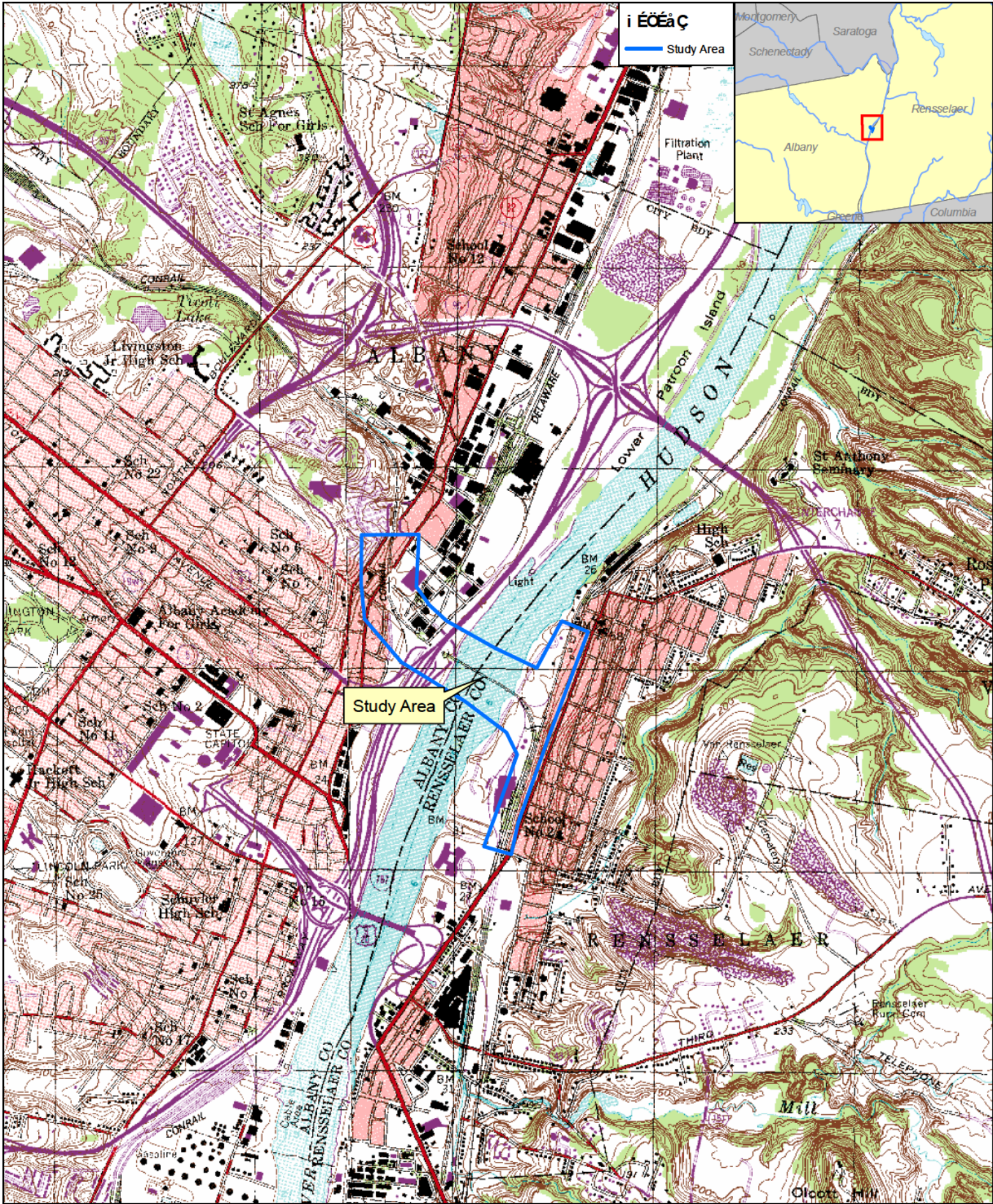


APPENDIX A
FIGURES



i ΕΟΕαÇ
 Study Area

Study Area



οἰκιστῶν ἑννοητικῶν ἑλίξῶν ἡ ἀνάπτυξη ἑξελίξις

Livingston Avenue Railroad Bridge
 P.I.N. 1935.49.101, BIN 7092890

Cities of Albany and Rensselaer - Albany and Rensselaer Counties



