



**Western Massachusetts
Electric**

The Northeast Utilities System

NEW ENGLAND
EAST  **WEST
SOLUTION**

EX. 5.2: Aerial Photographs – 400 Scale



Massachusetts Energy Facilities Siting Board Petition for
The Greater Springfield Reliability Project

INTRODUCTION

The 400-scale aerial route maps depict the Preferred Northern Route for the proposed 345-kV electric facilities and 115-kV improvements between the Connecticut/Massachusetts border in Agawam (near South Agawam Switching Station) and Ludlow Substation in Ludlow, Massachusetts. The 400-scale aerial maps also include the Noticed-Alternative Southern Route in Agawam, Longmeadow, East Longmeadow, Hampden, Wilbraham and Ludlow. The Greater Springfield Reliability Project includes construction of 345-kV electric transmission facilities and 115-kV transmission-system upgrades between North Bloomfield Substation and the Ludlow Substation in Ludlow, Massachusetts. Only the portions of the Project in Massachusetts are included in this section.

The routes are illustrated on a series of recent (2005 or 2007) aerial photographs. The 2007 aerials photographs are limited to an approximately 1,500-foot wide corridor along the Preferred Northern and Noticed-Alternative Southern Routes, and the 2005 aerials photographs cover the remainder of each map. The figures are labeled as a series of mapsheets based on the various routes presented and are shown at an approximate scale of one inch equals 400 feet (400-scale). An Index Map showing the location of each mapsheet overlaid on a partial map of Massachusetts is provided below. The aerial photograph for each map sheet is oriented with a north arrow to the left of the title block on each page. North varies with the orientation of the aerial photograph. Municipal boundaries and street names are identified on each mapsheet, as appropriate. The text description is organized to read from south to north and west to east, for example from South Agawam Switching Station to Agawam Substation.

Shown on the mapsheets are certain existing overhead transmission lines (in most locations, there is more than one line, even though only one symbol is shown), along with certain individual line-structure numbers, potential access roads, limits for the ROW, proposed ROW expansion limits, property lines, existing land use within and adjacent to the route corridor, zoning designations, and the preferred route and route alternatives. Likewise, areas of environmental significance, such as wetlands, watercourses, and the 100-year flood zone have been identified on the aerial map sheets. The accompanying text describes the area and ROW, including proximity of land use, forests, parks, Massachusetts protected open space areas and Article 97 lands.

INDEX

**PREFERRED NORTHERN ROUTE AND
NOTICED-ALTERNATIVE SOUTHERN ROUTE**

Mapsheet	Town(s)	Overhead Structures	Location
1 of 3	Agawam	2248 to 2253	CT/MA State Line to Barry Street
2 of 3	Agawam	2253 to 2264	Barry Street to South Westfield Street
3 of 3	Agawam	2263 to 2274	South Westfield Street to Moylan Drive

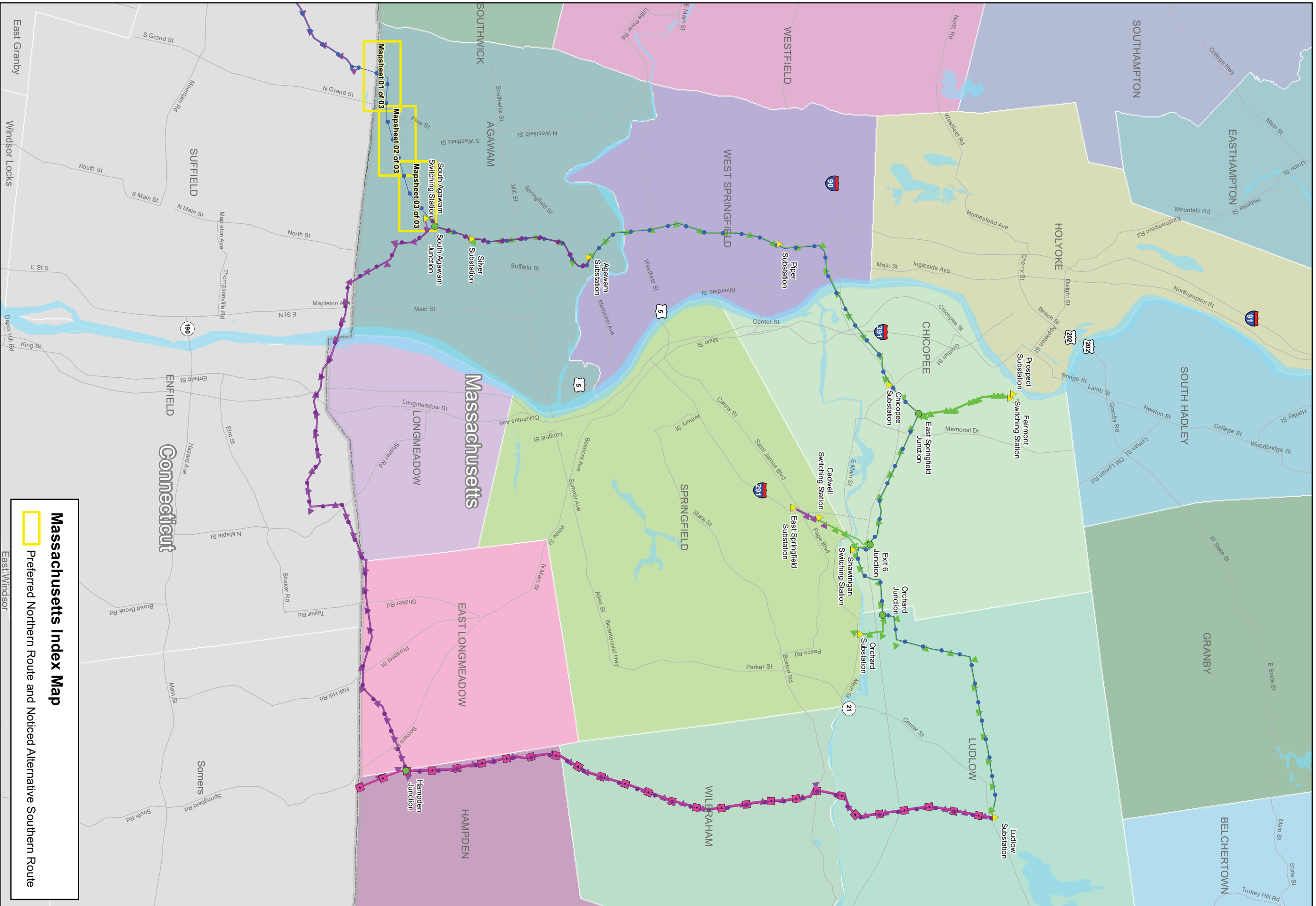
PREFERRED NORTHERN ROUTE

Mapsheet	Town(s)	Overhead Structures	Location
1 of 22	Agawam	2271 to 2284	Moylan Drive to Silver Street
2 of 22	Agawam	2283 to 2294	Silver Street to Lancaster Drive
3 of 22	Agawam	2293 to 48028	Rowley Street to Agawam Substation
4 of 22	Agawam, West Springfield	48033 to 48023	Agawam Substation to Fenor Street
5 of 22	West Springfield	48022 to 48011	U.S. Highway 20/Westfield Street to Amostown Road
6 of 22	West Springfield	48010 to 55032	Heritage Lane to Piper Road
7 of 22	West Springfield	48002 to 55023	Brush Hill Avenue to William Street
8 of 22	West Springfield, Chicopee	55022 to 55013	Riverdale Street to Chicopee Street
9 of 22	Chicopee	55014 to 55003	Bill Street to Granby Road
10 of 22	Chicopee	55003 to 49099	Pond Street to Memorial Drive
11 of 22	Chicopee	49100 to 49091	State Route 33/Memorial Drive to Massachusetts Turnpike
12 of 22	Chicopee	49091 to Shawinigan Switching Station	Massachusetts Turnpike to Shawinigan Drive
13 of 22	Chicopee, Ludlow, City of Springfield	49077 to 49064	Shawinigan Substation to Orchard Junction
14 of 22	Ludlow, City of Springfield	50 to 31 and 45051 to 9	Orchard Junction to Bruni Avenue and Orchard Junction to Orchard Substation
15 of 22	Ludlow	31 to 46	Bruni Avenue to Tank Farm Road
16 of 22	Ludlow	46 to 62	Tank Farm Road to Rood Street
17 of 22	Ludlow	60 to 76	Rood Street to Booth Street
18 of 22	Ludlow	75 to Ludlow Substation	Booth Street to Ludlow Substation
19 of 22	Chicopee	14 to 6	East Springfield Junction to Pendleton Avenue
20 of 22	Chicopee, City of Holyoke	5 to Fairmont Switching Station	Pendleton Avenue to Prospect Street
21 of 22	City of Springfield, Chicopee	45069 to 45065	Cadwell Drive to Worcester Street
22 of 22	City of Springfield	45074 to 45069	East Springfield Substation to Cadwell Drive

INDEX (Cont.)

NOTICED-ALTERNATIVE SOUTHERN ROUTE

Mapsheet	Town(s)	Overhead Structures	Location
1 of 20	Agawam	22003 to 2284	Moylan Drive to Silver Street
2 of 20	Agawam	2283 to 2294	Silver Street to Rowley Street
3 of 20	Agawam	2293 to Agawam Substation	Rowley Street to Agawam Substation
4 of 20	Agawam	22001 to 22006	South Agawam Junction to Suffield Street
5 of 20	Agawam	22007 to 22012	Shoemaker Lane to Brookfield Lane
6 to 20	Agawam, MA, Suffield, CT	22013 to 22021	Brookfield Lane to Connecticut River
7 of 20	Longmeadow, MA, Enfield, CT	22022 to 22028	Connecticut River to MA State Line
8 of 20	Longmeadow and East Longmeadow, MA, Enfield, CT	22054 to 54/46	Mayfield Drive to MA State Line
9 of 20	East Longmeadow, MA, Enfield and Somers, CT	54/45 to 54/34	MA State Line to Shaker Road
10 of 20	East Longmeadow, MA, Somers, CT	54/33 to 54/20	State Route 186/Prospect Street to Country Club Drive
11 of 20	East Longmeadow	54/21 to 44096	State Route 83/Somers Road to Hampden Junction
12 of 20	Hampden, East Longmeadow	54/11 to 44087	Mill Road to E. Longmeadow Road
13 of 20	Hampden, East Longmeadow	44086 to 44077	Millbrook Drive to Allen Street
14 of 20	Hampden, Wilbraham	44076 to 44066	Allen Crest Drive to Soule Road
15 of 20	Wilbraham	44065 to 44055	Conifer Drive to Tinkham Road
16 of 20	Wilbraham	44054 to 44044	Country Club Road to Springfield Street
17 of 20	Wilbraham	44043 to 44033	Springfield Street to U.S. Highway 20/Boston Road
18 of 20	Wilbraham, Ludlow	44032 to 44019	U.S. Highway 20/Boston Road to Chapin Street
19 of 20	Ludlow	44019 to 44009	East Street to Miller Street
20 of 20	Ludlow	44009 to 44001	Miller Street to Ludlow Substation



Massachusetts Index Map
 Preferred Northern Route and Noticed Alternative Southern Route

Map Location

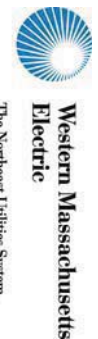


Electric Transmission Routes

- ▲— Preferred Northern Route
- Noticed Alternative Southern Route
- ▲— 115-kV Improvements
- 115-kV Existing to Remain in Corridor
- 345-kV Existing to Remain in Corridor



Greater Springfield Reliability Project Index Map
 Massachusetts



ENSR | AECOM

Date: October 2008

MAPSHEET 1 of 3:

Preferred Northern Route and Noticed-Alternative Southern Route Existing Structure Locations 2248 to 2253 CT/MA State Line to Barry Street Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Residential
- Conservation (Article 97 property)

Future Land Use

- Zoning (current):
 - Business A (BA)
 - Residence A-2 (A2)
 - Agricultural (AG)

Natural Systems

- Unnamed streams
- Mixed hardwood forests varying in age and size
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Agricultural south of and between structures 2249 and 2251
- Residential north of structure 2251, and adjacent to and between structures 2252 and 2253
- Forest adjacent to structures 2248 and 2249, and 2251 and 2252

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W1-1, W1-2, and W1-3
- Wetland Cover Types - - Palustrine Forested Wetland, Palustrine Scrub Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S1-1, and S1-2

Potential Access

- Structures 2248-2253 can be accessed from either Barry Street or Oakridge Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agricultural, House/Yard

Terrain

- Broad and flat between structures 2249 and 2251, and between structures 2252 and 2253
- Hilly to steep between structures 2248 and 2249, and between structures 2251 and 2252

Existing Right-of-Way Width

- 305 feet between structures 2248 and 2251
- 100 feet between structures 2251 and 2253

Proposed Expansion of Right-of-Way Width

- 10 feet from structures 2252-2267 for approximately 1.7 miles

Existing Cleared/Maintained Right-of-Way Width

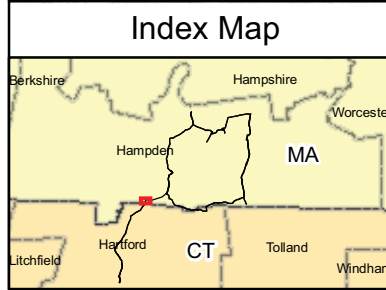
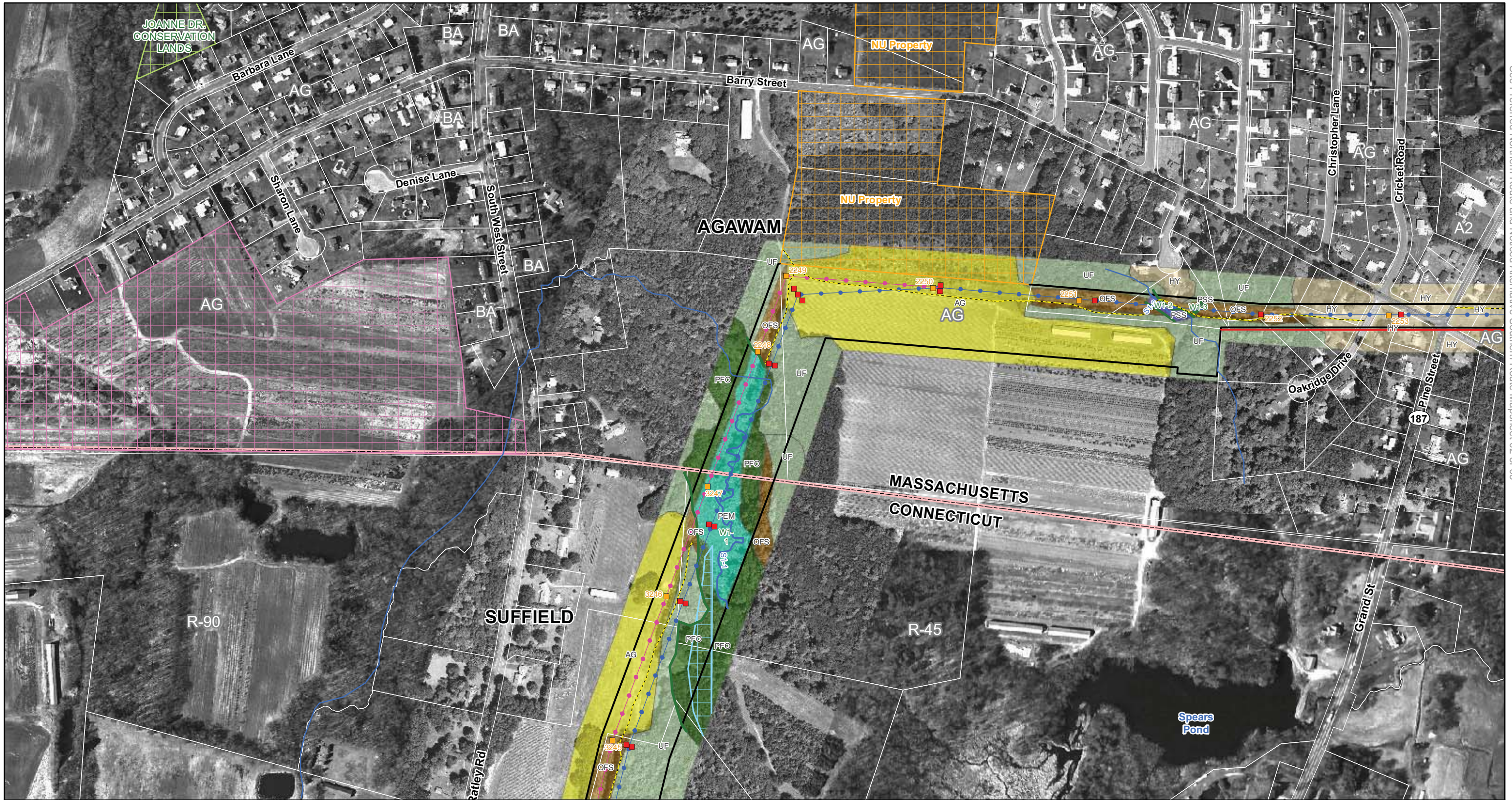
- 80-100 feet

Proposed Additional Cleared Right-of-Way Width

- 0-120 feet from CT/MA state line to structure 2252
- 0-30 feet from structures 2252-2253

Road Crossings/Major Utility Crossings

- Barry Street and State Route 187/Pine Street between structures 2253 and 2254
- Oakridge Drive between structures 2252 and 2253



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property


- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 MASS GIS 2005 Imagery
- Scale: 1:4,800
- 0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route and Noticed Alternative Southern Route

