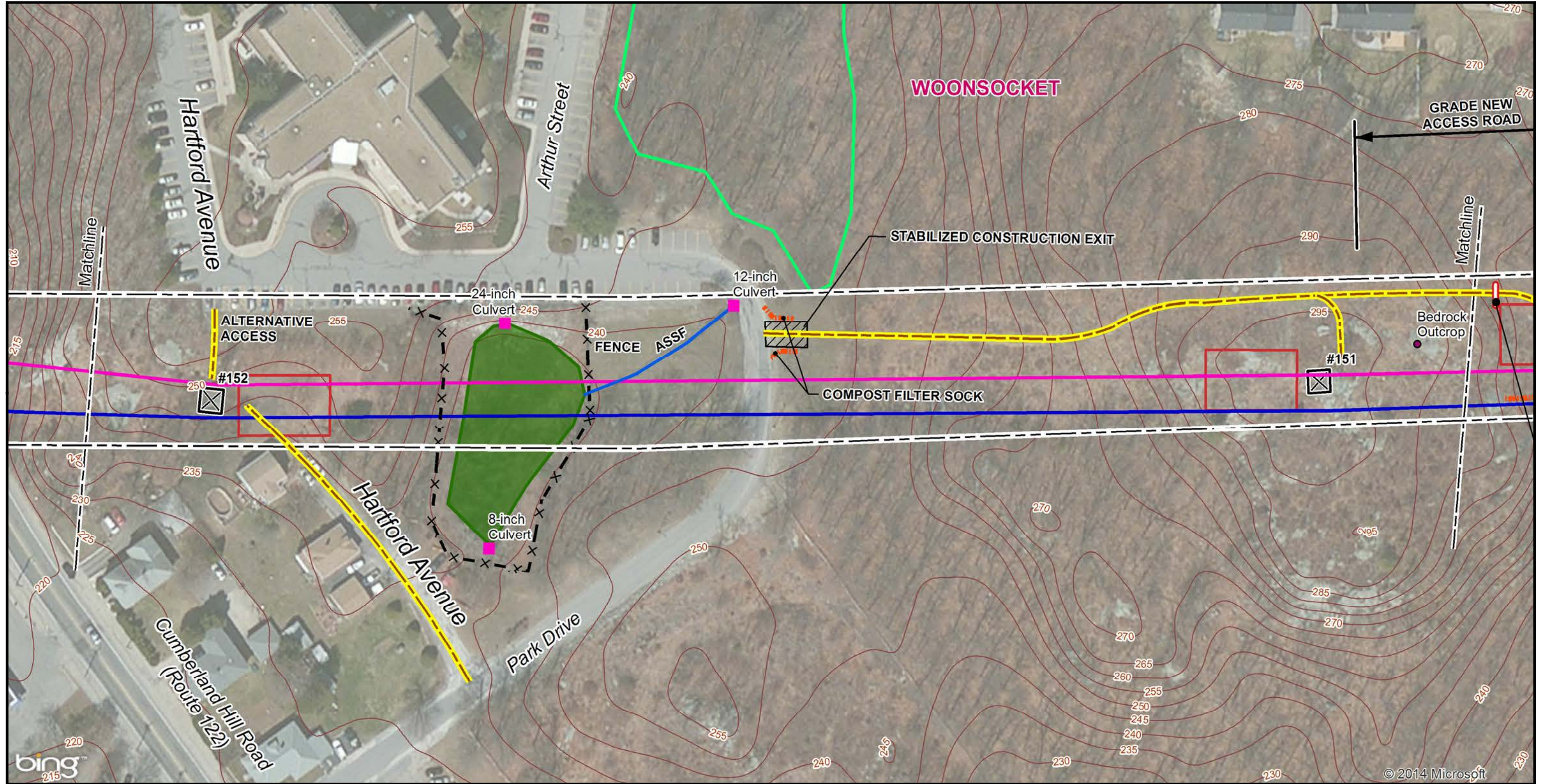
Legend	
— Right-of-Way	Workpad
Structure	Compost Filter Sock
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 6 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





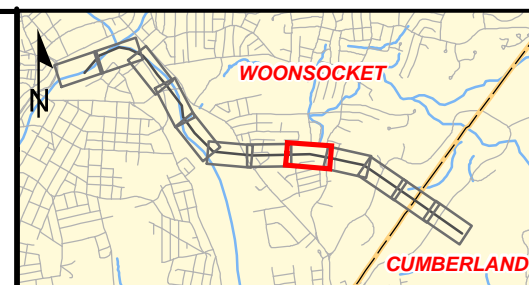
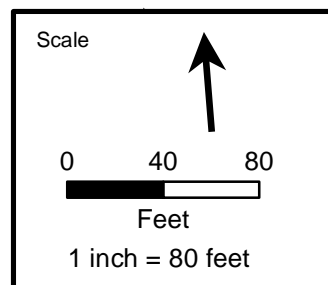
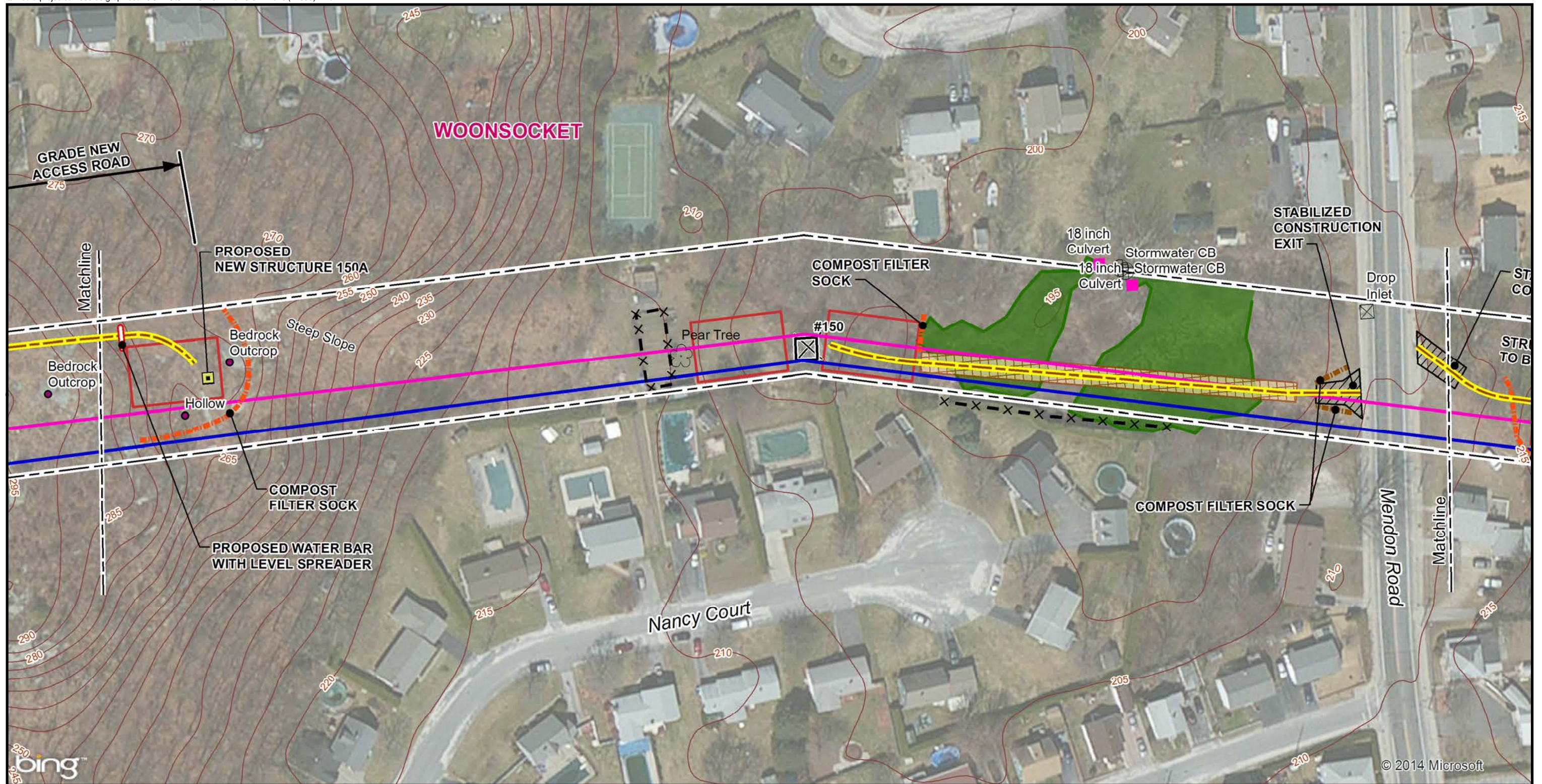
Legend	
— Right-of-Way	Workpad
■ Structure	Compost Filter Sock
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 7 of 12
 Plans
 Figure 3-1