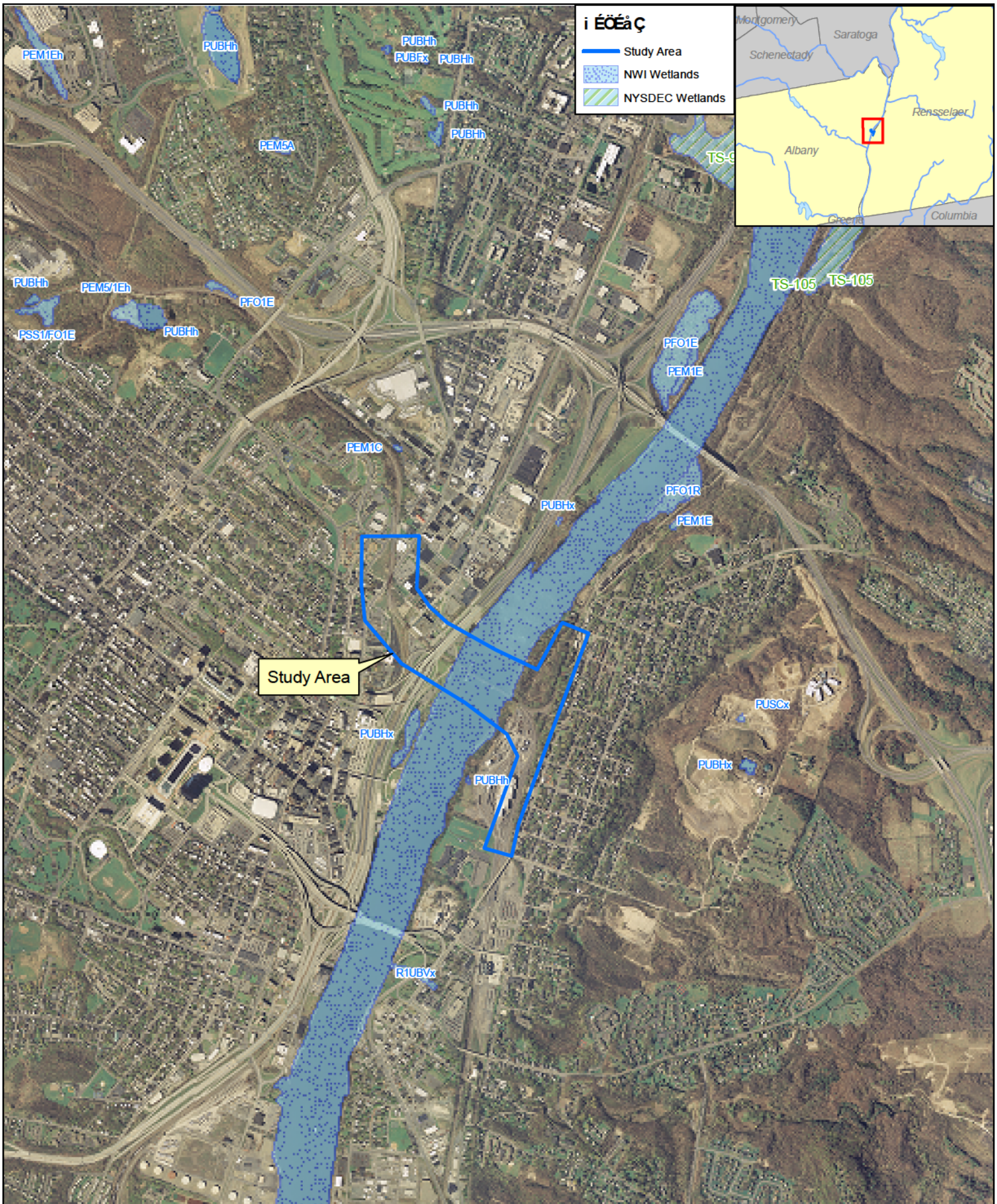
Project No. : 20932

Date : December 2010

0 1,000 2,000 Feet

1 inch = 2,000 feet

Μετὰ ἀδείξεως ἀναρτίου Κ. Γρηγορίου καὶ ἀ-ἀόκτου ΝΟΟΜΑΝΩΣ
 ἰ-ἀναρτίου ΓΡΑΜΜΑΤΕΙᾶΣ τῆς Μαγ. Οὐδ.-ἀγίας ἀρχῆς