Mapsheet 01 of 03


Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

MAPSHEET 2 of 3:

Preferred Northern Route and Noticed-Alternative Southern Route Existing Structure Locations 2253 to 2264 Barry Street to South Westfield Street Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Residential
- Recreational (Oak Ridge Golf Club)

Future Land Use

- Zoning (current):
 - Agricultural (AG)
 - Residence A-2 (A2)
 - Residence A-3 (A3)

Natural Systems

- Still Brook
- Philo Brook
- Mixed hardwood forests varying in age and size
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to and between structures 2253 and 2254
- Recreational (golf course) between structures 2254 and 2259
- Forest adjacent to structures 2260-2264

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W1-4, W1-5, W1-6, W1-7, W1-8, W1-9, and W1-10
- Wetland Cover Types - - Palustrine Forested Wetland, Palustrine Scrub Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S1-3 (Still Brook), and S1-4 (Philo Brook)

Potential Access

- Structures 2254-2256 can be accessed from either Barry Street or Pine Street
- Structures 2257-2262 can be accessed from South Westfield Street
- Structures 2263-2264 can be accessed from either South Westfield Street, Losito Lane or Shoemaker Lane (see Preferred Northern Route and Noticed-Alternative Southern Route Mapsheet 03 of 03)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, gentle hills between structures 2253 and 2259, and between structures 2262 and 2264
- Steep hills between structures 2259 and 2262

Existing Right-of-Way Width

- 100 feet

Proposed Expansion of Right-of-Way Width

- 10 feet from structures 2252-2267 for approximately 1.7 miles

Existing Cleared/Maintained Right-of-Way Width

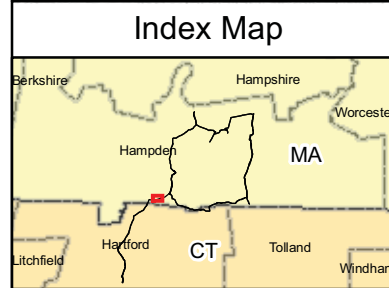
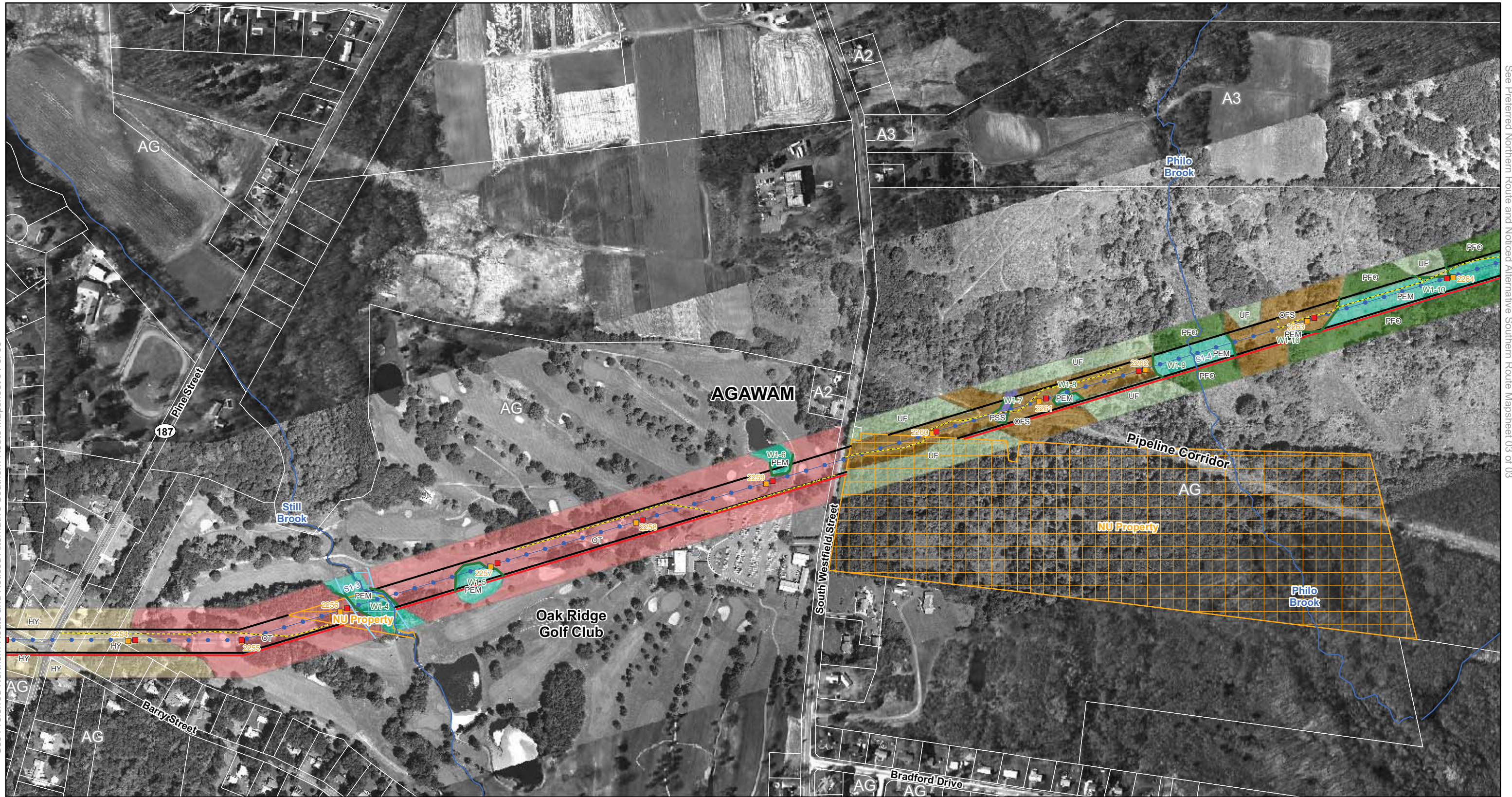
- 100 feet

Proposed Additional Cleared Right-of-Way Width

- 0-10 feet from structures 2253-2264

Road Crossings/Major Utility Crossings

- Barry Street and State Route 187/Pine Street between structures 2253 and 2254
- South Westfield Street between structures 2259 and 2260
- Natural gas pipeline between structures 2260 and 2261



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 MASS GIS 2005 Imagery
- Scale: 1:4,800
- 0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route and Noticed Alternative Southern Route

Mapsheet 02 of 03

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 3 of 3:

Preferred Northern Route and Noticed-Alternative Southern Route Existing Structure Locations 2263 to 2274 South Westfield Street to Moylan Drive Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Commercial
- Recreational (Golf course)
- Agricultural
- Residential

Future Land Use

- Zoning (current):
 - Agricultural (AG)
 - Residence A-3 (A3)
 - Residence B (RB)
 - Industrial B (IB)
 - Business A (BA)

Natural Systems

- Philo Brook
- Tarkill Brook
- Open water (ponds)
- Mixed hardwood forests varying in age and size
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest, agricultural, industrial, residential, and recreational

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial between structures 2268 and 2271A
- Forest adjacent to structures 2263-2265, 2266-2269, and 2272-2274

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W1-9, W1-10, W1-11, W1-12, W1-13, W1-14, W1-15, W1-16, W1-16A, W1-18, , W2-17, W1-18A (Noticed-Alternative Southern Route only)
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S1-4 (Philo Brook), S1-5, S1-6, and S1-7 and S1-8 (Tarkill Brook)

Potential Access

- Structures 2263-2269 can be accessed from either South Westfield Street (see Preferred Northern Route and Noticed-Alternative Southern Route Mapsheet 02 of 03), Losito Lane or Shoemaker Lane
- Structures 2270-2274 can be accessed from either Moylan Drive or Silver Street (see Preferred Northern Route Mapsheet 01 of 22 or Noticed-Alternative Southern Route Mapsheet 03 of 20)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way)

Terrain

- Broad and flat between structures 2263 and 2272
- Hilly between structures 2272 and 2274

Existing Right-of-Way Width

- 100 feet

Proposed Expansion of Right-of-Way Width

- 10 feet from structures 2252-2267 for approximately 1.7 miles
- 10 feet from Shoemaker Lane to South Agawam Junction, approximately 0.6 miles

Existing Cleared/Maintained Right-of-Way Width

- 100 feet

Proposed Additional Cleared Right-of-Way Width

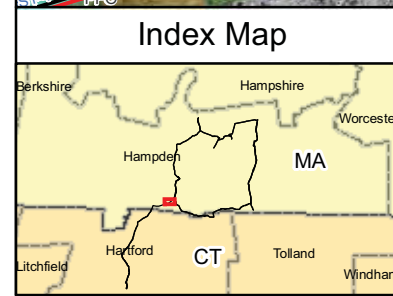
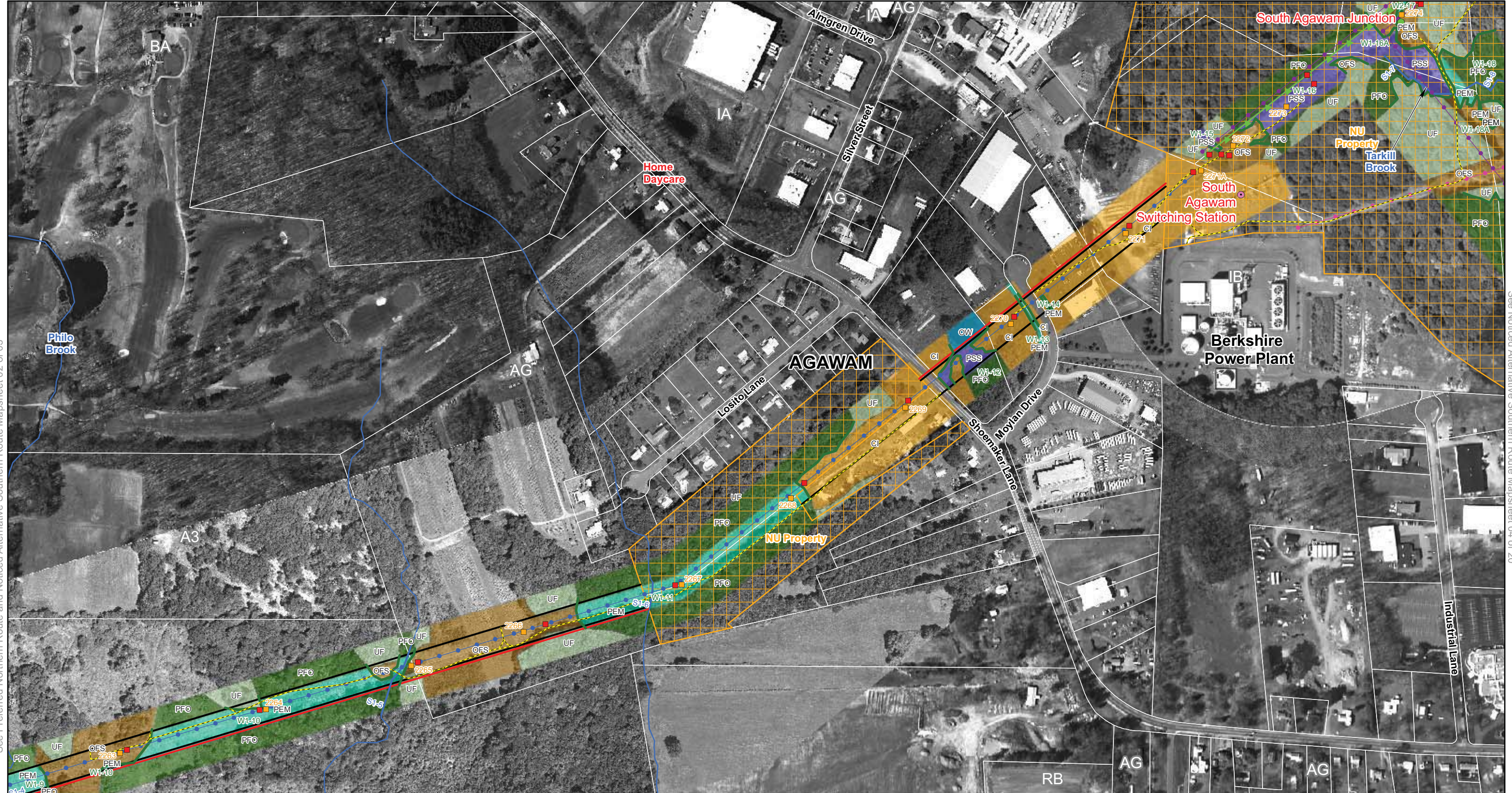
- 0-10 feet from structures 2263-2267 (south side)
- 0-10 feet from structure 2267 to South Agawam Substation (north side)

Road Crossings/Major Utility Crossings

- Shoemaker Lane between structures 2269 and 2270
- Moylan Drive between structures 2270 and 2271

See Preferred Northern Route and Noticed Alternative Southern Route Mapsheet 02 of 03

See Noticed Alternative Southern Route Mapsheet 04 of 20




<p>— Right-of-Way (Existing)</p> <p>— Right-of-Way (Expanded)</p> <p>● Preferred Northern Route</p> <p>● Noticed Alternative Southern Route</p> <p>▲ 115-kV Improvements</p> <p>— Existing 115-kV Line</p> <p>— Existing 345-kV Line</p>	<p>■ Existing Structure</p> <p>■ Proposed Structure</p> <p>■ MA Protected Open Space</p> <p>■ Article 97 Lands</p> <p>■ Northeast Utilities Property</p>	<p>■ 100 Year Flood Zone</p> <p>■ Property Line</p> <p>— Town/State Boundary</p> <p>— Wetland Boundary</p> <p>— Watercourse</p> <p>— Potential Access Road</p>	<p>Land Use/Vegetative Cover Type Classes</p> <p>■ Emergent Wetland (PEM)</p> <p>■ Forested Wetland (PFO)</p> <p>■ Scrub - Shrub Wetland (PSS)</p> <p>■ Open Field-Shrub Land (OFS)</p> <p>■ Commercial/Industrial (CI)</p> <p>■ Agricultural (AG)</p> <p>■ Other (OT)</p> <p>■ Open Water (OW)</p> <p>■ House/Yard (HY)</p> <p>■ Upland Forest (UF)</p>	<p>1:4,800</p> <p>400 800 Feet</p>
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Greater Springfield Reliability Project

Preferred Northern Route and Noticed Alternative Southern Route

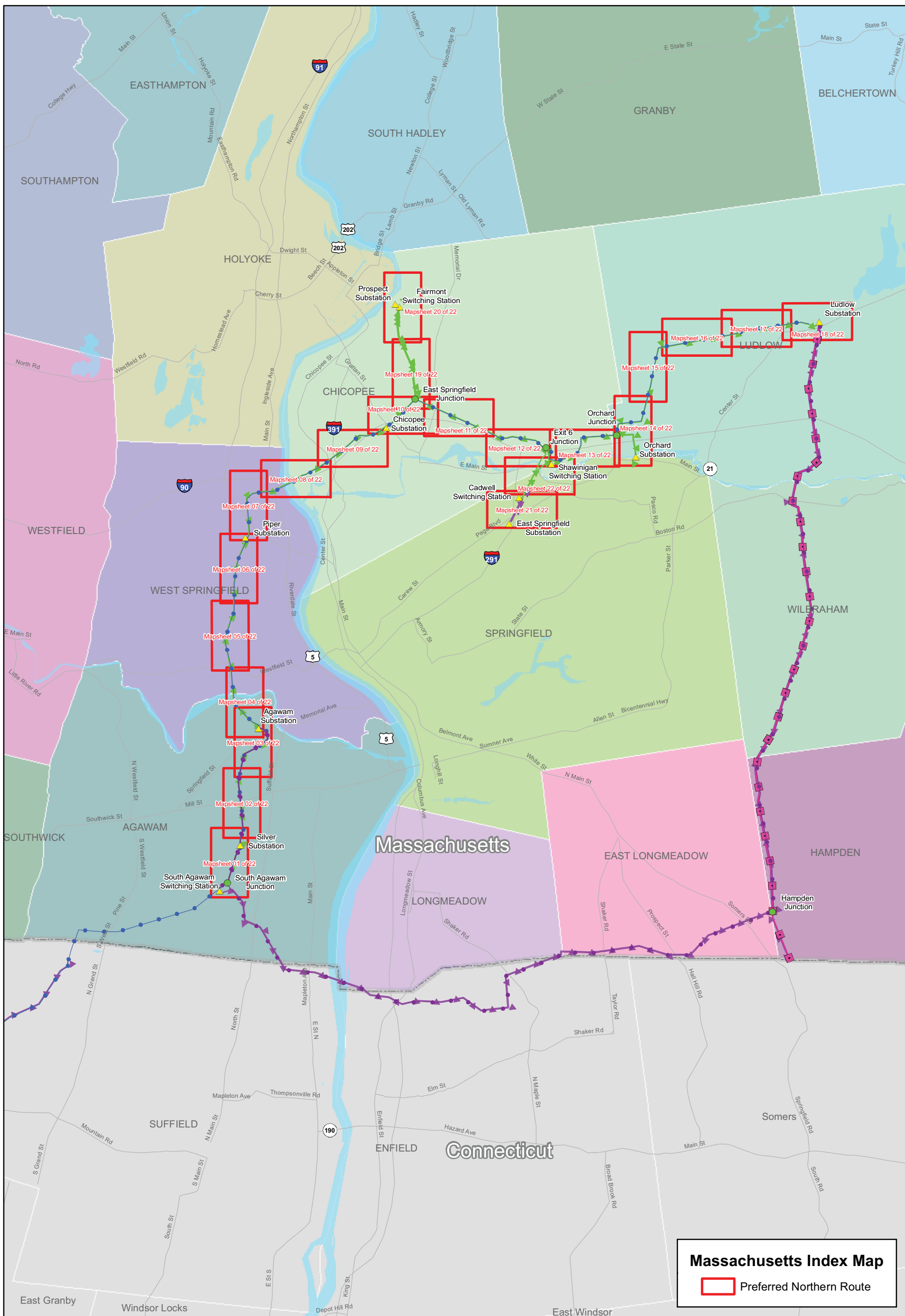
Mapsheet 03 of 03



Western Massachusetts Electric
The Northeast Utilities System



Date: October 2008



Massachusetts Index Map
 Preferred Northern Route



Electric Transmission Routes

- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- 115-kV Existing to Remain in Corridor
- 345-kV Existing to Remain in Corridor