Source:
 Bing Maps (Aerial Imagery)
 Nation Grid (Right-of-Way)
 VHB (GPS Located Wetlands)





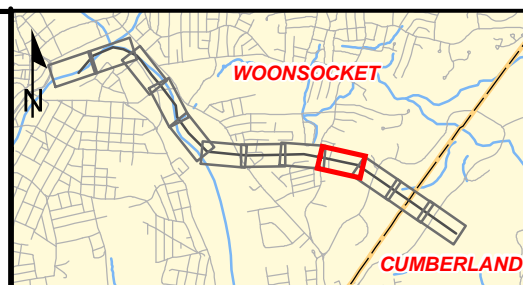
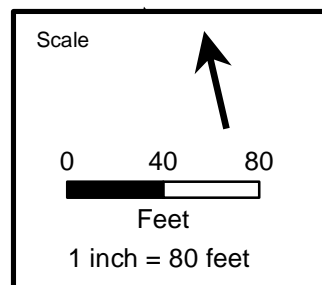
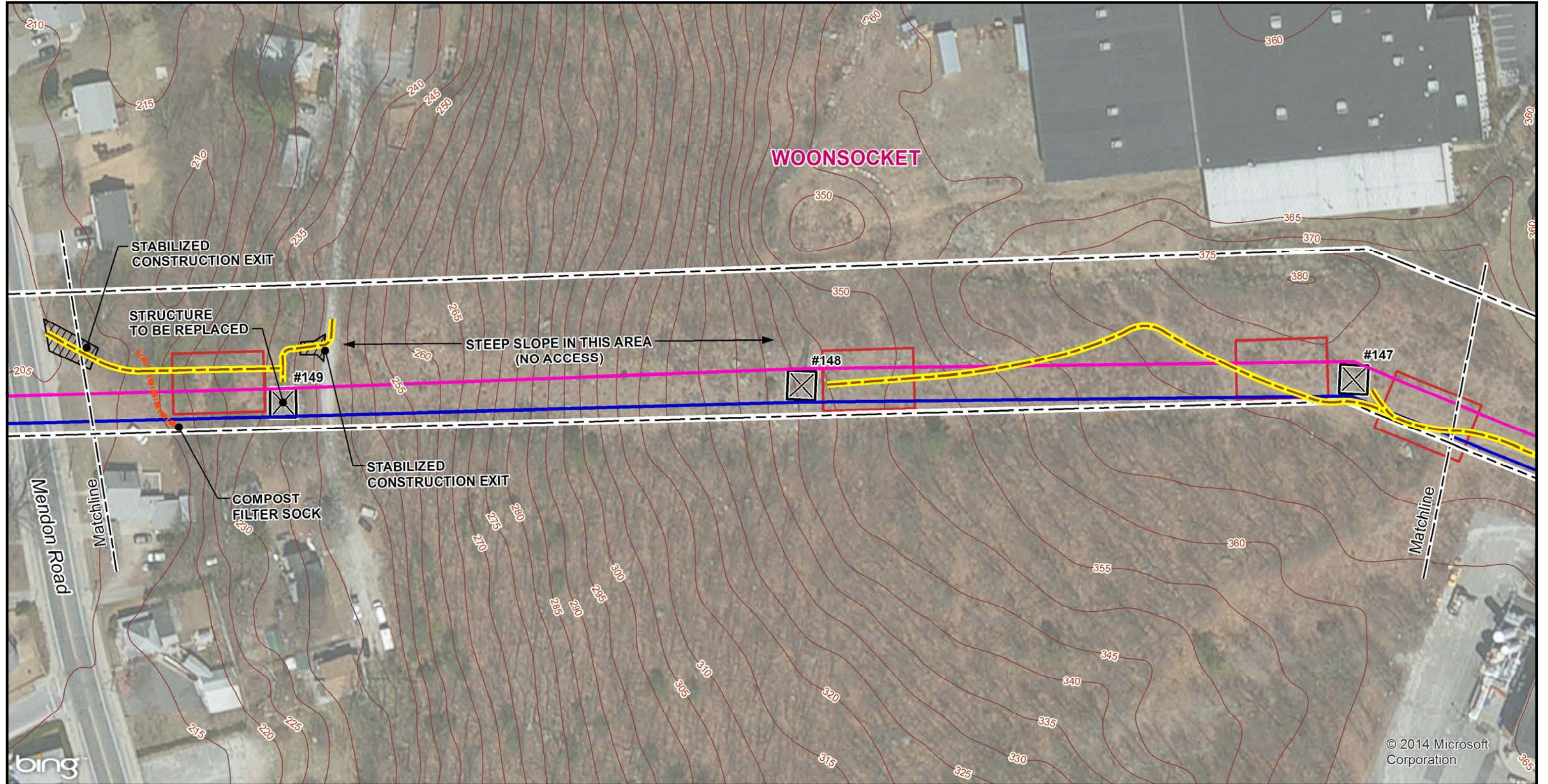
Legend	
— Right-of-Way	Workpad
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT **RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION** **WOONSOCKET AND CUMBERLAND, RHODE ISLAND**