Legend

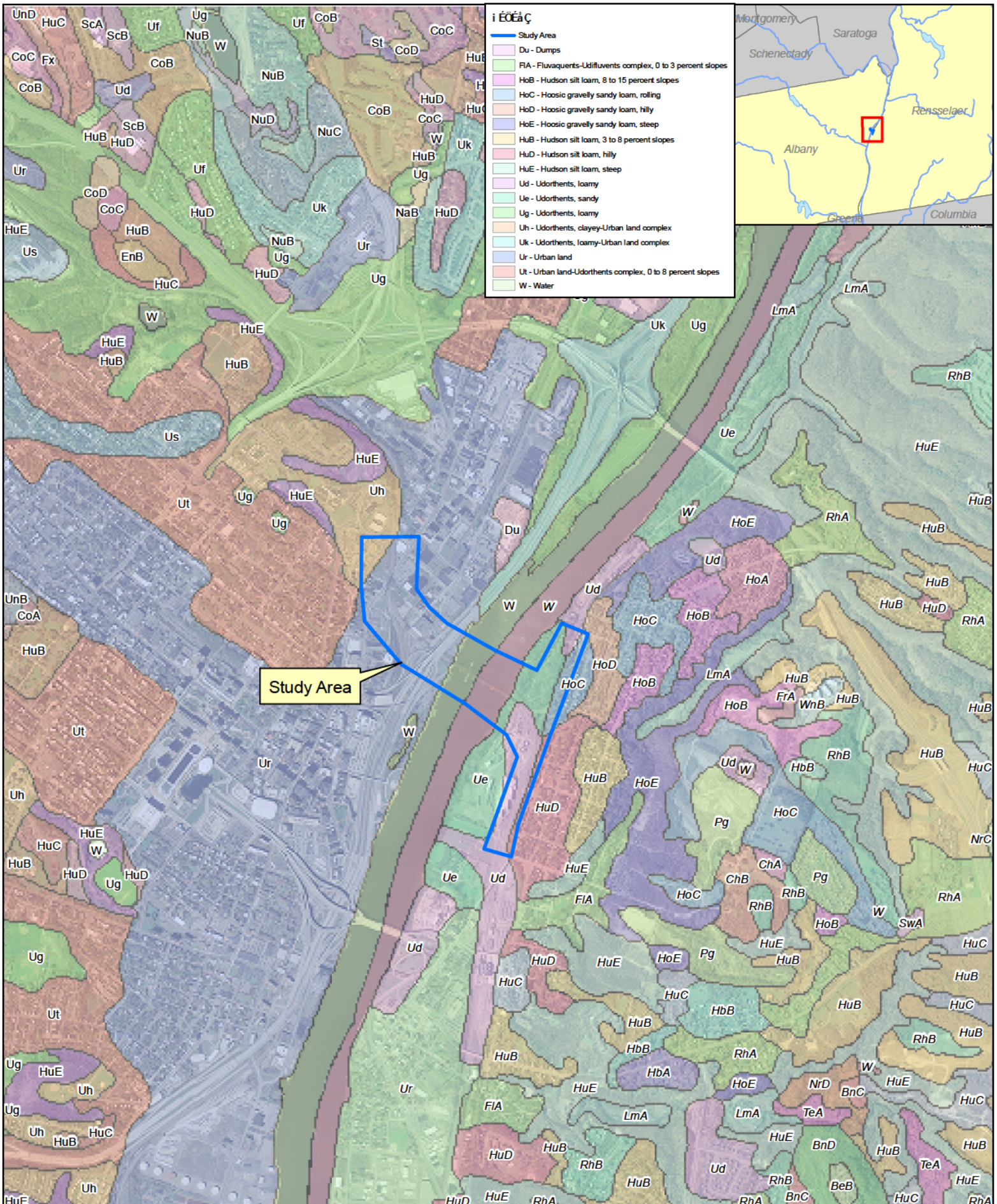
- Study Area
- NWI Wetlands
- NYSDEC Wetlands