0 1 2 3 Miles 1:100,000

Data Source: Burns & Mac, CT DEP, ENSR 2007

Greater Springfield Reliability Project Index Map

Massachusetts

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

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MAPSHEET 1 of 22:

Preferred Northern Route Existing Structure Locations 2271 to 2284 Moylan Drive to Silver Street Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Residential
- Agricultural
- Conservation (West Springfield Fish and Game Club and other privately owned land)

Future Land Use

- Zoning (current):
 - Industrial A (IA)
 - Residence A-1 (A1)
 - Business A (BA)
 - Business B (BB)
 - Agricultural (AG)
 - Residence A-2 (A2)

Natural Systems

- Tarkill Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest, residential, agricultural, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial between structures 2270 and 2272, east of structures 2275-2278, adjacent to structure 2279, and east of structures 2281-2283
- Residential west of structures 2280 and 2281
- Forest adjacent to structures 2272-2278, 2280, and 2282-2284

Wetlands, Watercourses and Waterways

- Wetland Nos. W1-15, W1-16, W1-16A, W1-18, W2-17, W2-21, W2-20, W2-19, and W1-18A, W1-18B, W1-18C, and W1-18D (Noticed-Alternative Southern Route only)
- Wetland Cover Types - Palustrine Scrub Shrub Wetland, Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S1-7 and S1-8 (Tarkill Brook), S2-9, S2-10, and S2-11

Potential Access

- Structures 2274-2281 can be accessed from either Moylan Drive (See Preferred Northern Route and Noticed-Alternative Southern Route Mapsheet 03 of 03) or Silver Street
- Structures 2282 and 2283 can be accessed from Silver Street
- Structure 2284 can be accessed from Tennis Road (see Preferred Northern Route Mapsheet 02 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad and flat between structures 2271 and 2272, and structures 2275-2283
- Hilly between structures 2272 and 2275

Existing Right-of-Way Width

- 100-300 feet

Proposed Expansion of Right-of-Way Width

- 35 feet from structure 2281 (Silver Substation) to structure 2287 for approximately 0.6 miles

Existing Cleared/Maintained Right-of-Way Width

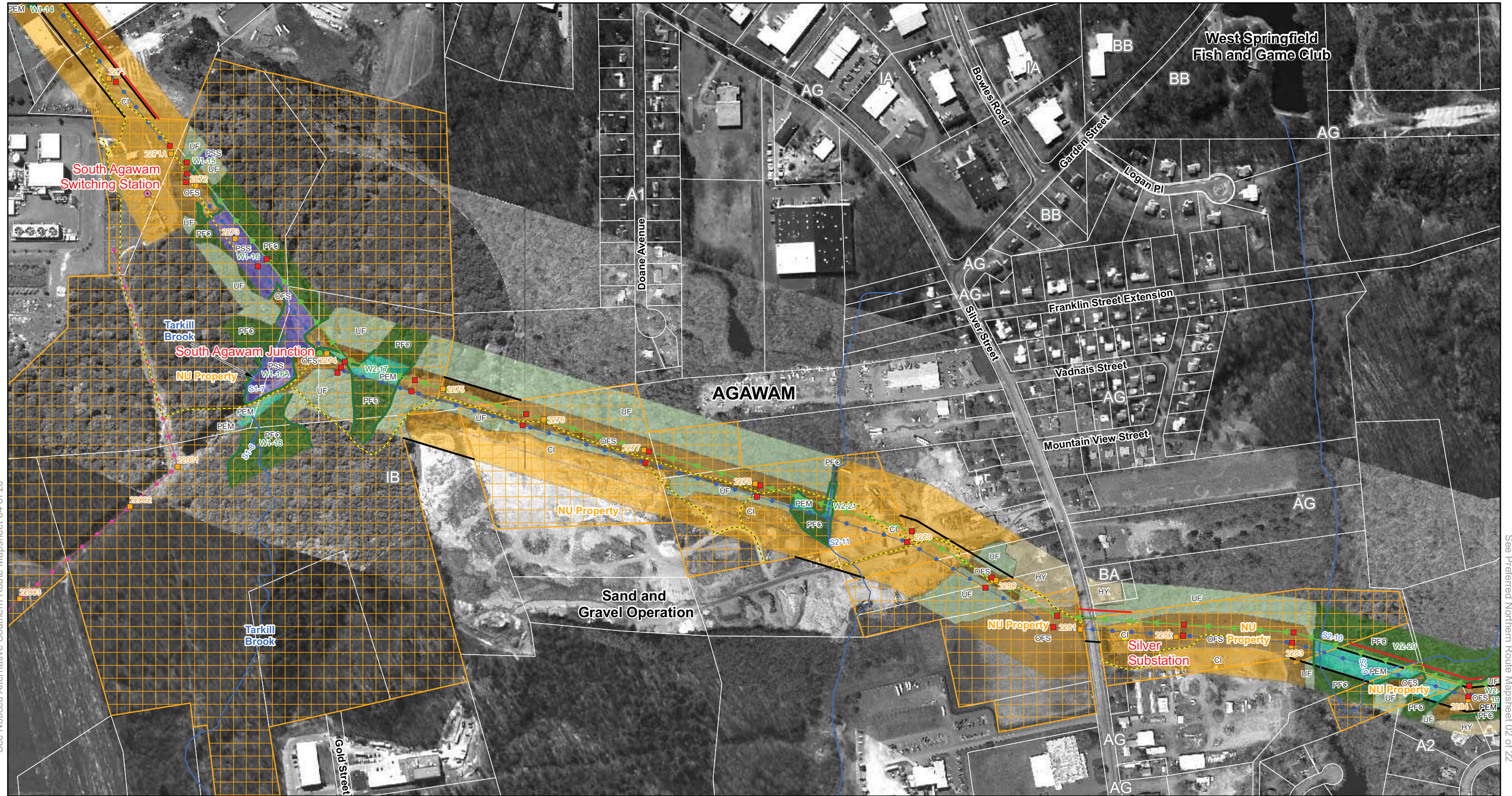
- 70-100 feet

Proposed Additional Cleared Right-of-Way Width

- 0-10 feet from structure 2271 (South Agawam Switching Station) to structure 2274 (South Agawam Junction)
- 0-35 feet from structure 2281-2284

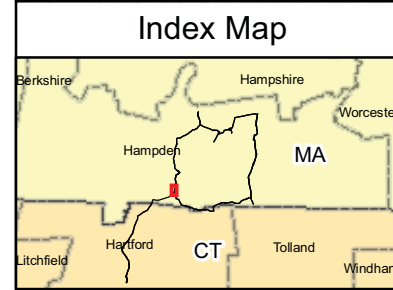
Road Crossings/Major Utility Crossings

- Silver Street between structures 2281 and 2282



See Noticed Alternative Southern Route Mapsheet 04 of 20

See Preferred Northern Route Mapsheet 02 of 22



<ul style="list-style-type: none"> Right-of-Way (Existing) Right-of-Way (Expanded) Preferred Northern Route Noticed Alternative Southern Route 115-kV Improvements Existing 115-kV Line Existing 345-kV Line 	<ul style="list-style-type: none"> Existing Structure Proposed Structure MA Protected Open Space Article 97 Lands Northeast Utilities Property 	<ul style="list-style-type: none"> 100 Year Flood Zone Property Line Town/State Boundary Wetland Boundary Watercourse Potential Access Road
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Land Use/Vegetative Cover Type Classes	
Emergent Wetland (PEM)	Agricultural (AG)
Forested Wetland (PFO)	Other (OT)
Scrub - Shrub Wetland (PSS)	Open Water (OW)
Open Field-Shrub Land (OFS)	House/Yard (HY)
Commerical/Industrial (CI)	Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 01 of 22

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 2 of 22:

Preferred Northern Route Existing Structure Locations 2283 to 2294 Silver Street to Lancaster Drive Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial
- Agricultural
- Managed open space (Agawam Senior High School)
- Conservation

Future Land Use

- Zoning (current):
 - Residence B (RB)
 - Agricultural (AG)
 - Residence A-2 (A2)
 - Business A (BA)
 - Business B (BB)
 - Residence A-3 (A3)
 - Residence A-1 (A1)

Natural Systems

- Threemile Brook
- Silver Lake Reservoir
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest, residential, and commercial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential east of structures 2284-2287 and 2288M, and adjacent to structures 2289, 2291, and 2292
- Commercial/Industrial west of structure 2287
- Agricultural east of structure 2294
- Forest adjacent to structures 2283-2286, 2287, 2291, and 2293-2294

Wetlands, Watercourses and Waterways

- Wetland Nos. W2-20, W2-19, W2-23, and W2-22
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S2-10, S2-9, and S2-12 (Threemile Brook),

Potential Access

- Structure 2283 can be accessed from Silver Street (See Preferred Northern Route Mapsheet 01 of 22)
- Structures 2284-2288 can be accessed from Tennis Road
- Structures 2288M-2291 can be accessed from Cooper Street
- Structure 2292 can be accessed from Lancaster Drive
- Structures 2293-2294 can be accessed from either Lancaster Drive or Rowley Street (see Preferred Northern Route Mapsheet 03 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), and Agricultural

Terrain

- Broad and flat to rolling hills between all structures

Existing Right-of-Way Width

- 100 feet between structures 2283-2286
- 150 feet between structures 2286-2294

Proposed Expansion of Right-of-Way Width

- 35 feet from structure 2281 (Silver S/S) to structure 2287 for approximately 0.6 miles
- 45 feet at structure 2291

Existing Cleared/Maintained Right-of-Way Width

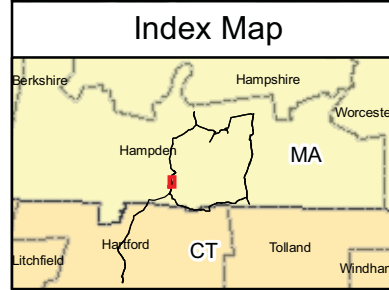
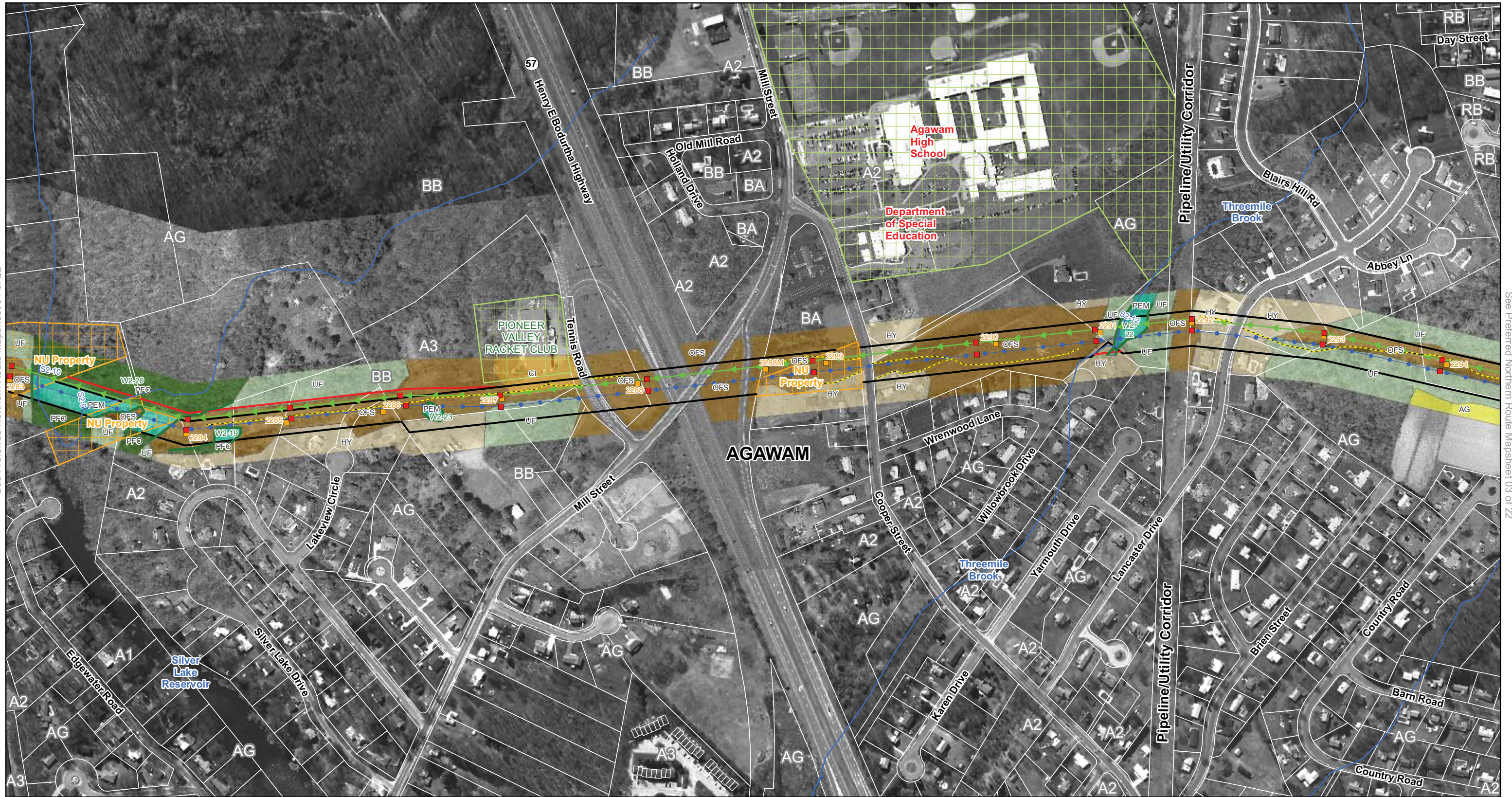
- 70-100 feet between structures 2283 and 2286
- 70-150 feet between structures 2286 and 2294

Proposed Additional Cleared Right-of-Way Width

- 0-35 feet from structures 2283-2287

Road Crossings/Major Utility Crossings

- Tennis Road between structures 2287 and 2288
- State Route 57/Henry Bodurtha Highway and Mills Street between structures 2288 and 2288M
- Cooper Street between structures 2289 and 2290
- Lancaster Drive between structures 2292 and 2293
- Pipeline/Utility corridor between structures 2291 and 2292



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 02 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 3 of 22:

Preferred Northern Route Existing Structure Locations 2293 to 48028 Rowley Street to High Street Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Agricultural
- Recreational (Shea Field managed by Town of Agawam)
- Conservation (Robinson State Park managed by the MA Department of Conservation and Recreation)

Future Land Use

- Zoning (current):
 - Residence B (RB)
 - Agricultural (AG)
 - Residence A-2 (A2)
 - Business A (BA)
 - Business B (BB)
 - Industrial A (IA)

Natural Systems

- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, recreational, agricultural, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial south of structure 2300, and adjacent to and between structures 2301 and 2302A
- Residential south of structures 2298-2299, adjacent to structure 2300, north and west of structures 48032 and 48031, north and east of structures 48030-48029, and west of structures 48033 and 48029
- Agricultural east of structures 2294-2295, adjacent to structure 2296, and between structures 2297 and 2298
- Forest adjacent to structures 2293-2296, 2297, 2299-2301, 2302A-2303, and 48030-48028

Wetlands, Watercourses and Waterways

- Wetland Nos. W2-33, W2-32, W2-31, W2-30, W2-29, W2-28, W2-27, W2-26, W2-24, and W2-25
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland
- Stream Nos. S2-15, and S2-13

Potential Access

- Structures 2293-2299 can be accessed from either Lancaster Drive (see Preferred Northern Route Mapsheet 02 of 22) or Rowley Street
- Structure 2300 can be accessed from Columbus Street and Ramah Circle
- Structure 2301 can be accessed from Shopping Court
- Structures 2302-2303 can be accessed from either Springfield Street or Walnut Street
- Structures 48033-48031 can be accessed from Maple Street
- Structures 48030-48028 can be accessed from High Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agricultural, House/Yard

Terrain

- Broad and flat between structures 2293 and 2299, and structures 48032A and 48028
- Hilly to steep between structures 2299 and 2303

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 30 feet near structure 48031 for approximately 200 linear feet