Sheet 8 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





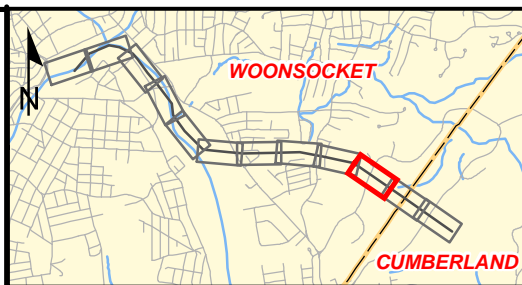
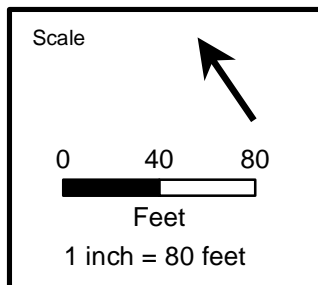
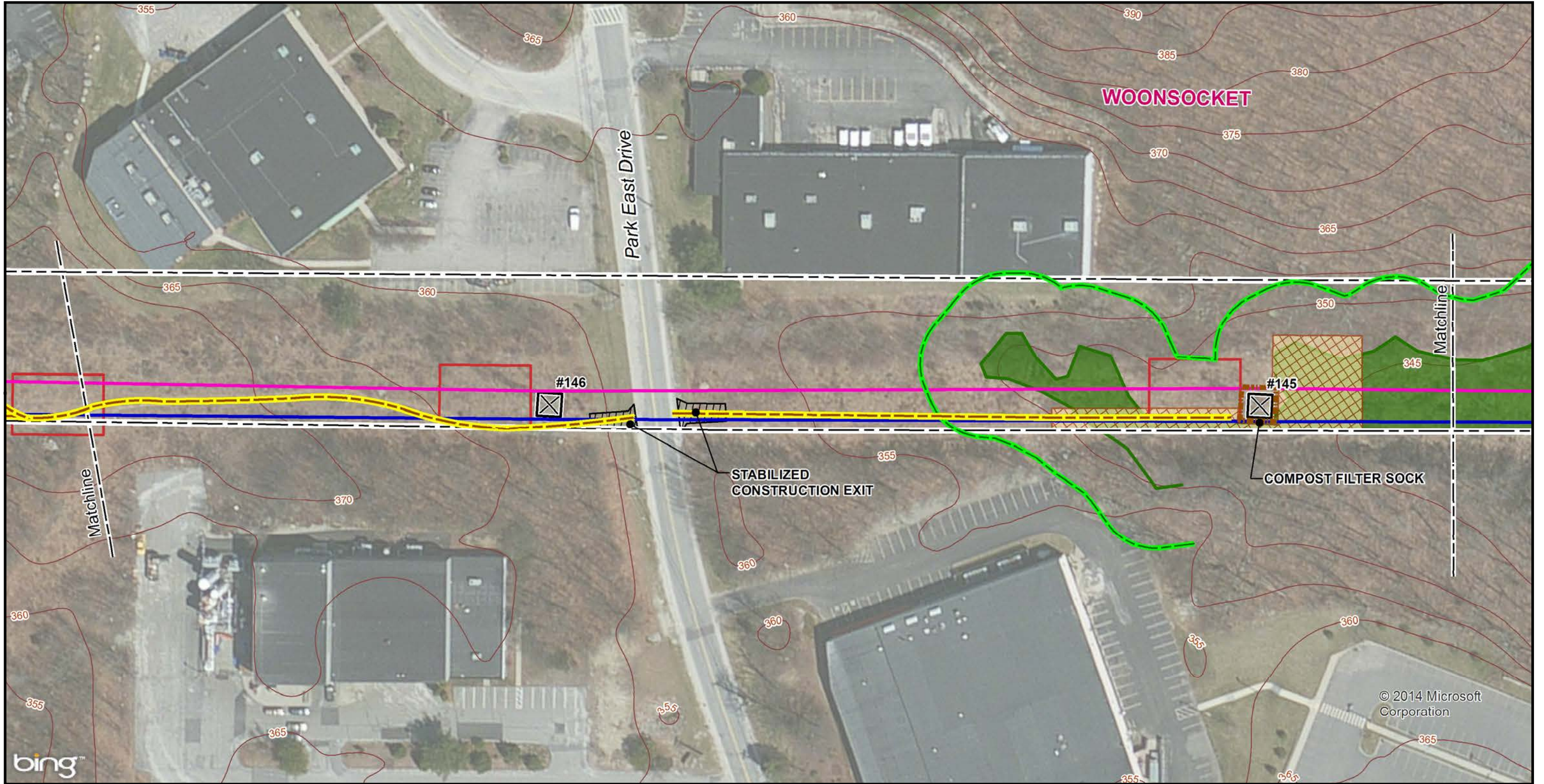
Legend	
Right-of-Way	Workpad
Structure	Compost Filter Sock
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Sheet 9 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





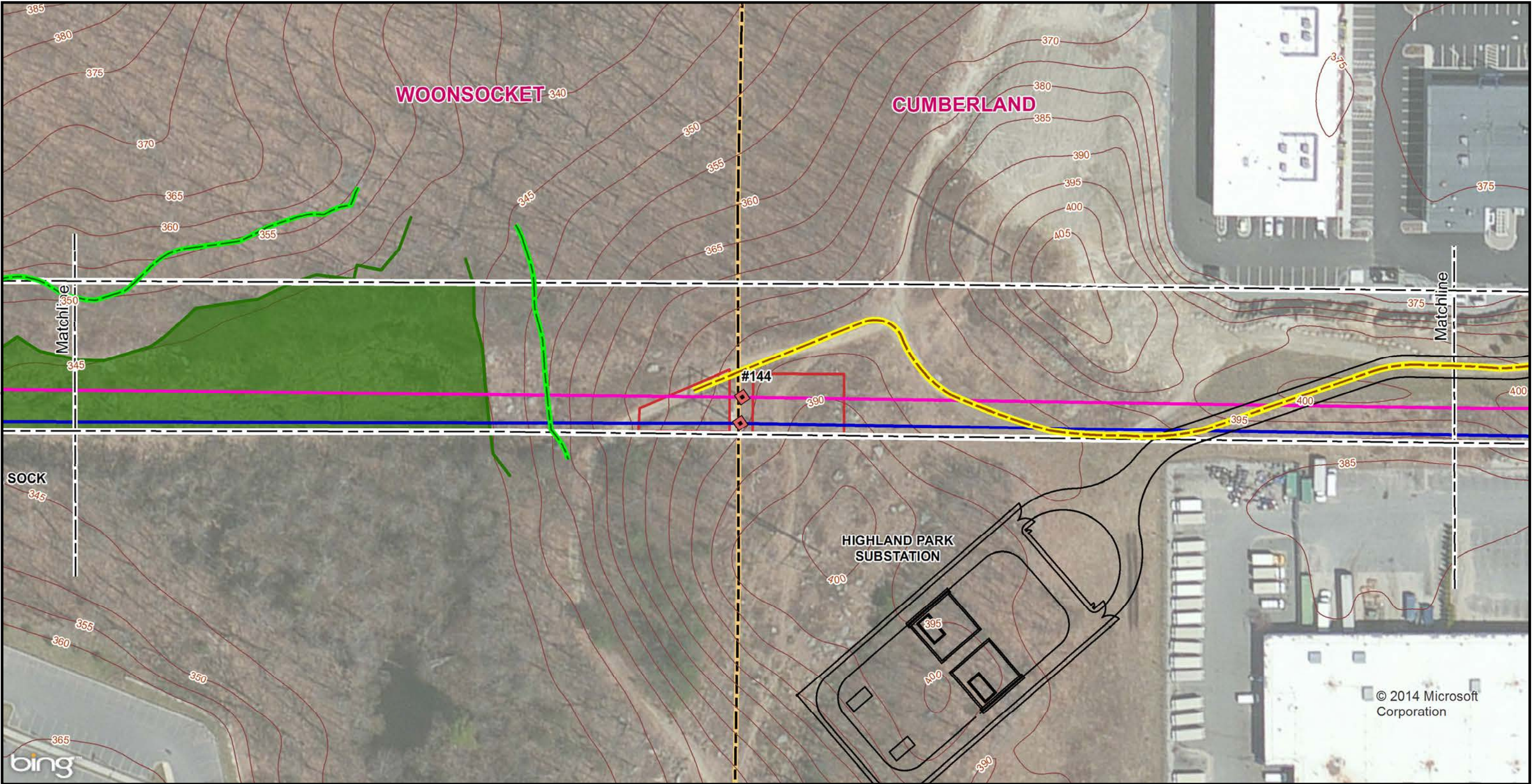
Legend	
Right-of-Way	Workpad
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

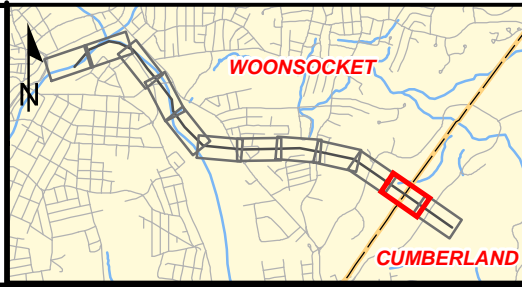
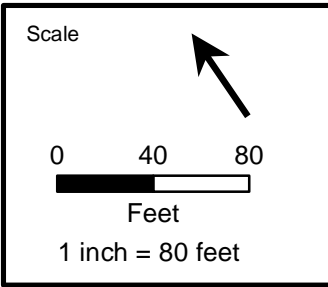
Sheet 10 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)