Study Area

Livingston Avenue Railroad Bridge
 P.I.N. 1935.49.101, BIN 7092890
 Cities of Albany and Rensselaer - Albany and Rensselaer Counties

Project No. : 20932
 Date : December 2010
 0 1,000 2,000 Feet



Study Area



City of Albany
City of Rensselaer

Livingston Avenue Railroad Bridge

P.I.N. 1935.49.101, BIN 7092890

Cities of Albany and Rensselaer - Albany and Rensselaer Counties



1 inch = 2,000 feet

Project No. : 20932

Date : December 2010

0 1,000 2,000 Feet

APPENDIX B
DATA SHEETS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Livingston Avenue Railroad Bridge City/County: Albany & Rensselaer Sampling Date: 11/11/10
 Applicant/Owner: Amtrak State: NY Sampling Point: 1
 Investigator(s): Greaves & Einstein Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave
 Slope (%): 0 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Ue- Udorthents,, sandy NWI classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Vernal Pool</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: 1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30"</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15"</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5"</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lemna minor</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Bidens frondosa</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>36</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			
0-16+	2..5Y 3/1	100				Gravelly clay		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input checked="" type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed): Type: <u>Rock</u> Depth (inches): <u>16</u></p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
--	---

Remarks:

Can't get past 16" due to rock.

These are problematic hydric soils. This is a Recently Developed Wetland with Seasonally Ponded Soils (as described in Chapter 5 of the Regional Supplement). Sufficient indicators of wetland hydrology and hydrophytic vegetation were present at the time of survey. This "vernal pool" occurs in a depression within a flat floodplain of the Hudson River. Surrounding areas were upland, but this depression was wetland. This depression may have been deepened by ATV or truck traffic.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Livingston Avenue Railroad Bridge City/County: Albany & Rensselaer Sampling Date: 11/11/10
 Applicant/Owner: Amtrak State: NY Sampling Point: 2
 Investigator(s): Greaves & Einstein Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): flat, floodplain Local relief (concave, convex, none): flat/none
 Slope (%): 0 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Ue- Udorthents, sandy NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: <u>Upland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successional Southern Hardwoods	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: 2

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
1. <u>Rhus typhina</u>	<u>25</u>	<u>N/A</u>	<u>NL</u>	
2. <u>Ailanthus altissima</u>	<u>25</u>	<u>Y</u>	<u>NI/FACU</u>	
3. <u>Robinia pseudoacacia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
<u>30</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
1. <u>Rhus typhina</u>	<u>30</u>	<u>N/A</u>	<u>NL</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Robinia pseudoacacia</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Rhamnus cathartica</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
4. <u>Rosa multi-flora</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
<u>40</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Solidago sp.</u>	<u>5</u>	<u>N/A</u>	<u>N/A</u>	
2. <u>Rubus idaeus</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>5</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
1. _____				
2. _____				
3. _____				
4. _____				
_____	= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes _____ No <u>x</u>

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	2.5Y 3/2	100					loamy sand	
9-16+	10YR 4/3	95	10YR 3/1	5			clay with rocks	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No x

Remarks:

APPENDIX C
PHOTOGRAPHS



Photo 1- Delineated feature A, an ephemeral stream (R4UB1).



Photo 2 – Delineated feature A, the ephemeral stream (gravel in the foreground), where it meets the Hudson River (beyond the pillar in the background). Water in the picture is a rain puddle.



SITE PHOTOGRAPHS

**P.I.N. 1935.49.101, BIN 7092890
Livingston Avenue Railroad Bridge
Cities of Albany and Rensselaer
Albany and Rensselaer Counties, NY**



Photo 3 – Delineated feature B (Wetland B), a vernal pool (PEMC).