Existing Cleared/Maintained Right-of-Way Width

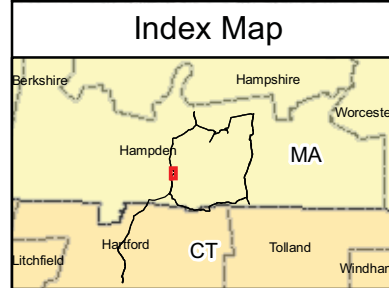
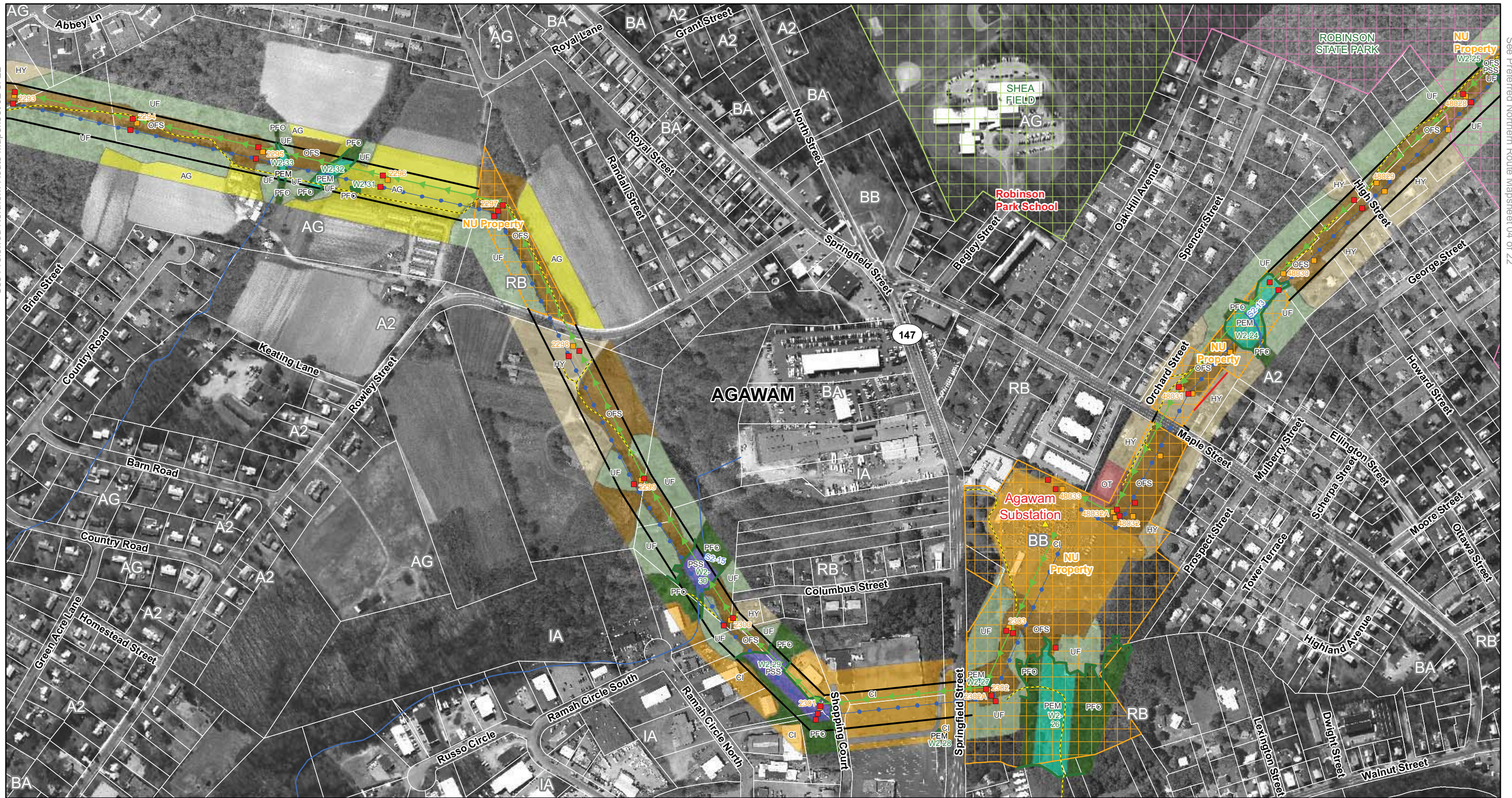
- 70-150 feet

Proposed Additional Cleared Right-of-Way Width

- 0-80 feet from structures 2293-2303
- 0-30 feet from structures 48031-48028

Road Crossings/Major Utility Crossings

- Rowley Street between structures 2297 and 2298
- Shopping Court and State Route 147/Springfield Street between structures 2301 and 2302A
- Maple Street between structures 48032 and 48031
- High Street between structures 48030 and 48029



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

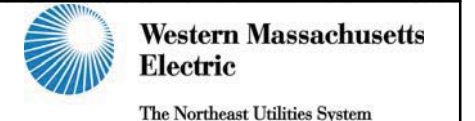
Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 03 of 22



Date: October 2008

MAPSHEET 4 of 22:

Preferred Northern Route Existing Structure Locations 48033 to 48023 Agawam Substation to Fenor Street Towns of Agawam and West Springfield, MA

AREA DESCRIPTION

Existing Land Use

- Town of Agawam
 - Residential
 - Commercial/Industrial
 - Recreation (Shea Field managed by the Town of Agawam)
 - Conservation (Robinson State Park managed by the MA Department of Conservation and Recreation)
- Town of West Springfield
 - Residential
 - Commercial/Industrial

Future Land Use

- Town of Agawam
 - Zoning (current):
 - Agricultural (AG)
 - Business A (BA)
 - Residence B (RB)
 - Industrial A (IA)
 - Residence A-3 (A3)
 - Business B (BB)
- Town of West Springfield
 - Zoning (current):
 - Business A (BA)
 - Residence (RA-2)
 - Residence B (RB)
 - Industrial (I)
 - Recreational (REC)

Natural Systems

- Robinson State Park
- Westfield River (100-year Flood Zone not shown near Westfield River because this area is located within a community or county that is not mapped on any published Flood Insurance Rate Map (FIRM))
- Silver Stream
- State/Federal Jurisdictional Wetlands
- Hardwood forest varying in size and age

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial at Agawam Substation
- Residential adjacent to structures 48033-48031, 48030-48028, 48026, 48025, 48024 and 48023
- Forest adjacent to structures 48030-48025, and 48023

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W2-24, W2-25, W3-34, W3-36, and W3-37
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Open Water
- Stream Nos. S2-13, S3-16 and S3-17 (Westfield River), S3-18, and S3-19 and S3-20 (Silver Stream)

Potential Access

- Structures 48033-48031 can be accessed from Maple Street
- Structures 48030-48027 can be accessed from High Street
- Structures 48026-48025 can be accessed from either Ashley Street or Guy Place
- Structure 48024 can be accessed from Fenor Street
- Structure 48023 can be accessed from either Brooks Place or U.S. Highway 20/Westfield Street (see Preferred Northern Route Mapsheet 05 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, hilltops between structures 48033 and 48027, and between structures 48025 and 48023
- Hilly to steep between structures 48027 and 48025

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 30 feet near structure 48031 for approximately 200 linear feet
- 30 feet near structure 48024 for approximately 60 linear feet

Existing Cleared/Maintained Right-of-Way Width

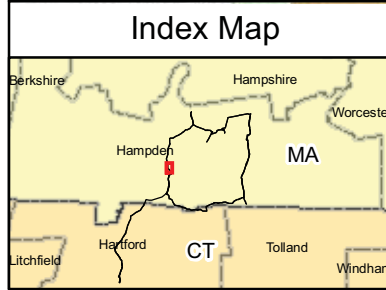
- 100-150 feet

Proposed Additional Cleared Right-of-Way Width

- 0-30 feet near structures 48031 and 48024

Road Crossings/Major Utility Crossings

- Maple Street between structures 48032 and 48031
- High Street between structures 48030 and 48029
- Ashley Street between structures 48025 and 48024
- Unnamed private access road between structures 48027-48026
- Railroad between structures 48027 and 48026



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
Electric Transmission Routes	■ MA Protected Open Space	— Town/State Boundary
● Preferred Northern Route	■ Article 97 Lands	— Wetland Boundary
● Noticed Alternative Southern Route	■ Northeast Utilities Property	— Watercourse
▲ 115-kV Improvements		— Potential Access Road
— Existing 115-kV Line		
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery


Scale: 1:4,800


0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 04 of 22


Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

MAPSHEET 5 of 22:

Preferred Northern Route Existing Structure Locations 48022 to 48011 U.S. Highway 20/Westfield Street to Amostown Road Town of West Springfield, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Recreational (Piper Wells and Cook playground managed by the Town of West Springfield)
- Urban

Future Land Use

- Residence A-2 (RA-2)
- Residence A-1 (RA-1)
- Residence B (RB)
- Neighborhood Business (NB)
- Business A (BA)

Natural Systems

- Silver Stream
- Piper Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial between structures 48023 and 48021
- Residential adjacent to and between structures 48022 and 48012
- Recreational adjacent to and between structure 48014 and 48011
- Forest adjacent to structures 48021-48020, 48018, 48017-48015, and 48012-48011

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-37, W3-38, W3-39, and W3-40
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub- Shrub Wetland, Palustrine Forested Wetland
- Stream Nos. S3-20 (Silver Stream), and S3-21 and S3-22 (Piper Brook)

Potential Access

- Structure 48022 can be accessed from either U.S. Highway 20/Westfield Street or Brooks Place (See Preferred Northern Route Mapsheet 04 of 22)
- Structures 48021-48020 can be accessed from either Kings Highway or Forris Street
- Structure 48019 can be accessed from Cora Street
- Structure 48018 can be accessed from Larchwood Street
- Structure 48017 can be accessed from Clarence Street
- Structures 48016-48015 can be accessed from either Morton Street, Bowers Street or Albert Street
- Structure 48014 can be accessed from either Morton Street or Homestead Avenue
- Structure 48013 can be accessed from Homestead Avenue
- Structures 48012-48011 can be accessed from either Amostown Road or Lyncoaky Drive (See Preferred Northern Route Mapsheet 06 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Flat to hilly

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 30 feet between structures 48021 and 48020 for approximately 530 linear feet

Existing Cleared/Maintained Right-of-Way Width

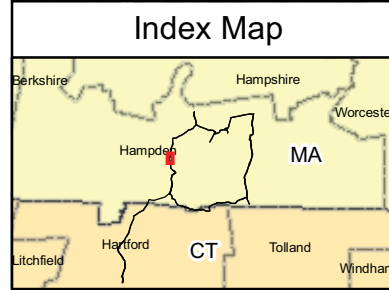
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 0-30 feet near structures 48021-48020

Road Crossings/Major Utility Crossings

- U.S. Highway 20/Westfield Street and Kings Highway between structures 48022 and 48021
- Forris Street between structures 48020 and 48019
- Cora and Larchwood Streets between structures 48019 and 48018
- Clarence Street between structures 48018 and 48017
- Morton Street between structures 48015 and 48014
- Homestead Avenue between structures 48014 and 48013
- Amostown Road between structures 48013 and 48012



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

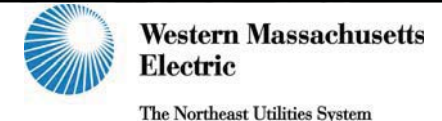
Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 05 of 22



Date: October 2008

MAPSHEET 6 of 22:

Preferred Northern Route Existing Structure Locations 48010 to 55032 Heritage Lane to Piper Road Town of West Springfield, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Recreational (John Fausey Playground managed by the Town of West Springfield)
- Urban

Future Land Use

- Zoning (current):
 - Residence A-1 (RA-1)
 - Residence A-2 (RA-2)
 - Special Use-Multi-family (SU-M)

Natural Systems

- Bagg Brook
- Goldine Brook
- Open water (ponds)
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to and/or between structures 48010 and 48009, 48008 and 48007, 48006, and 48003 and 48002
- Commercial/Industrial west of structure 48009, and structures 48002-55032
- Forest adjacent to structures 48010-48009, 48008, 48006-48004, and 48002-55032

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-41, W3-42, and W3-43
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S3-23 (Bagg Brook), and S3-23A

Potential Access

- Structures 48010-48007 can be accessed from either Amostown Road (See Preferred Northern Route Mapsheet 05 of 22), Lyncosky Drive or Morgan Road
- Structure 48006 can be accessed from Morgan Road
- Structures 48005-55032 can be accessed from Piper Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland Forest (in un-cleared portion of right-of-way), , House/Yard

Terrain

- Broad, hilltops to hilly

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

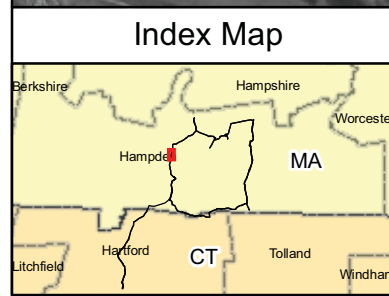
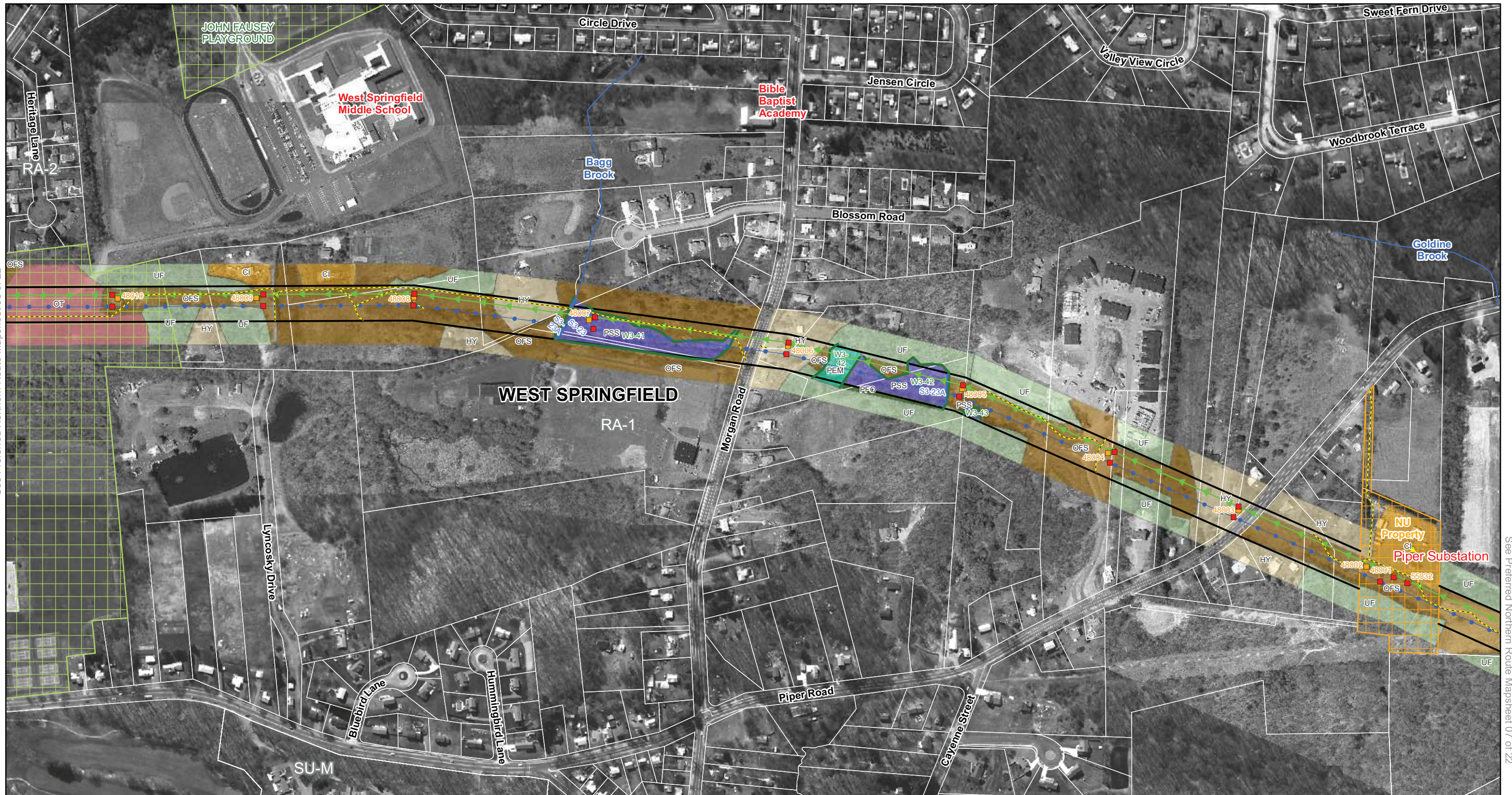
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

Road Crossings/Major Utility Crossings

- Private drive between structures 48009 and 48008
- Morgan Road between structures 48007 and 48006
- Private drive between structures 48005 and 48004
- Private drives between structures 48004 and 48003
- Piper Road between structures 48003 and 48002



<p>— Right-of-Way (Existing)</p> <p>— Right-of-Way (Expanded)</p> <p>Electric Transmission Routes</p> <p>● Preferred Northern Route</p> <p>● Noticed Alternative Southern Route</p> <p>▲ 115-kV Improvements</p> <p>— Existing 115-kV Line</p> <p>— Existing 345-kV Line</p>	<p>■ Existing Structure</p> <p>■ Proposed Structure</p> <p>■ MA Protected Open Space</p> <p>■ Article 97 Lands</p> <p>■ Northeast Utilities Property</p>	<p>■ 100 Year Flood Zone</p> <p>■ Property Line</p> <p>— Town/State Boundary</p> <p>— Wetland Boundary</p> <p>— Watercourse</p> <p>— Potential Access Road</p>	<p>Land Use/Vegetative Cover Type Classes</p> <p>■ Emergent Wetland (PEM)</p> <p>■ Forested Wetland (PFO)</p> <p>■ Scrub - Shrub Wetland (PSS)</p> <p>■ Open Field-Shrub Land (OFS)</p> <p>■ Commercial/Industrial (CI)</p> <p>■ Agricultural (AG)</p> <p>■ Other (OT)</p> <p>■ Open Water (OW)</p> <p>■ House/Yard (HY)</p> <p>■ Upland Forest (UF)</p>
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Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 06 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 7 of 22:

Preferred Northern Route Existing Structure Locations 48002 to 55023 Brush Hill Avenue to William Street Town of West Springfield, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Urban

Future Land Use

- Zoning (current):
 - Residence A-1 (RA-1)
 - Special Use-Mobile Home (SU-H)
 - Industrial Park (IP)
 - Residence B (RB)
 - Residence A-2 (RA-2)

Natural Systems

- Goldine Brook
- Schoolhouse Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to and/or between structures 55030-55029, 55028-55025, and 55024-55023
- Commercial/Industrial adjacent to structures 48002-55032
- Forest adjacent to structures 48002-55030, 55029, 55028 to 55024, and 55023

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-44, W3-45, W3-46, W3-47, W3-48, W3-49, W3-50, W3-51, W3-52, and W3-53
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, and Palustrine Emergent Wetland
- Stream Nos. S3-24 and S-24A (Goldine Brook), S3-25, and S3-26 (Schoolhouse Brook)

Potential Access

- Structures 48002-55031 can be accessed from Piper Road (See Preferred Northern Route Mapsheet 06 of 22)
- Structure 55030-55029 can be accessed from Brush Hill Avenue
- Structures 55028-55025 can be accessed from Clayton Drive
- Structure 55024 can be accessed from Oglore Street
- Structure 55023 can be accessed from Frederick Street

Right-of-Way Vegetation

- Open Field – Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Hilly to steep between structures 55031 and 55023
- Rolling hills adjacent to structures 48002-55032, and 55023

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 110-150 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

Road Crossings/Major Utility Crossings

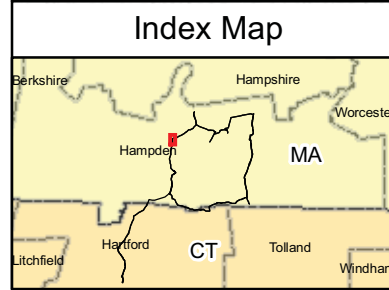
- Brush Hill Avenue between structures 55030 and 55029
- U.S. Interstate 91 between structures 55029 and 55028
- Clayton Drive between structures 55028 and 55027
- Oglore Street and Frederick Street between structures 55024 and 55023
- Private drive between structures 55023 and 55022

See Preferred Northern Route Mapsheet 06 of 22



See Preferred Northern Route Mapsheet 08 of 22

BA



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

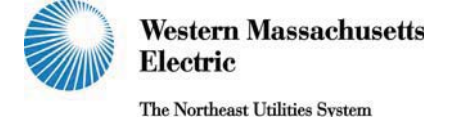
Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 07 of 22



Date: October 2008

MAPSHEET 8 of 22:

Preferred Northern Route Existing Structure Locations 55022 to 55013 Riverdale Street to Chicopee Street Towns of West Springfield and Chicopee, MA

AREA DESCRIPTION

Existing Land Use

- Town of West Springfield
 - Residential
 - Commercial/Industrial
- Town of Chicopee
 - Residential
 - Recreational (Chicopee State Boat Ramp managed by the MA Division of State Parks and Recreation)

Future Land Use

- Town of West Springfield
 - Zoning (current):
 - Recreational (REC)
 - Business A (BA)
 - Residence A-2 (RA-2)
- Town of Chicopee
 - Zoning (current):
 - Residential A (RA)
 - Residential B (RB)
 - Business A (BA)
 - Industrial (I)

Natural Systems

- Schoolhouse Brook
- Connecticut River
- Chicopee River
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, commercial, industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 55022-55021, and adjacent to and/or between structures 55018 and 55013
- Commercial/Industrial adjacent to and/or between structures 55022 and 55020
- Forest adjacent to structures 55022, 55020, 55018, and 55017-55016

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-51, W3-52, W3-53, W3-54, and W3-55
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S3-27 (Schoolhouse Brook), and S3-28 (Connecticut River)

Potential Access

- Structure 55022 can be accessed from Frederick Street (See Preferred Northern Route Mapsheet 07 of 22)
- Structures 55021-55020 can be accessed from U.S. Highway 5/Riverdale Street
- Structure 55019 can be accessed from Medina Street
- Structures 55018-55017 can be accessed from either Granger Street or Paderewski Street
- Structure 55016 can be accessed from Amherst Street
- Structure 55015 can be accessed from either Whitin Avenue or Truro Street
- Structure 55014 can be accessed from Bill Street
- Structure 55013 can be accessed from Chester Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard,

Terrain

- Broad, rolling hills

Existing Right-of-Way Width

- 150 feet between structures 55022 and 55019, and between structures 55017 and 55013
- 250 feet adjacent to structure 55018

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

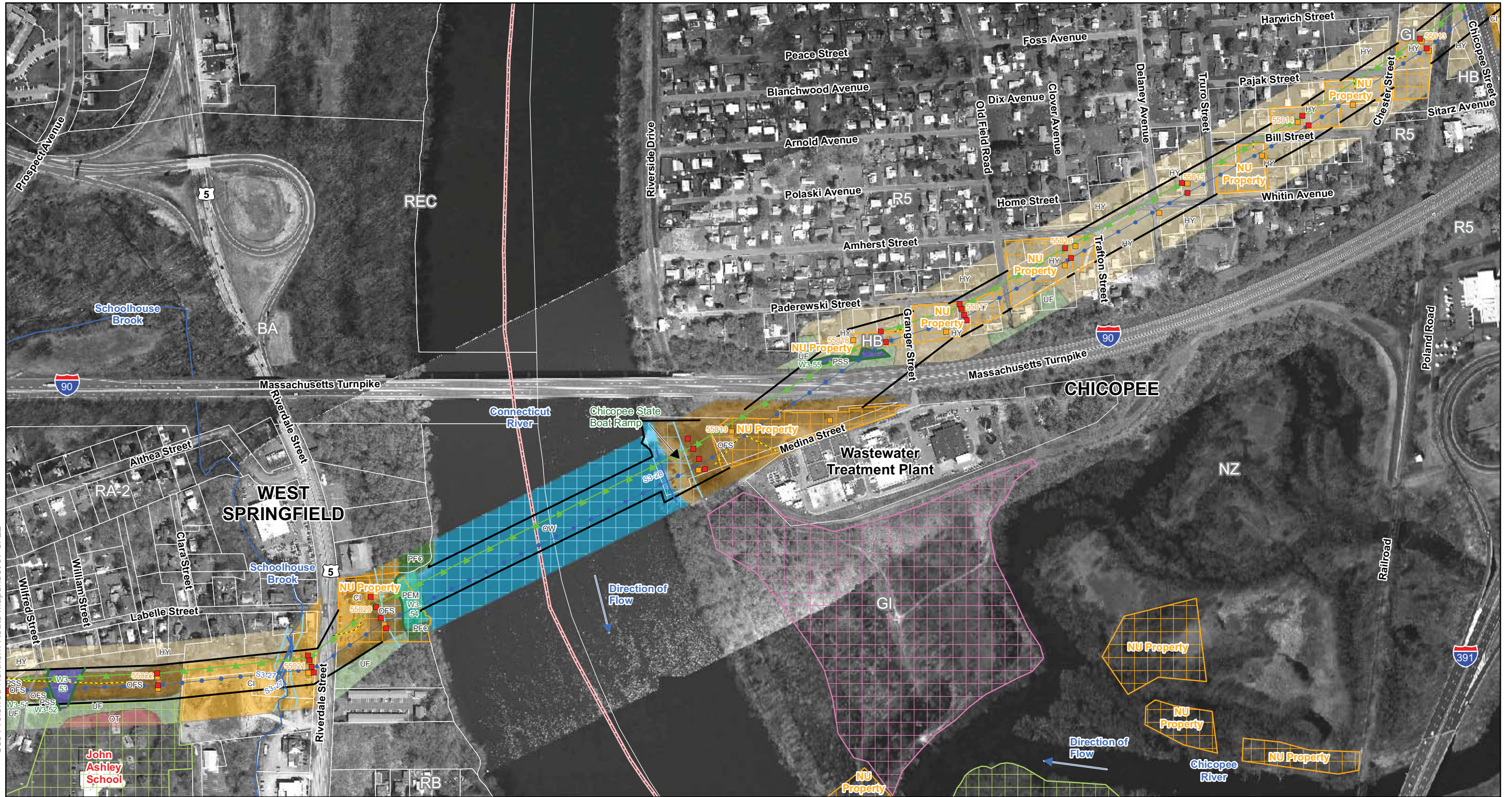
- 110-250 feet

Proposed Additional Cleared Right-of-Way Width

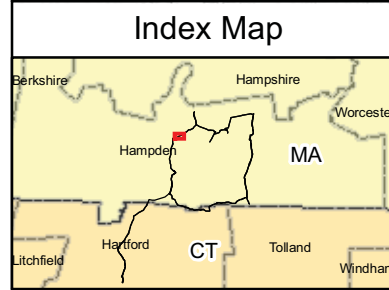
- 0 feet

Road Crossings/Major Utility Crossings

- U.S. Highway 5/Riverdale Street between structures 55021 and 55020
- U.S. Interstate 90 between structures 55019 and 55018
- Granger Street between structures 55018 and 55017
- Wayfield Avenue between structures 55017 and 55016
- Trafton Street, Gaspee Street, and Whitin Avenue between structures 55016 and 55015
- Truro Street and Bill Street between structures 55015 and 55014
- Pajak Street and Chester Street between structures 55014 and 55013
- Railroad and Chicopee Street between structures 55013-55012



See Preferred Northern Route Mapsheet 07 of 22



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- Scale: 1:4,800
- 0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 08 of 22

Western Massachusetts Electric
The Northeast Utilities System

Date: October 2008

MAPSHEET 9 of 22:

Preferred Northern Route Existing Structure Locations 55014 to 55003 Bill Street to Granby Road Town of Chicopee, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Recreational (Ray Ash Park managed by the Town of Chicopee, Sara Jane Sherman Memorial Pool managed by MA Division of State Parks and Recreation)
- Commercial/Industrial

Future Land Use

- Zoning (current):
 - Residential A (RA)
 - Residential B (RB)
 - Business A (BA)
 - Business B (BB)
 - Industrial (I)

Natural Systems

- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to and/or between structures 55014-55013, 55007, 55006, and 55005-55003
- Commercial/Industrial adjacent to structure 55012
- Forest adjacent to structures 55011-55006, and 55003

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-56, and W3-57
- Wetland Cover Type - Palustrine Emergent Wetland
- Stream No. S3-29

Potential Access

- Structure 55014 can be accessed from Bill Street
- Structure 55013 can be accessed from Chester Street
- Structure 55012 can be accessed from East Meadow Street
- Structures 55011-55006 can be accessed from Schoolhouse Road
- Structures 55005-55004 can be accessed from either Granby Road or Sophia Street
- Structure 55003 can be accessed from either Granby Road or Pond Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, rolling hills between structures 55013 and 55012, and between structures 55010 and 55003
- Hilly to steep between structures 55012 and 55011, and adjacent to structure 55010

Existing Right-of-Way Width

- 150 feet between structures 55013 and 55011, and between structures 55004 and 55003
- 250 feet between structures 55011 and 55004

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

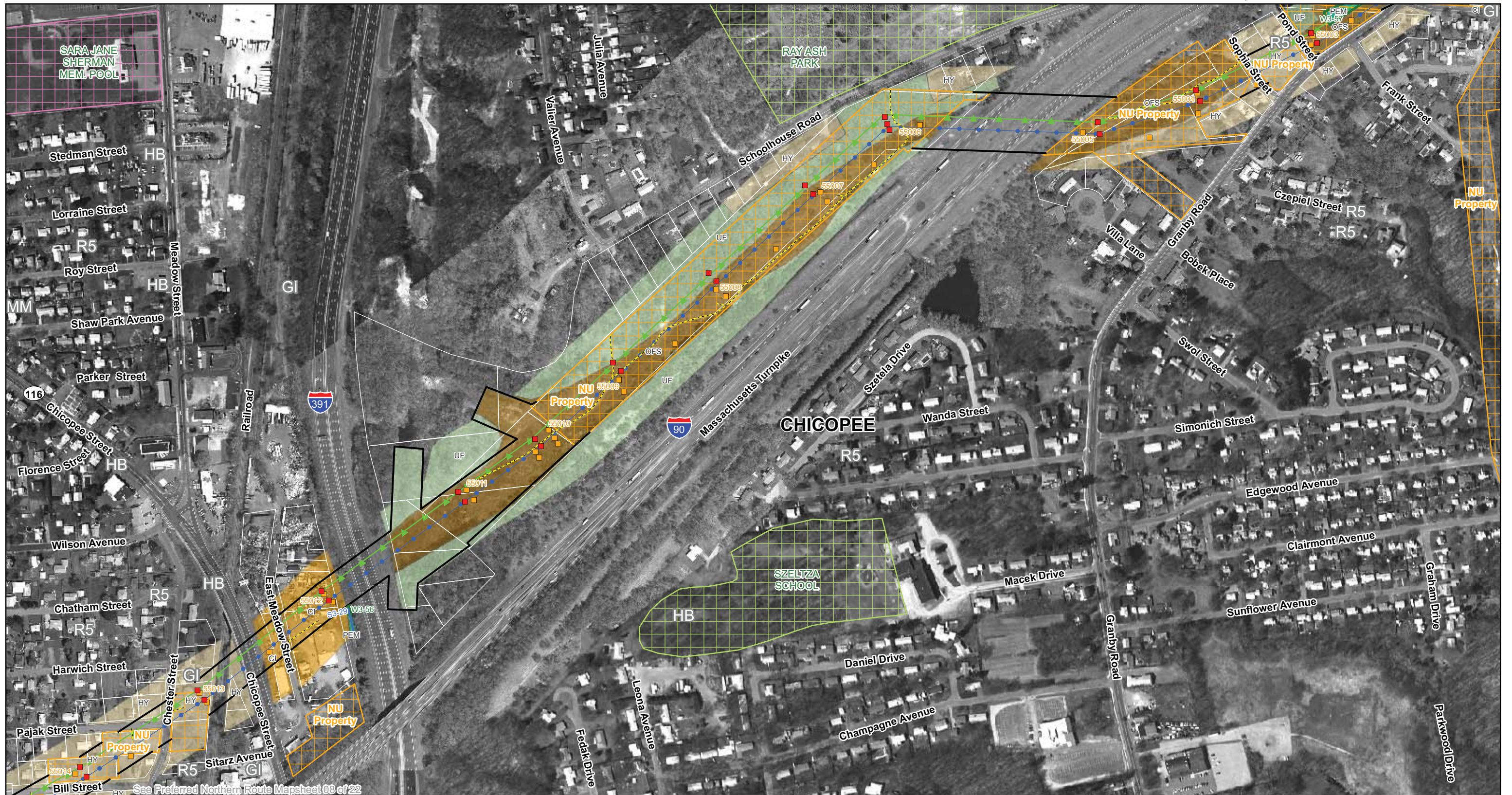
- 100-150 feet

Proposed Additional Cleared Right-of-Way Width

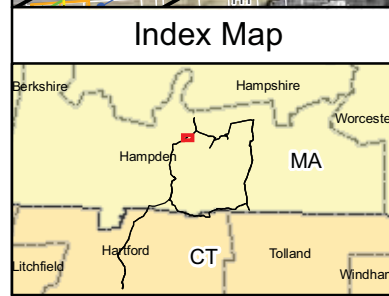
- 0 feet

Road Crossings/Major Utility Crossings

- Chicopee Street and Railroad between structures 55013 and 55012
- U.S. Interstate 391 between structures 55012 and 55011
- U.S. Interstate 90 (Massachusetts Turnpike) between structures 55006 and 55005
- Sophia Street and Pond Street between structures 55004 and 55003



See Preferred Northern Route Mapsheet 08 of 22



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
● Preferred Northern Route	■ MA Protected Open Space	— Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	— Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	— Watercourse
— Existing 115-kV Line		— Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery


Scale: 1:4,800


0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 09 of 22


Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

MAPSHEET 10 of 22:

Preferred Northern Route Existing Structure Locations 55003 to 49099 Pond Street to Memorial Drive Town of Chicopee, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Recreational (Garrity Grove Park managed by the Town of Chicopee)

Future Land Use

- Zoning (current):
 - Residential A (RA)
 - Residential B (RB)
 - Business A (BA)
 - Central Business (CBD)
 - Residential C (RC)
 - Business B (BB)

Natural Systems

- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between Chicopee Substation, structures 18-16, 15-49101, and 49099
- Residential land use adjacent to and/or between structures 55003, 20, 19, and 14
- Forest adjacent to Chicopee Substation, structures 19-18, and 49100

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-57, W3-58, W3-59, W3-60, W3-60A, W3-61, W3-62, and W3-63
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland

Potential Access

- Structures 55003-55002 can be accessed from either Granby Road or Pond Street
- Structure 20 can be accessed from Sanders Street
- Structures 19-17 can be accessed from Montgomery Street
- Structure 16 can be accessed from either U.S. Interstate 90 ramp or the Mall Road
- Structures 15-14, and 49103-49101 can be accessed from the Mall Road
- Structures 49100-49099 can be accessed from State Route 33/Memorial Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, gentle hills

Existing Right-of-Way Width

- 250 feet adjacent to Chicopee Substation, and between structures 18 and 17
- 150 feet between structures 55003 and 55002, between structures 20 and 18, and between structures 17– and 14
- 100 feet between structures 49102 and 49099