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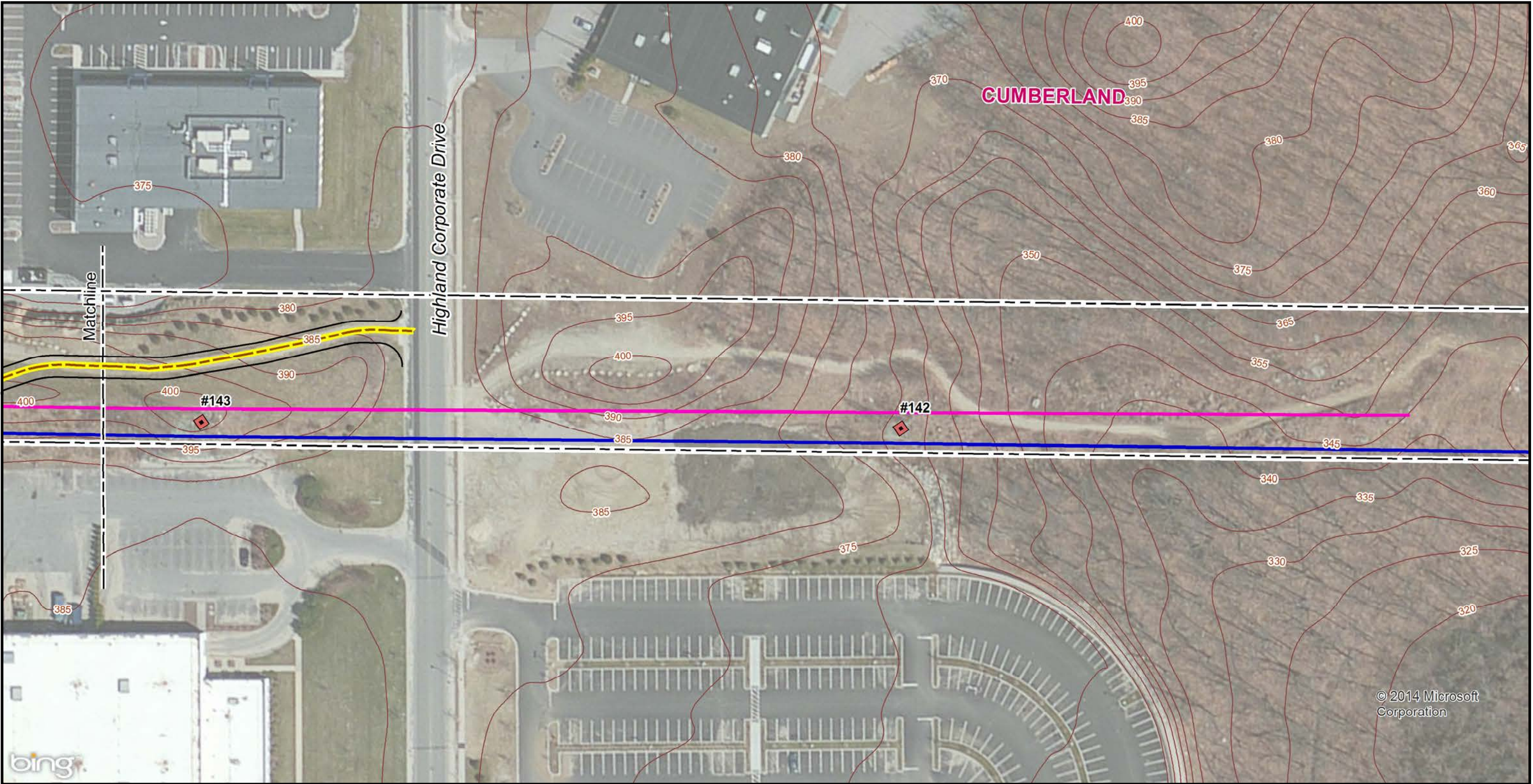
Legend	
— Right-of-Way	Workpad
■ Structure	Compost Filter Sock
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

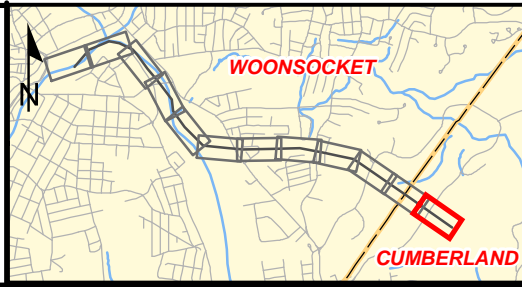
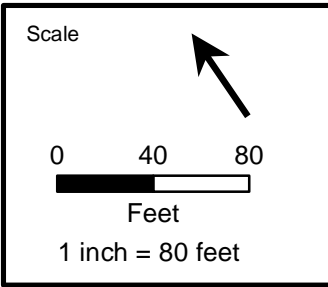
Sheet 11 of 12
Plans
Figure 3-1

Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)

nationalgrid
vhb



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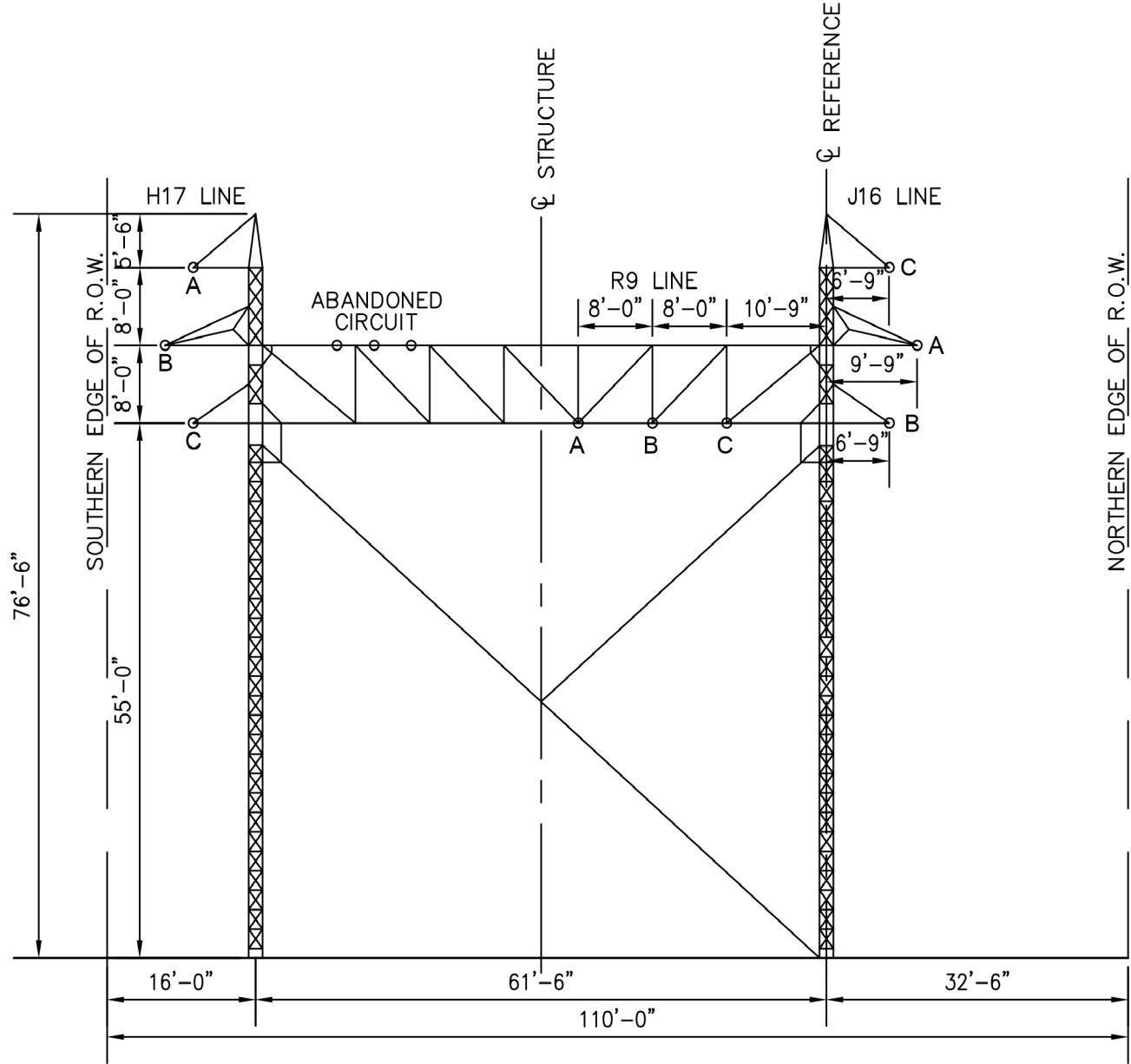
Legend	
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J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND



Sheet 12 of 12
Plans
Figure 3-1

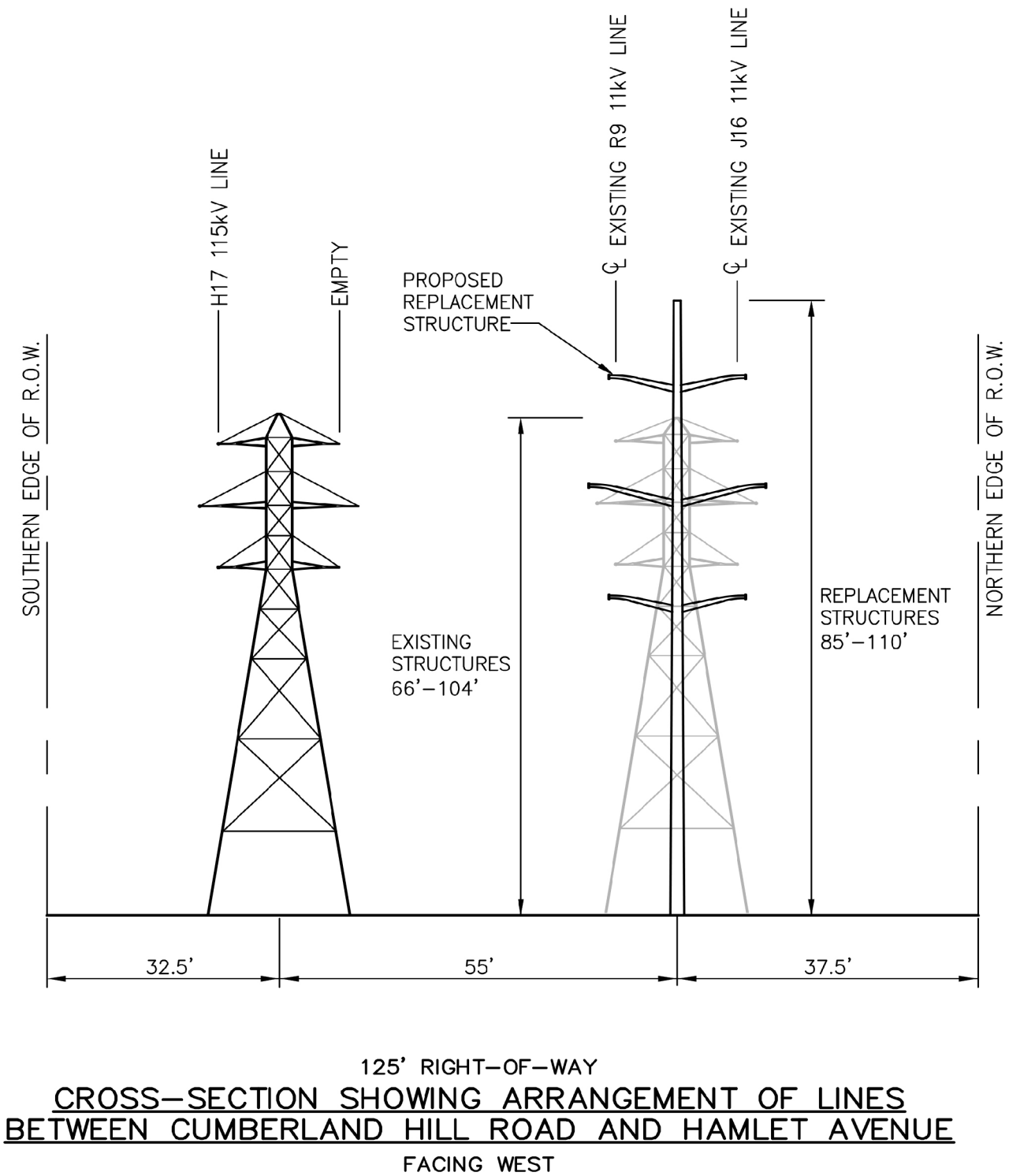
Source:
Bing Maps (Aerial Imagery)
Nation Grid (Right-of-Way)
VHB (GPS Located Wetlands)

nationalgrid
vhb



110'± RIGHT-OF-WAY
CROSS-SECTION SHOWING TYPICAL ARRANGEMENT OF LINES
CANAL STRUCTURE
LOOKING TOWARD RIVERSIDE

<p>Scale</p> <p>Not to Scale</p>	<p>J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION WOONSOCKET AND CUMBERLAND, RHODE ISLAND</p> <p>ROW Cross Section (Canal Structures-Hamlet Avenue to Riverside Substation) Figure 3-2</p>	<p>Source:</p> <p> </p>
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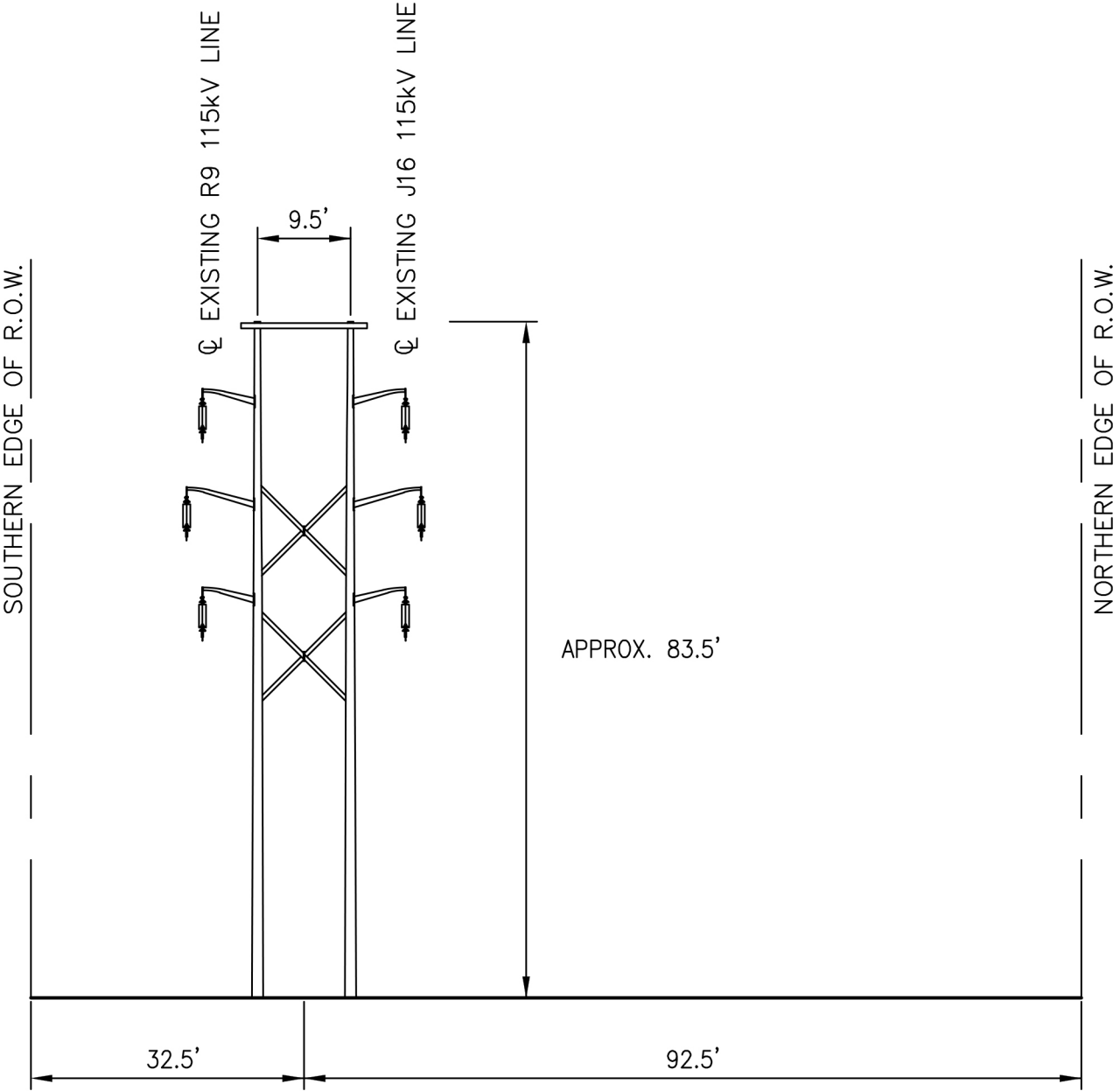