Photo 4 –Shovel pit of Wetland B's soils.



SITE PHOTOGRAPHS

**P.I.N. 1935.49.101, BIN 7092890
Livingston Avenue Railroad Bridge
Cities of Albany and Rensselaer
Albany and Rensselaer Counties, NY**



Photo 5 – Successional northern hardwoods that surround Wetland B.



Photo 6 – Shovel pit to document the soils of the successional northern hardwoods surrounding Wetland B



SITE PHOTOGRAPHS

**P.I.N. 1935.49.101, BIN 7092890
Livingston Avenue Railroad Bridge
Cities of Albany and Rensselaer
Albany and Rensselaer Counties, NY**

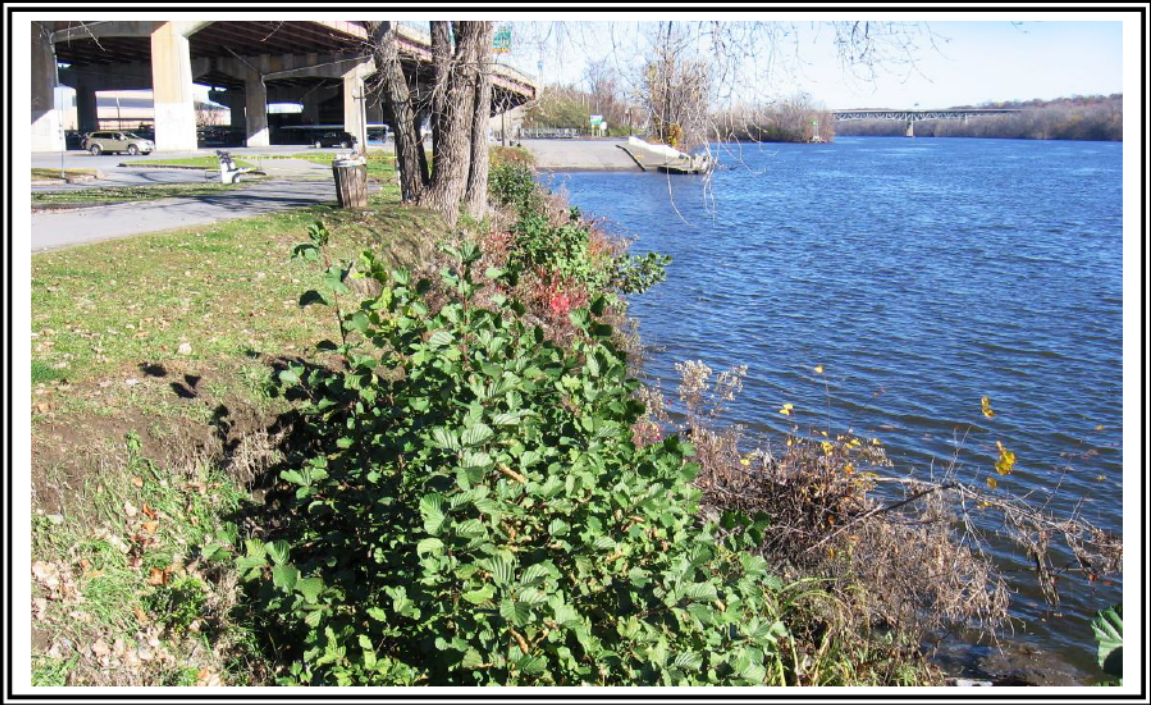


Photo 7 – View of the Hudson River’s west bank (Albany side), looking north.



Photo 8 – View of the Hudson River’s west bank (Albany side), looking south.



SITE PHOTOGRAPHS

**P.I.N. 1935.49.101, BIN 7092890
Livingston Avenue Railroad Bridge
Cities of Albany and Rensselaer
Albany and Rensselaer Counties, NY**



Photo 9 – View of the undelineated reedgrass/purple loosestrife linear wetland ditch (next to the telephone pole in the background).



SITE PHOTOGRAPHS

**P.I.N. 1935.49.101, BIN 7092890
Livingston Avenue Railroad Bridge
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Albany and Rensselaer Counties, NY**