Proposed Expansion of Right-of-Way Width

- 30 feet from structure 49102 to structure 49090 for approximately 1.5 miles

Existing Cleared/Maintained Right-of-Way Width

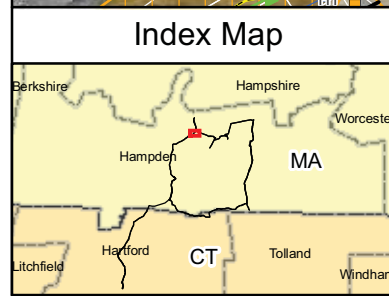
- 100-150 feet

Proposed Additional Cleared Right-of-Way Width

- 30 feet from structure 49102 to structure 49090

Road Crossings/Major Utility Crossings

- Granby Road between structure 55002 and Chicopee Substation
- Grattan Street between Chicopee Substation and structure 20
- U.S. Interstate 90 (Massachusetts Turnpike) between structures 20 and 19
- Montgomery Street between structures 17 and 16
- Exit ramps between structures 17 and 16, and between structures 49101 and 49100
- State Route 33/Memorial Drive between structures 49099 and 49098



<ul style="list-style-type: none"> Right-of-Way (Existing) Right-of-Way (Expanded) Preferred Northern Route Noticed Alternative Southern Route 115-kV Improvements Existing 115-kV Line Existing 345-kV Line 	<ul style="list-style-type: none"> Existing Structure Proposed Structure MA Protected Open Space Article 97 Lands Northeast Utilities Property 	<ul style="list-style-type: none"> 100 Year Flood Zone Property Line Town/State Boundary Wetland Boundary Watercourse Potential Access Road
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Land Use/Vegetative Cover Type Classes	
Emergent Wetland (PEM)	Agricultural (AG)
Forested Wetland (PFO)	Other (OT)
Scrub - Shrub Wetland (PSS)	Open Water (OW)
Open Field-Shrub Land (OFS)	House/Yard (HY)
Commerical/Industrial (CI)	Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 10 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Preferred Northern Route
Existing Structure Locations 49100 to 49091
State Route 33/Memorial Drive to Massachusetts Turnpike
Town of Chicopee, MA**

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Urban
- Recreational (Chicopee Memorial State Park managed by the MA Division of State Parks and Slate Conservation Area managed by the Town of Chicopee)
- Residential

Future Land Use

- Zoning (current):
 - Residential A (RA)
 - Residential B (RB)
 - Business A (BA)
 - Central Business (CB)
 - Residential C (RC)
 - Business B (BB)
 - Industrial (I)

Natural Systems

- Cooley Brook and its tributaries
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 49099-49097, and 49094
- Residential adjacent to structures 49096-49094
- Forest adjacent to structures 49100, 49098-49097, and 49095-49091

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-63, W3-64, and W3-65
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S3-30, S3-30B and S3-30C (Cooley Brook)

Potential Access

- Structures 49100-49098 can be accessed from State Route 33/Memorial Drive
- Structure 49097 can be accessed from Sheridan Street
- Structures 49096-49092 can be accessed from Sheridan Street and/or Slate Road
- Structure 49091 can be accessed from First Avenue (See Preferred Northern Route Mapsheet 12 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), , House/Yard

Terrain

- Broad, rolling hills between structures 49100 and 49096, 49095 and 49093, and 49092 and 49091
- Hilly between structures 49096 and 49095, and between structures 49093 and 49092

Existing Right-of-Way Width

- 100 feet

Proposed Expansion of Right-of-Way Width

- 30 feet from structure 49102 to structure 49090 for approximately 1.5 miles

Existing Cleared/Maintained Right-of-Way Width

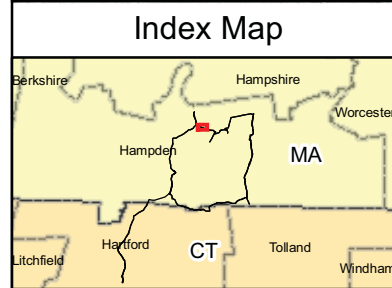
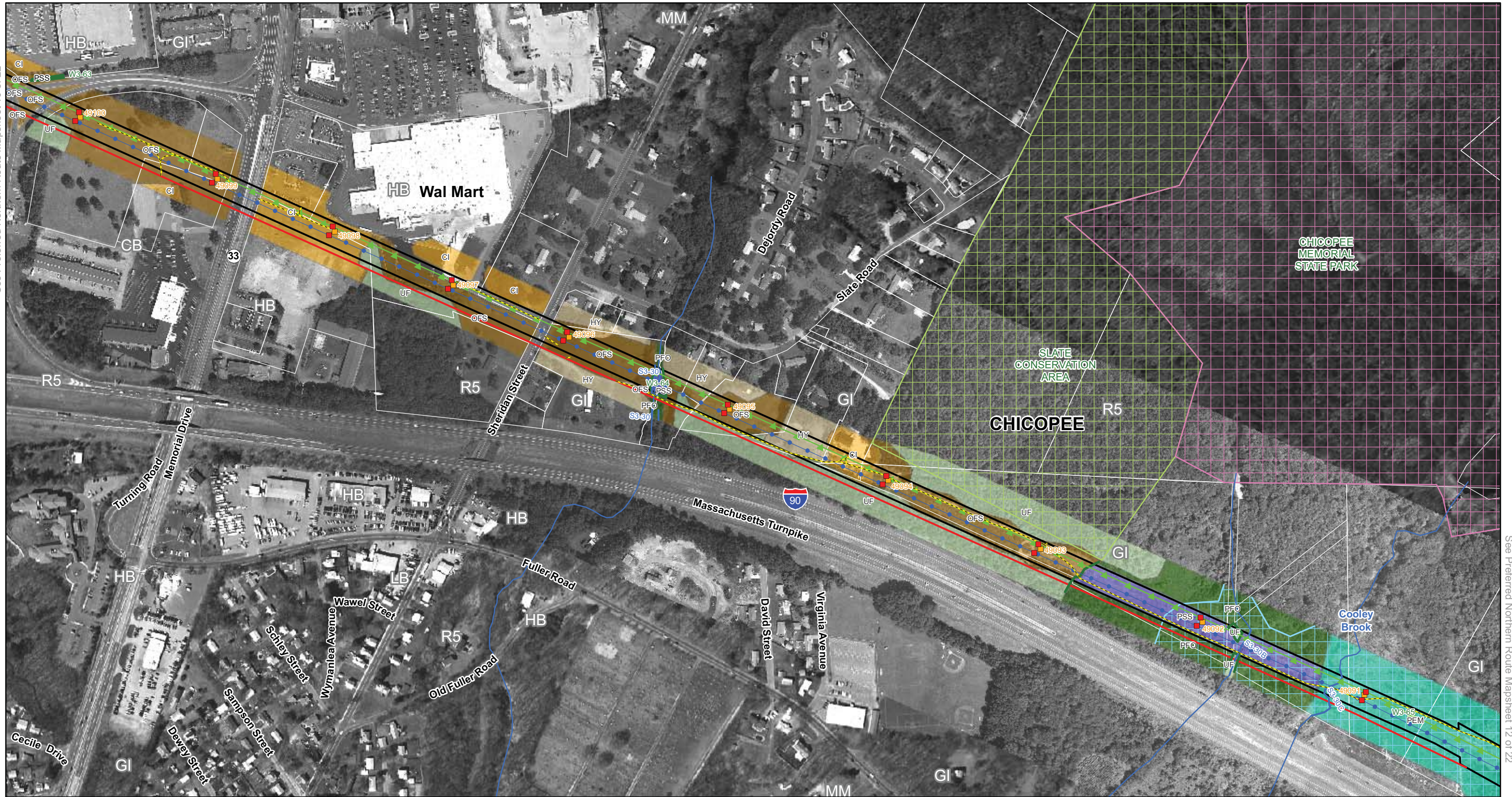
- 100 feet

Proposed Additional Cleared Right-of-Way Width

- 30 feet from structure 49102 to structure 49090

Road Crossings/Major Utility Crossings

- State Route 33/Memorial Drive between structures 49099 and 49098
- Sheridan Street between structures 49097 and 49096



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 11 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 12 of 22:

Preferred Northern Route Existing Structure Location 49091 to Shawinigan Switching Station Massachusetts Turnpike to Shawinigan Drive Town of Chicopee, MA

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Urban
- Residential
- Agricultural

Future Land Use

- Zoning (current):
 - Residential A (RA)
 - Industrial (I)
 - Business A (BA)
 - Business C (BC)
- Zoning (planned):
 - Industrial Planned Unit Development (IPUD)

Natural Systems

- Chicopee River
- Fuller Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Commercial/Industrial, residential, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 49088-49080
- Residential adjacent to and/or between structures 49079-49078A, and 21039
- Forest adjacent to structures 49091-49087, 49080, 21037, and 49078

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-65, W3-67, W3-68, W3-69, W3-70, W3-71, and W6-134
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Open Water
- Stream Nos. S3-30A and S3-30D (unregulated detention basins), S3-31 (Fuller Brook), S6-44 (Chicopee River)

Potential Access

- Structures 49091-49086 can be accessed from First Avenue
- Structures 49085-49080 can be accessed from either Burnett Road or New Lombard Road
- Structures 49079-49077, and 21038-21039 can be accessed from Shawinigan Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, rolling hills

Existing Right-of-Way Width

- 100 feet between structures 49091 and 49090
- 150 feet between structures 49090 and 49081
- 160 feet between structures 49080 and 49078
- 200 feet between structures 49078 and 49077
- 150 feet between structures 21037 and 21039

Proposed Expansion of Right-of-Way Width

- 30 feet from structure 49102 to structure 49090 for approximately 1.5 miles
- 140-200 feet from structure 49083 to structure 49081 for approximately 1,000 linear feet
- 20 feet near structure 49080 for approximately 160 linear feet

Existing Cleared/Maintained Right-of-Way Width

- 60 to 100 feet

Proposed Additional Cleared Right-of-Way Width

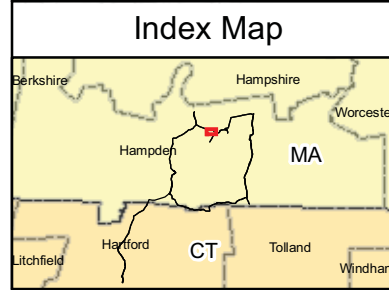
- 30 feet from structure 49102 to structure 49090
- 70 feet from structure 49083 to structure 49081
- 20 feet near structure 49080

Road Crossings/Major Utility Crossings

- Private road between structures 49087 and 49086
- U.S Interstate 291/Springfield Expressway between structures 49086 and 49085
- U.S. Interstate 90 between structures 48080 and 49079
- Shawinigan Drive between structures 49079 and 49078



See Preferred Northern Route Mapsheet 22 of 22

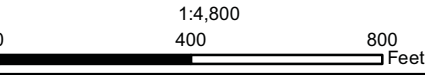


- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

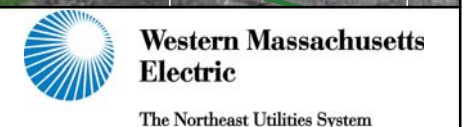
- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery



Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 12 of 22



Date: October 2008

**Preferred Northern Route
Existing Structure Locations 49077 to 49064
Shawinigan Substation to Orchard Junction
Towns of Chicopee and Ludlow, MA and City of Springfield, MA**

AREA DESCRIPTION

Existing Land Use

- Town of Chicopee
 - Residential
 - Commercial/Industrial
 - Urban
- Town of Ludlow
 - Agricultural
 - Commercial/Industrial
 - Residential
- City of Springfield
 - Commercial/Industrial

Future Land Use

- Town of Chicopee
 - Zoning (current):
 - Residential A (RA)
 - Industrial (I)
 - Residential D (RD)
 - Business A (BA)
- Town of Ludlow
 - Zoning (current):
 - Residence A (RA)
 - Agricultural (AG)
- City of Springfield
 - Zoning (current):
 - Industrial A (IA)

Natural Systems

- Fuller Brook
- Open water (pond)
- Chicopee River
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 4-5, 49074-49073, and 49065-49064
- Residential adjacent to and/or between structures 49079-49078A, 49070-49069, and 49065
- Forest adjacent to and/or between structures 45062, 45061, 45057-45055, and 45053-45052

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-67, W3-68, W3-70, W3-71, W3-72, W3-73, W3-74, and W3-75
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland, Palustrine Forested Wetland, Open Water
- Stream No. S3-31 (Fuller Brook)

Potential Access

- Structures 45064-45059 can be accessed from Shawinigan Drive
- Structures 45058-45055 can be accessed from Old Fuller Road Extension
- Structures 45054-45049 can be accessed from either Wren Drive or Cady Street (See Preferred Northern Route Mapsheet 14 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad, rolling hills

Existing Right-of-Way Width

- 200 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

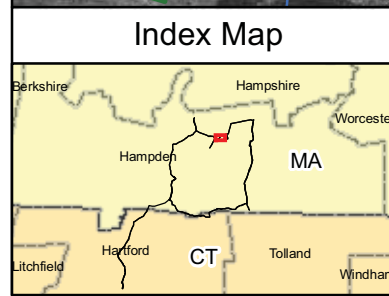
- 125 to 200 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

Road Crossings/Major Utility Crossings

- Shawinigan Switching Station access road between structures 45064A and 45064
- U.S. Interstate 90 and Shawinigan Drive between structures 45059 and 45058
- Old Fuller Road Extension and Lark Drive between structures 49070 and 49069_2
- Dove Drive between structures 49069_2 and 49069
- Service Drive and Canary Drive between structures 49069 and 49068



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project
Preferred Northern Route

Mapsheet 13 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Preferred Northern Route
Existing Structure Locations 50 to 31 and 45051 to 9
Orchard Junction to Bruni Avenue and Orchard Junction to Orchard Substation
Town of Ludlow, MA and City of Springfield, MA**

AREA DESCRIPTION

Existing Land Use

- Town of Ludlow
 - Residential
 - Recreational (West Street Playground and Park managed by the Town of Ludlow)
 - Commercial/Industrial
- City of Springfield
 - Residential
 - Recreational (Myrtle Street Park managed by the City of Springfield)
 - Commercial/Industrial

Future Land Use

- Town of Ludlow
 - Zoning (current):
 - Residence A (RA)
 - Agricultural (AG)
- City of Springfield
 - Zoning (current):
 - Industrial A (IA)
 - Residence B (RB)
 - Business A (BA)
 - Residence C (RC)
 - Business B (BB)
 - Residence A (RA)

Natural Systems

- Fuller Brook
- Chicopee River
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, commercial/industrial and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 50 48, and at Orchard Substation
- Residential adjacent to structures 48, 46, 30-31, 50-4, and 7-9
- Forest adjacent to structures 48-31, and 9

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-76, W3-77, W3-77A, W3-78, W3-79, W3-80, W3-81, W3-82, W3-83, W3-84, and W3-85
- Wetland Cover Types -Palustrine Scrub-Shrub Wetland , Palustrine Emergent Wetland , Palustrine Forested Wetland, Open Water
- Stream Nos. S3-32 (Chicopee River), S3-33, S3-34 and S3-34A (Detention Basin), S3-35, and S3-36 and S3-37 (Fuller Brook)

Potential Access

- Structure 50 can be accessed from either Old Fuller Road Extension (See Preferred Northern Route Mapsheet 13 of 22) or Cady Street
- Structures 002-004 can be accessed from West Street
- Structures 005-007 can be accessed from either West Street or Glenwood Street
- Structures 008-010 can be accessed from either West Avenue or Tait Street
- Structures 49065-49063 can be accessed from either Cady Street or Old Fuller Road Extension (See Preferred Northern Route Mapsheet 13 of 22)
- Structures 49062, and 20-29 can be accessed from either Cady Street or West Street
- Structures 30-31 can be accessed from either Bruni Avenue or Libby Street (See Preferred Northern Route Mapsheet 15 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land , Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad, rolling hills between structures 50 and 31, and 45051-9
- Steep from structure 9 to Orchard Substation

Existing Right-of-Way Width

- 180 feet from Orchard Junction to Orchard Substation
- 160 feet from Orchard Junction to Structure 31

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

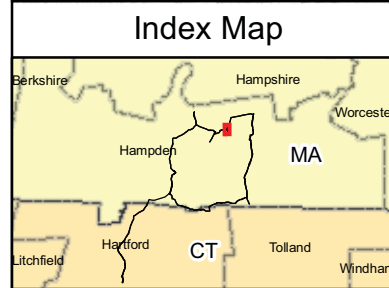
- 100 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

Road Crossings/Major Utility Crossings

- West Street between structures 4 and 5, and between structures 21 and 22
- U.S. Interstate 90 and West Avenue between structures 6 and 7
- Tait Street between structures 8 and 9
- Cady Street between structures 49063 and 49062



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line
- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property
- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

Land Use/Vegetative Cover Type Classes	
Emergent Wetland (PEM)	Agricultural (AG)
Forested Wetland (PFO)	Other (OT)
Scrub - Shrub Wetland (PSS)	Open Water (OW)
Open Field-Shrub Land (OFS)	House/Yard (HY)
Commerical/Industrial (CI)	Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 14 of 22

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 15 of 22:

Preferred Northern Route Existing Structure Locations 31 to 46 Bruni Avenue to Tank Farm Road Town of Ludlow, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Agricultural

Future Land Use

- Zoning (current):
 - Business A (BA)
 - Residence A (RA)
 - Agricultural (AG)
 - Industrial A (IA)
 - Industrial C (IC)
 - Residence A-1 (RA-1)

Natural Systems

- Fuller Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 34-35, and 36
- Commercial/Industrial adjacent to and/or between structures 32, 33-34, 36-37, 38, and 46
- Forest adjacent to structures 31, 32-33, 34, 36, and 41-46