Scale
Not to Scale

J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND
ROW Cross Section (Cumberland Hill Road to Hamlet Avenue)
Figure 3-3

Source:





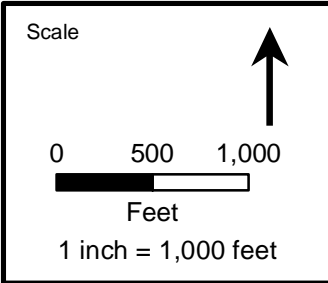
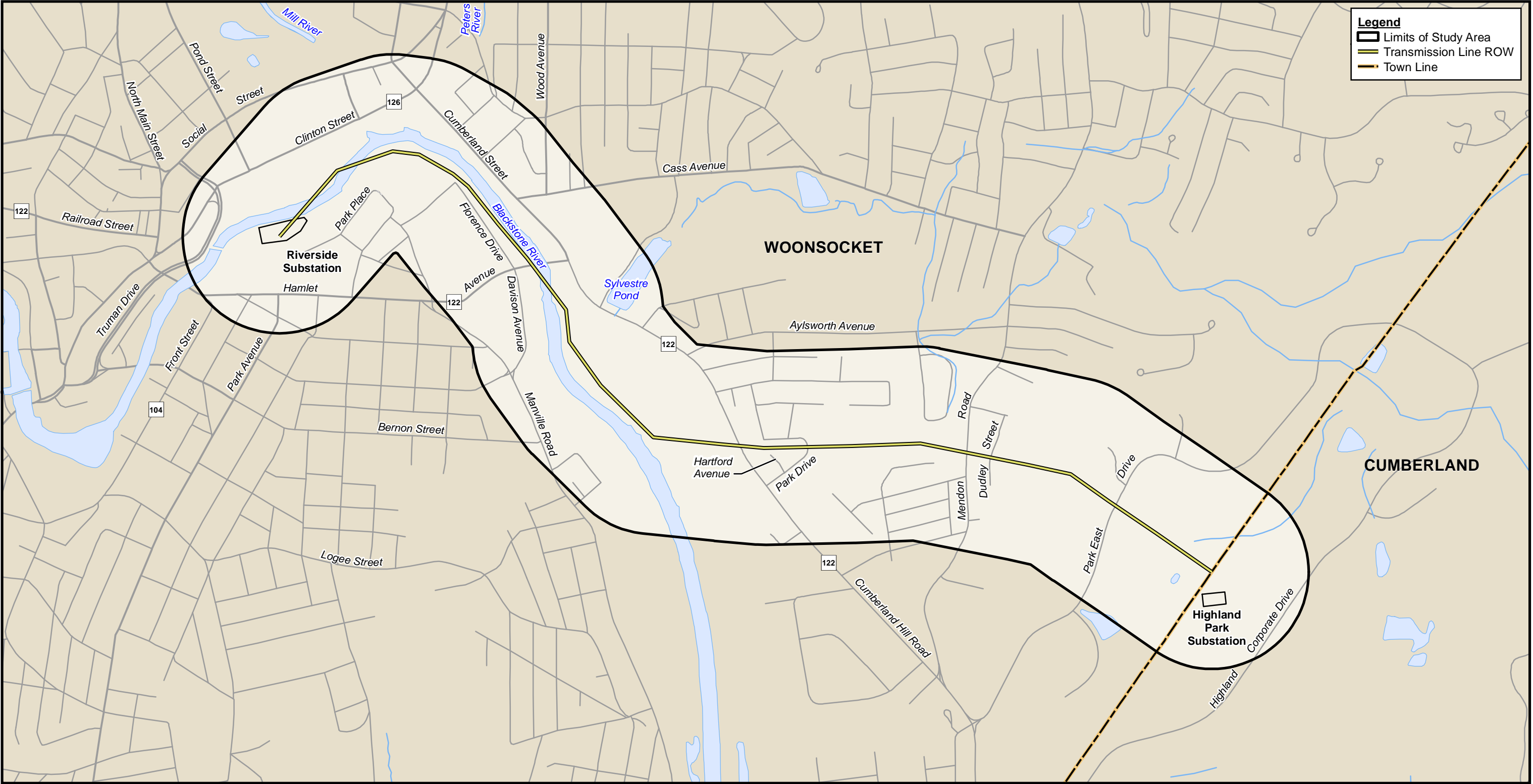
125' RIGHT-OF-WAY
CROSS-SECTION SHOWING ARRANGEMENT OF LINES
AT NEW STRUCTURE 150A
BETWEEN MENDON ROAD AND CUMBERLAND HILL ROAD

J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND
ROW Cross Section (Mendon Road to Cumberland Hill Road)
Figure 3-4

Scale
Not to Scale

Source:

nationalgrid
vhb

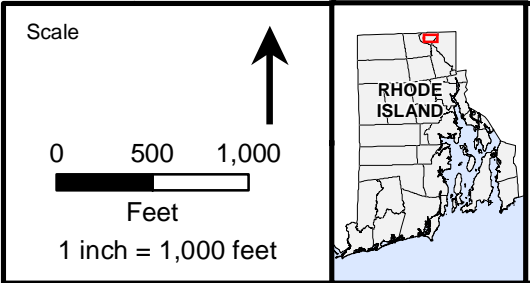
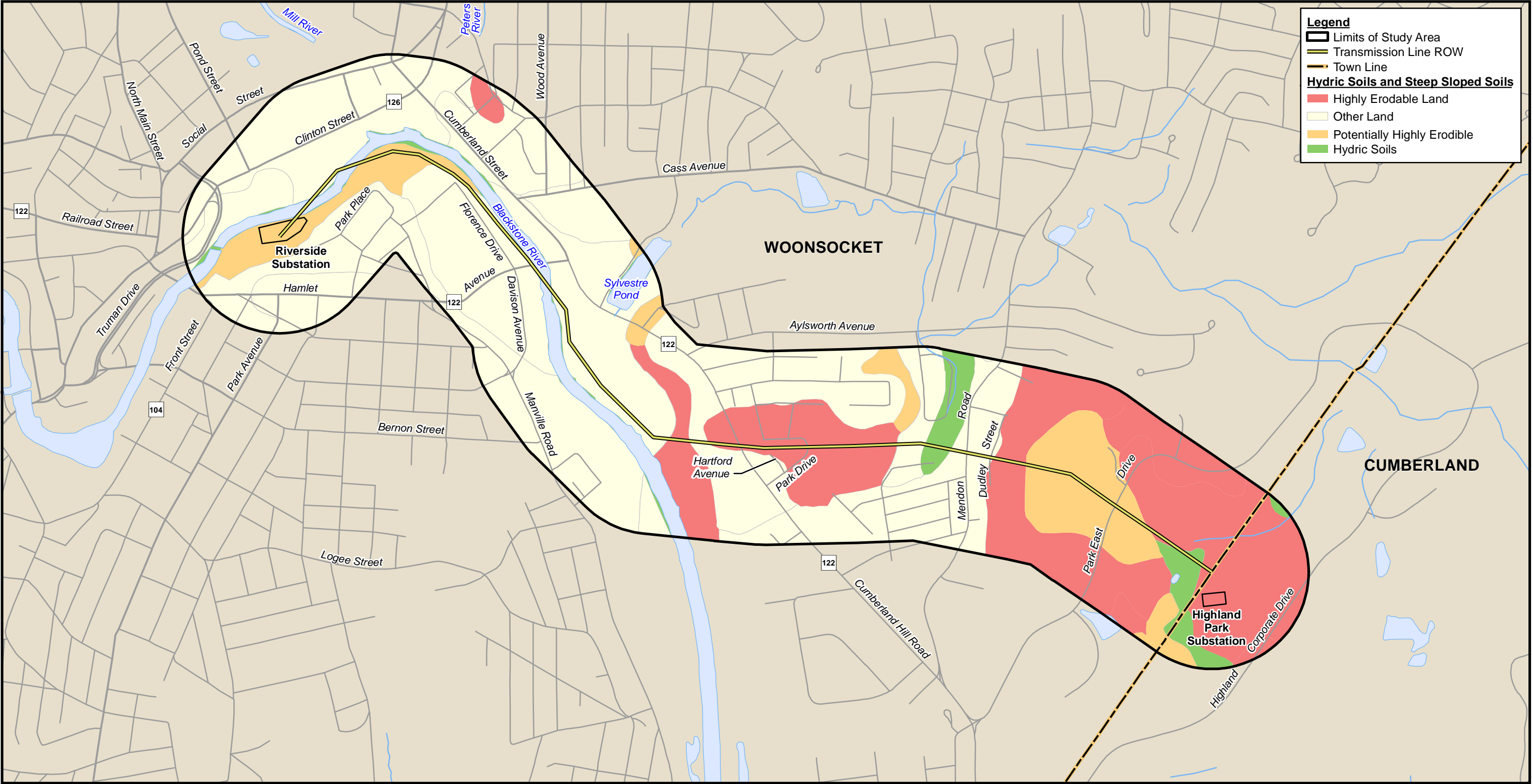


J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Base Plan
Figure 5-1

Source:
RIGIS Base Information
National Grid (Right-of-Way)



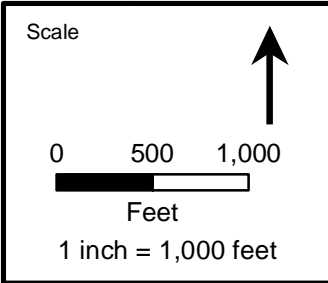
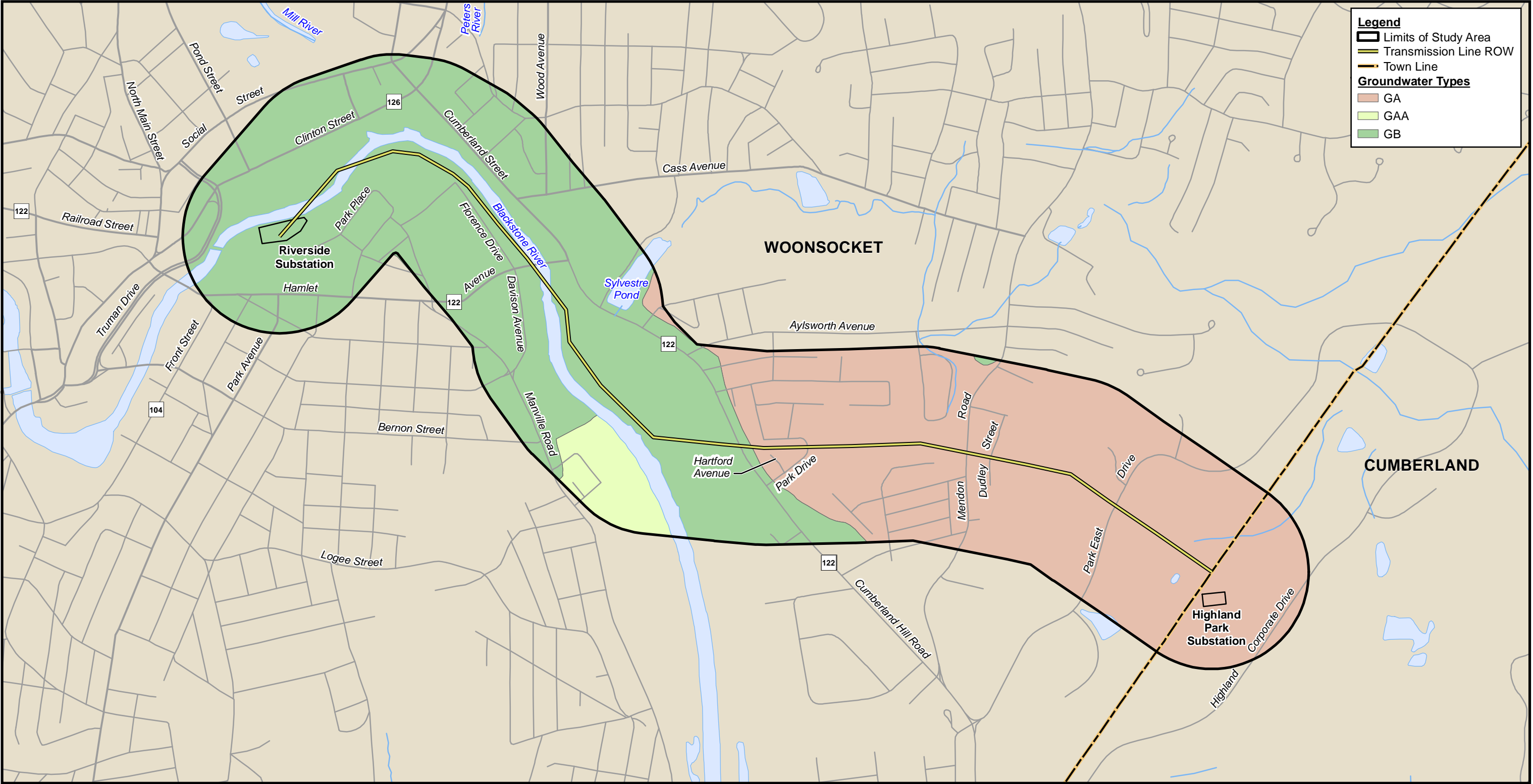


J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Soils Plan
Figure 5-2

Source:
RIGIS Base Information
RIGIS Soils (Obtained 10-14-2014)
National Grid (Right-of-Way)