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-84, W3-85, W3-86, W3-87, W3-88, W3-89, and W3-90
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland

Potential Access

- Structures 31-35 can be accessed from either Bruni Avenue, West Street or Libby Street
- Structures 36-37 can be accessed from either Stanley Street or Holyoke Street
- Structures 38-43 can be accessed from either Holyoke Street or Tank Farm Road
- Structures 44-46 can be accessed from either Tank Farm Road or Fuller Street (See Preferred Northern Route Mapsheet 16 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, ridge tops and hills

Existing Right-of-Way Width

- 160 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

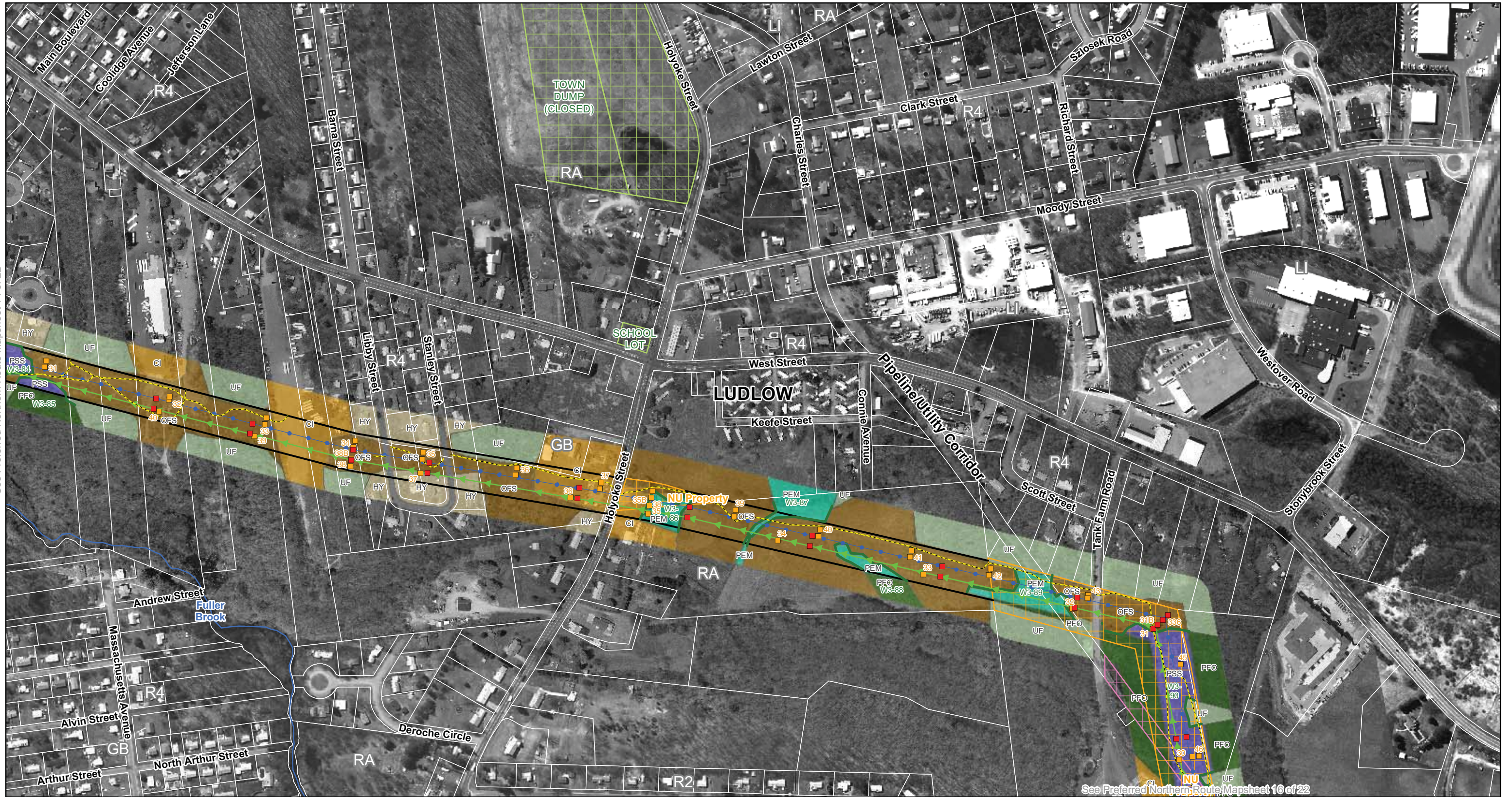
- 150 feet

Proposed Additional Cleared Right-of-Way Width

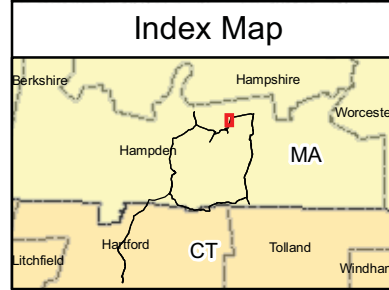
- 0 feet

Road Crossings/Major Utility Crossings

- Libby Street between structures 34 and 35
- Stanley Street between structures 35 and 36
- Holyoke Street between structures 37 and 38
- Tank Farm Road between structures 43 and 44
- Pipeline/utility corridor between structures 42 and 43, and east of structure 46



See Preferred Northern Route Mapsheet 16 of 22



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project
Preferred Northern Route
Mapsheet 15 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Preferred Northern Route
Existing Structure Locations 46 to 62
Tank Farm Road to Rood Street
Town of Ludlow, MA**

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Conservation (Nash Hill Reservoir managed by the Massachusetts Water Resources Authority and Camp White managed by the Town of Ludlow)
- Residential
- Commercial/Industrial

Future Land Use

- Zoning (current):
 - Residence A (RA)
 - Agricultural (AG)
 - Industrial C (IC)
 - Residence A-1 (RA-1)

Natural Systems

- Nash Hill Reservoir
- Harris Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Agricultural, residential, industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 46-47, 53-54, and 60-61
- Residential adjacent to and/or between structures 54-58
- Forest adjacent to structures 46-53, 59, 60, and 62

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-90, W3-91, W3-92, W3-93, W3-94, W3-95, W3-96, W3-97, W3-98, W3-99, W3-100, and W3-101
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland
- Stream Nos. S3-37A, S3-38 (Harris Brook)

Potential Access

- Structures 46-58 can be accessed from either Tank Farm Road (See Preferred Northern Route Mapsheet 15 of 22) or Fuller Street
- Structures 59-62 can be accessed from Rood Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad ridge tops to rolling hills

Existing Right-of-Way Width

- 160 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 150 feet

Proposed Additional Cleared Right-of-Way Width

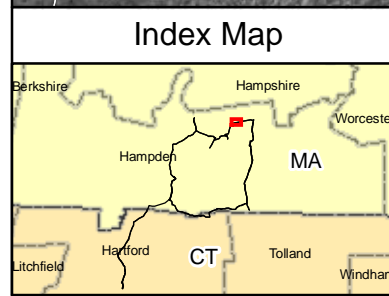
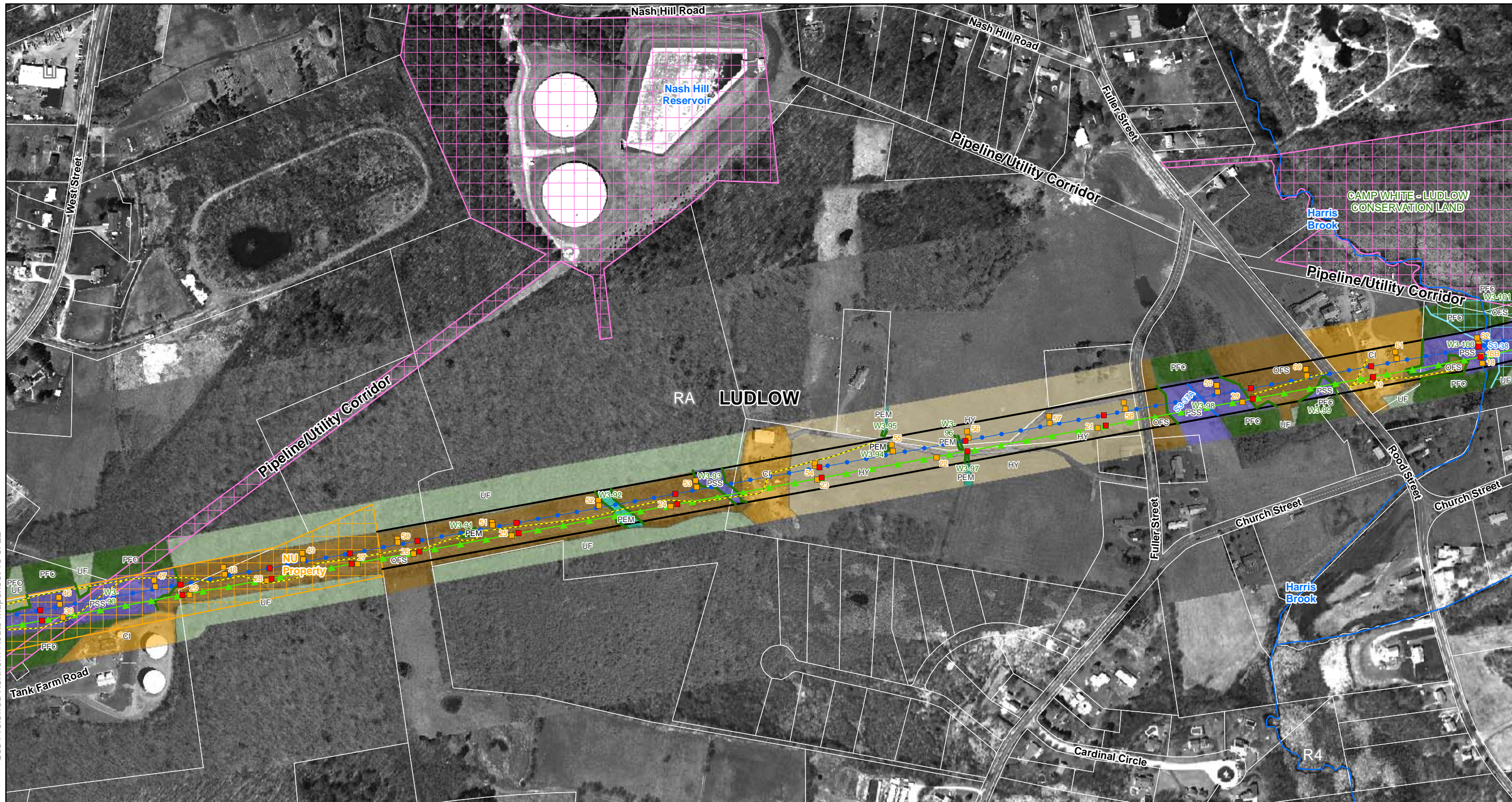
- 0 feet

Road Crossings/Major Utility Crossings

- Private driveway between structures 55 and 56, and between structures 56 and 57
- Fuller Street between structures 58 and 59
- Rood Street between structures 60 and 61
- Pipeline/Utility crossing between structures 46 and 47

See Preferred Northern Route Mapsheet 15 of 22

See Preferred Northern Route Mapsheet 17 of 22



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

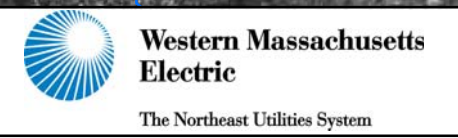
- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project
Preferred Northern Route

Mapsheet 16 of 22



Date: October 2008

**Preferred Northern Route
Existing Structure Locations 60 to 76
Rood Street to Booth Street
Town of Ludlow, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Agricultural
- Urban (First Meeting House, First Church Cemetery, Ludlow Center Cemetery, and Munsing St. Cemetery)
- Conservation (Camp White managed by the Town of Ludlow)

Future Land Use

- Zoning (current):
 - Residence A (RA)
 - Agricultural (AG)

Natural Systems

- Harris Brook
- Higher Brook
- Fuller Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 60-61, and 67
- Residential adjacent to and/or between structures 65-66, 69, and 74-76
- Forest adjacent to structures 61-73

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-99, W3-100, W3-101, W3-102, W3-103, W3-104, W3-105, W3-106, W3-107, W3-108, and W3-109
- Wetland Cover Types - Palustrine Scrub-Shrub Wetlands, Palustrine Forested Wetlands, Palustrine Emergent Wetlands
- Stream No. S3-38 (Harris Brook)

Potential Access

- Structures 60-62 can be accessed from Rood Street
- Structures 63-67 can be accessed from Munsing Street
- Structures 68-74 can be accessed from either Munsing Street or Booth Street
- Structures 75-76 can be accessed from either Booth Street or Lyon Street (See Preferred Northern Route Mapsheet 18 of 22)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, hill tops to rolling hills

Existing Right-of-Way Width

- 160 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 160 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

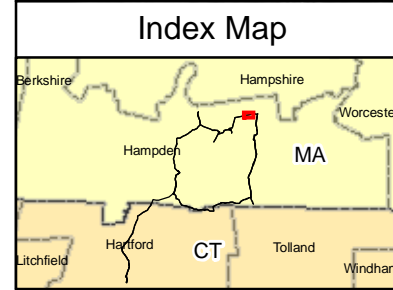
Road Crossings/Major Utility Crossings

- Rood Street between structures 60 and 61
- Munsing Street between structures 65 and 66
- Booth Street between structures 74 and 75
- Pipeline/Utility Corridor crossing between structures 63 and 64



See Preferred Northern Route Mapsheet 16 of 22

See Preferred Northern Route Mapsheet 18 of 22



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line
- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property
- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Emergent Wetland (PEM)
- Forested Wetland (PFO)
- Scrub - Shrub Wetland (PSS)
- Open Field-Shrub Land (OFS)
- Commercial/Industrial (CI)
- Agricultural (AG)
- Other (OT)
- Open Water (OW)
- House/Yard (HY)
- Upland Forest (UF)

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

Land Use/Vegetative Cover Type Classes

■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery


Scale: 1:4,800


0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 17 of 22


Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

**Preferred Northern Route
Existing Structure Location 75 to Ludlow Substation
Booth Street to Ludlow Substation
Town of Ludlow, MA**

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Residential
- Industrial

Future Land Use

- Zoning (current):
 - Residence A (RA)
 - Agricultural (AG)
 - Industrial A (IA)

Natural Systems

- Higher Brook
- Fuller Brook
- Ludlow Reservoir (managed by the City of Springfield Water Department)
- Facing Rock Wildlife Management Area (managed by the MA Department of Fish and Game)
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, industrial, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential land adjacent to and/or between structures 75-78, and southwest of Ludlow Substation
- Commercial/Industrial land at Ludlow Substation
- Forest adjacent to structures 78-79, 49003-49001, and Ludlow Substation

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W3-109, W3-110, W3-111, and W3-115
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent wetland
- Stream Nos. S3-39 (Higher Brook), and S3-39A

Potential Access

- Structures 75-77 can be accessed from either Booth Street or Lyon Street
- Structures 78-79, 49003, and 2 can be accessed from either Lyon Street or State Route 21/Center Street
- Structures 1, 44001, 23210, 49001, and others can be accessed from State Route 21/Center Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, hill tops between structures 75 and 76, 76 and 79, and Ludlow Substation
- Hilly to steep adjacent to structure 76

Existing Right-of-Way Width

- 160 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 160 feet

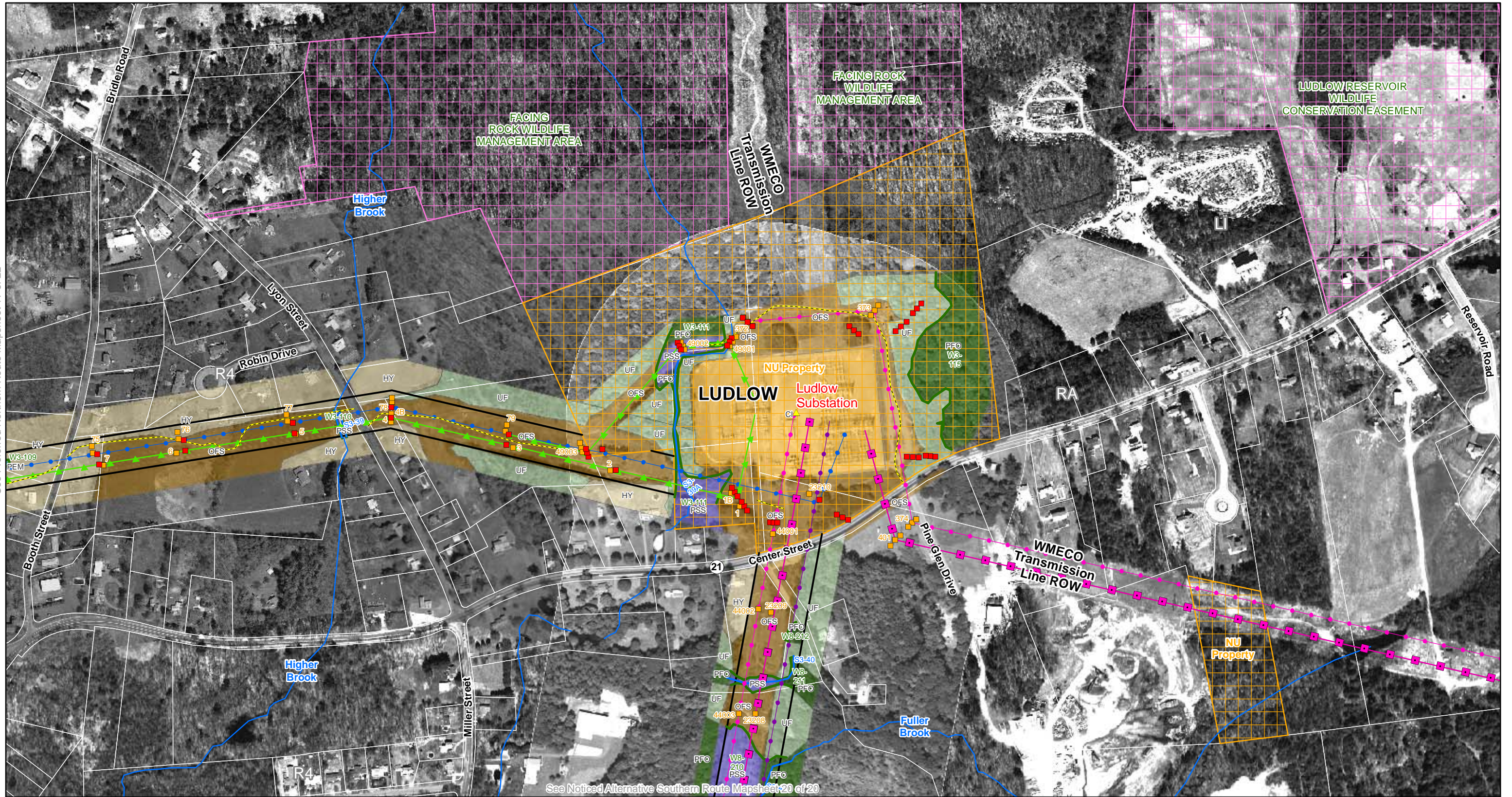
Proposed Additional Cleared Right-of-Way Width