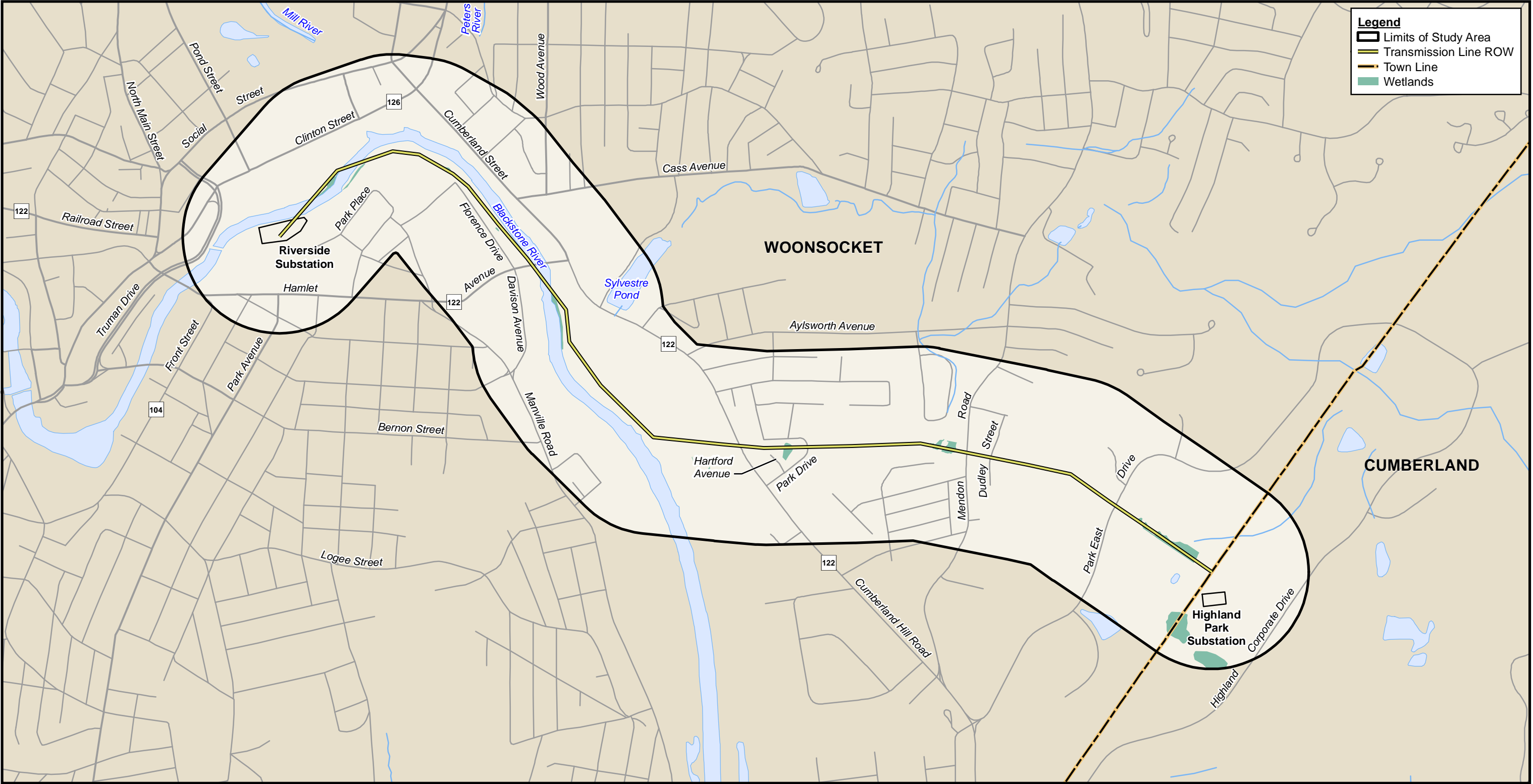


J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Surface and Groundwater Resource Plan
Figure 5-3

Source:
RIGIS Base Information
RIGIS Groundwater Quality Standards
(Obtained 10-14-2014)
National Grid (Right-of-Way)





Legend

- Limits of Study Area
- Transmission Line ROW
- Town Line
- Wetlands

Scale

0 500 1,000

Feet

1 inch = 1,000 feet

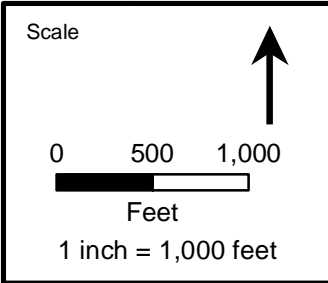
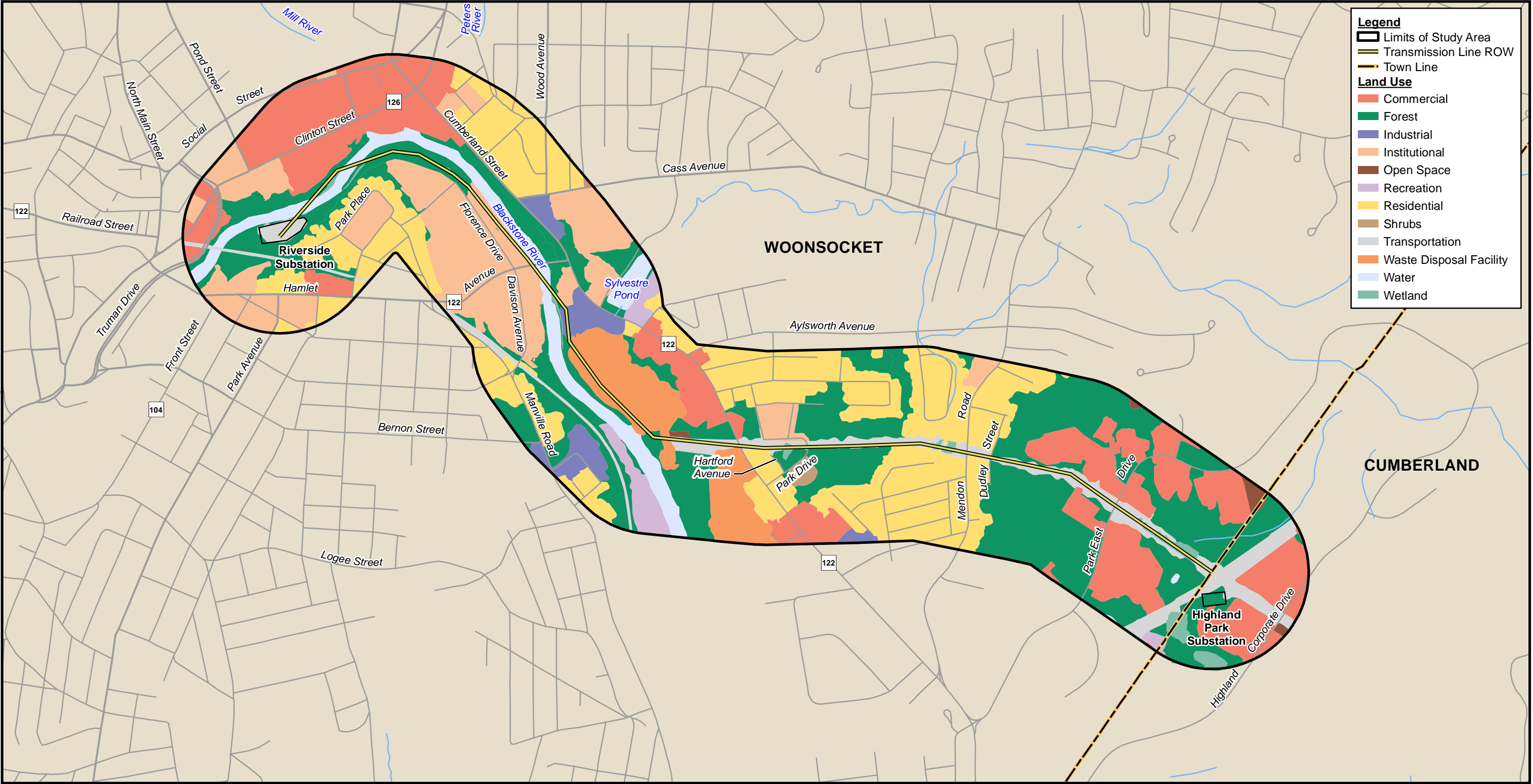
RHODE ISLAND

J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Wetland Plan
Figure 5-4

Source:
RIGIS Base Information
RIGIS Wetlands (Obtained 10-14-2014)
VHB Survey Wetlands (9-24-2014)
National Grid (Right-of-Way)





J16 115KV TRANSMISSION LINE RECONDUCTORING PROJECT
RIVERSIDE SUBSTATION TO HIGHLAND PARK SUBSTATION
WOONSOCKET AND CUMBERLAND, RHODE ISLAND

Land Use Plan
Figure 6-1

Source:
RIGIS Base Information
RIGIS Land Use (Obtained 10-14-2014)
National Grid (Right-of-Way)