- 0 feet

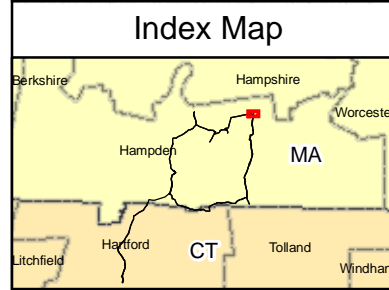
Road Crossings/Major Utility Crossings

- Booth Street between structures 74 and 75
- Lyon Street between structures 77 and 78

See Preferred Northern Route Mapsheet 17 of 22



See Noticed Alternative Southern Route Mapsheet 20 of 20



— Right-of-Way (Existing)	■ Existing Structure	▨ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	▨ Property Line
● Preferred Northern Route	■ MA Protected Open Space	▨ Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	▨ Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	▨ Watercourse
— Existing 115-kV Line		▨ Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)


Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery


Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 18 of 22


Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

**Preferred Northern Route
Existing Structure Locations 14 to 6
East Springfield Junction to Pendleton Avenue
Town of Chicopee, MA**

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Urban, open space (Saint Stanislaus Public Cemetery and Bellamy Playground managed by the Town of Chicopee)
- Residential

Future Land Use

- Zoning (current):
 - Business A (BA)
 - Central Business (CB)
 - Business B (BB)
 - Residential A (RA)
 - Industrial (I)

Natural Systems

- Mixed hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 13, 12-10, and 8
- Commercial/Industrial adjacent to structure 14
- Urban, open space adjacent to and between structures 9-10
- Forest adjacent to structures 13-12, 9, and 7-6

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W5-125, W5-126, W5-127, W5-128, and W5-129
- Wetland cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland
- Stream No. S3-27

Potential Access

- Structures 14-13 can be accessed from either the Mall Road or Stanley Drive
- Structures 12-11 can be accessed from Granby Road
- Structure 10 can be accessed from Woodcrest Drive
- Structures 9-6 can be accessed from either Carriage Road or Pendleton Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agriculture

Terrain

- Broad, gentle hills between structures 14- 8
- Hilly to steep slopes between structures 7-6

Existing Right-of-Way Width

- 150 feet between structures 12 and 6
- 200 feet between structures 14 and 12

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

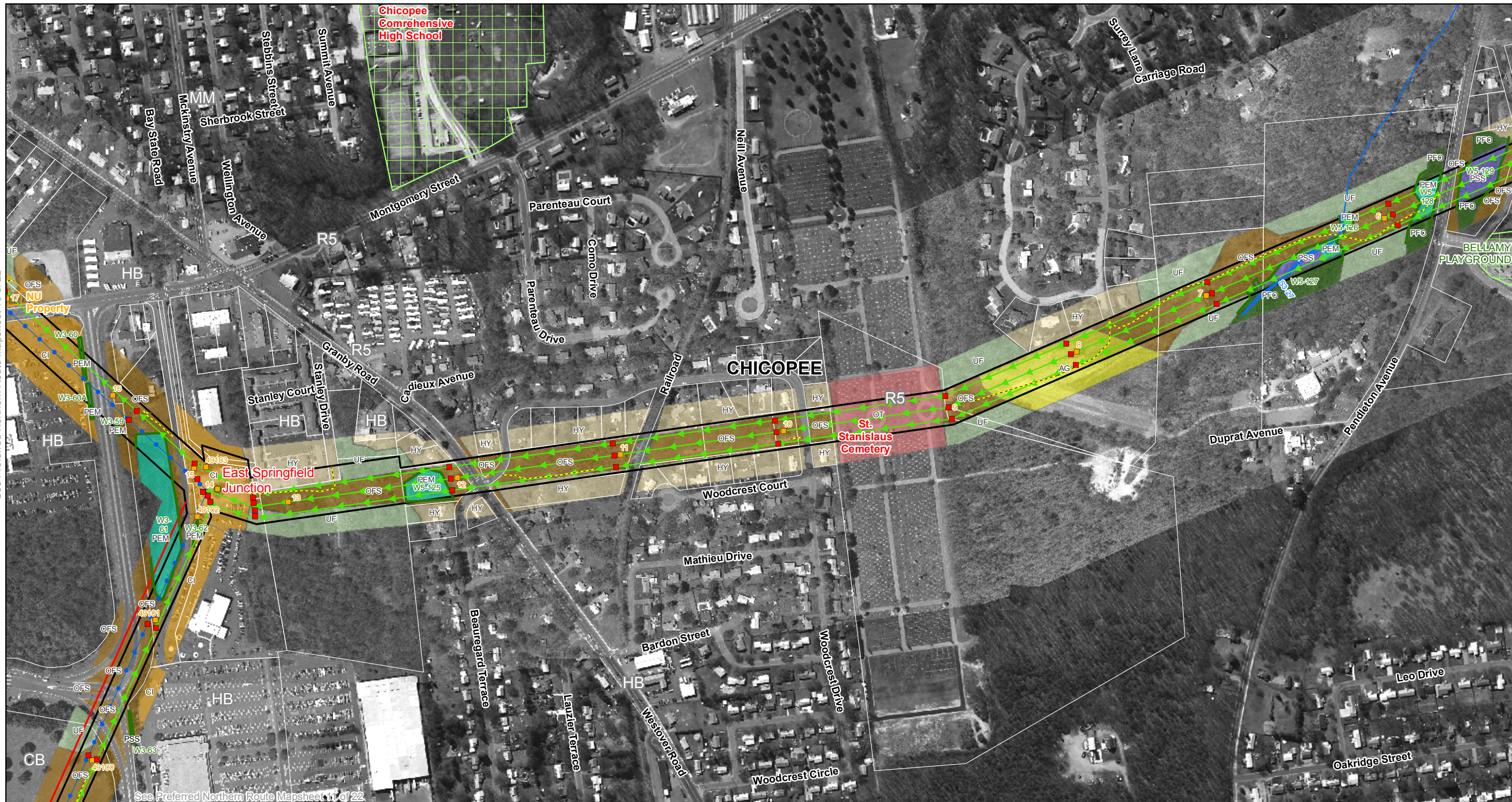
- 100 to 150 feet

Proposed Additional Cleared Right-of-Way Width

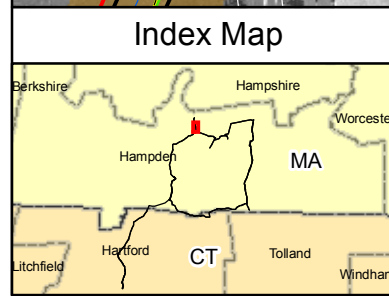
- 25-50 feet between structures 14 and 6

Road Crossings/Major Utility Crossings

- Granby Road and Woodcrest Drive between structures 11 and 12
- Woodcrest Drive and Unnamed Roads between structures 9 and 10
- Pendleton Avenue and Old Pendleton Avenue between structures 5 and 6
- Railroad between structures 10 and 11



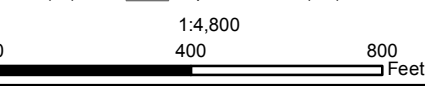
See Preferred Northern Route Mapsheet 11 of 22



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line
- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

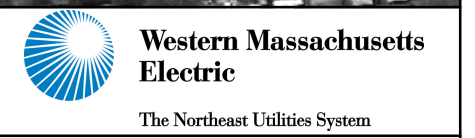
- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery



Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 19 of 22



Date: October 2008

**Preferred Northern Route
Existing Structure Location 5 to Fairmont Switching Station
Pendleton Avenue to Prospect Street
Town of Chicopee, MA and City of Holyoke, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Urban, open space (Bellamy Playground managed by the Town of Chicopee)
- Industrial

Future Land Use

- Town of Chicopee
 - Zoning (current):
 - Residential A (RA)
 - Residential B (RB)
 - Residential C (RC)
 - Business A (BA)
- City of Holyoke
 - Zoning (current):
 - Limited Business (BL)
 - Industrial Park (IP)
 - General Industry (IG)
 - General Business (BG)

Natural Systems

- Connecticut River
- Mountain Lake Stream
- Mountain Lake
- Mixed hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential land use adjacent to structures 3-1
- Agricultural adjacent to and/or between structures 5-4
- Forest adjacent to structures 3 to 1, and proposed substation

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W5-129, W5-129A, W5-130, W5-131, and W5-132
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland
- Stream Nos. S5-42 (Mountain Lake Stream), and S5-43

Potential Access

- Structures 5-4 can be accessed from Old Pendleton Avenue
- Structure 3 can be accessed from Irene Street
- Structures 2-1 can be accessed from either Irene Street or Prospect Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad, gentle hills between structures 5 and 4, and between structures 3 and 1
- Hilly to steep slopes between structures 4 and 3

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 100 to 150 feet

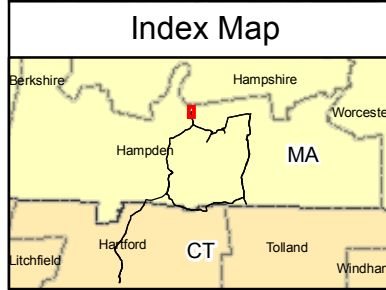
Proposed Additional Cleared Right-of-Way Width

- 25-50 feet between structures 5 and 1

Road Crossings/Major Utility Crossings

- Pendleton Avenue and Old Pendleton Avenue south of structure 5
- Irene Street between structures 3 and 2
- Prospect street between structure 1 and the proposed substation

See Preferred Northern Route Mapsheet 19 of 22



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 20 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 21 of 22:

Preferred Northern Route Existing Structure Locations 45069 to 45065 Cadwell Drive to Worcester Street City of Springfield, MA and Town of Chicopee, MA

AREA DESCRIPTION

Existing Land Use

- Town of Chicopee
 - Commercial/Industrial
- City of Springfield
 - Residential
 - Commercial/Industrial
 - Recreational (Bircham Park, and Rio Vista Park managed by the City of Springfield)

Future Land Use

- Town of Chicopee
 - Zoning (current):
 - Industrial (I)
 - Business B (BB)
 - Business A (BA)
 - Not Zoned (NZ)
- City of Springfield
 - Zoning (current):
 - Industrial A (IA)
 - Residence B (RB)
 - Business A (BA)
 - Residence A (RA)
 - Business B (BB)

Natural Systems

- Chicopee River
- Fuller Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Commercial/Industrial, residential, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to structures 45067-45069
- Forest adjacent to structures 45065-45067, and 45069

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W6-133, W3-69, W3-70, W3-71, W3-72, and W6-134
- Wetland Cover Types - Palustrine Emergent Wetlands, Palustrine Scrub-Shrub Wetlands, Palustrine Forested Wetlands, Open Water
- Stream Nos. S6-44 (Chicopee River), S3-31 (Fuller Brook)

Potential Access

- Structures 45069-45068 can be accessed from Cadwell Drive
- Structures 45067-45066 can be accessed from either Cadwell Drive or East Main Street/Rte 141
- Structure 45065 can be accessed from Shawinigan Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, hill tops between structures 45066 and 45069
- Steep between structures 45065 and 45066

Existing Right-of-Way Width

- 200 feet between structures 45066 and 45069
- 300 feet adjacent to structure 45066
- 160 feet between structures 45065 and 45066

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

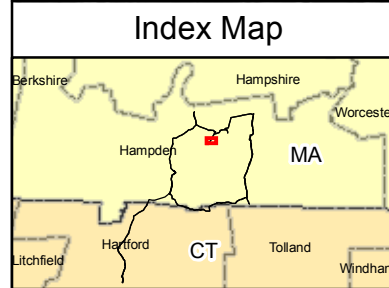
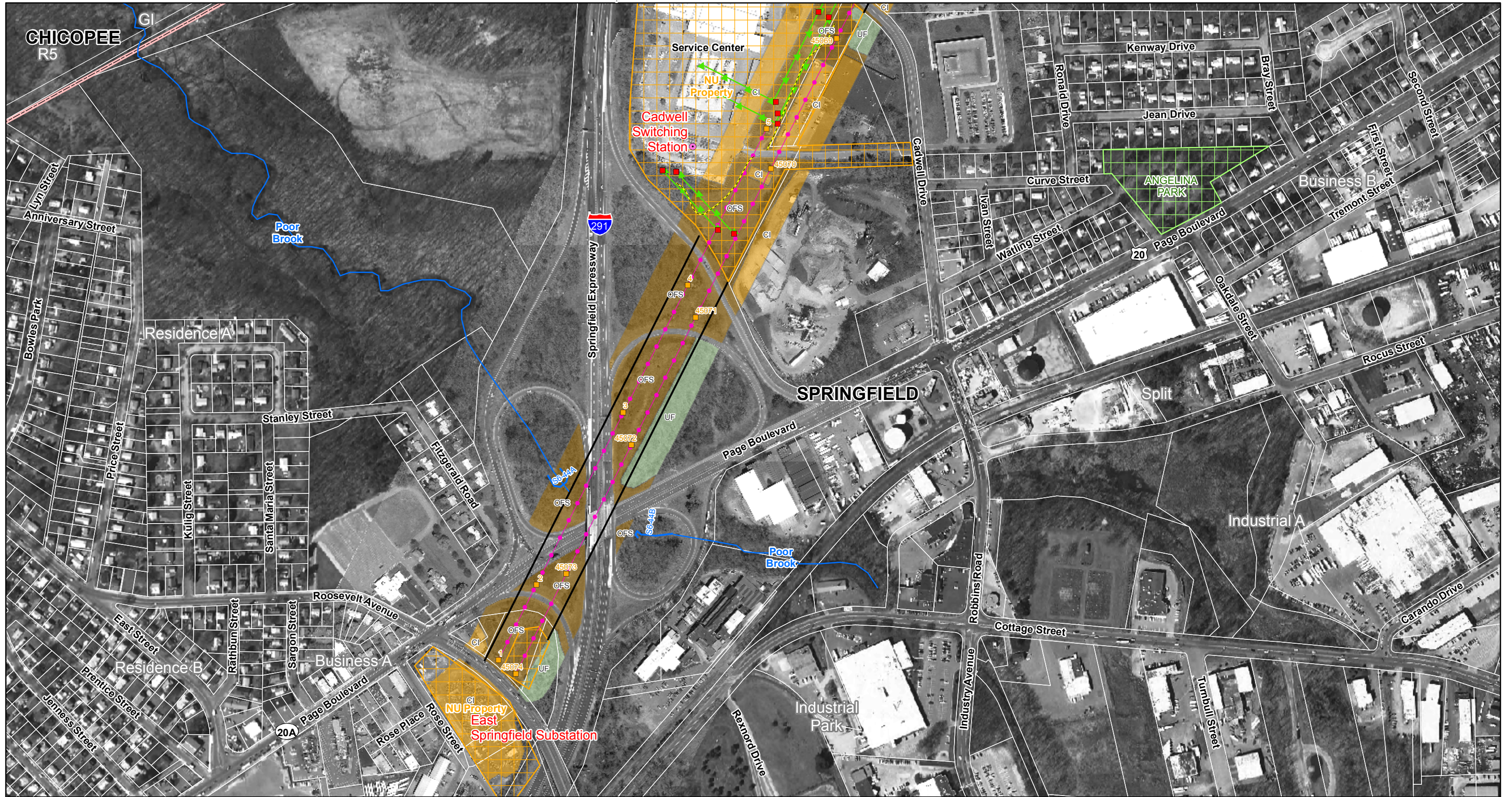
- 160-300 feet

Proposed Additional Cleared Right-of-Way Width

- 0 feet

Road Crossings/Major Utility Crossings

- Cadwell Drive between structures 45067 and 45068 and between structures 45068 and 45069
- East Main Street/Worcester Street between structures 45065 and 45066



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road


- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery




Greater Springfield Reliability Project

Preferred Northern Route

Mapsheet 21 of 22



Western Massachusetts Electric
The Northeast Utilities System



Date: October 2008

**Preferred Northern Route
Existing Structure Locations 45074 to 45069
East Springfield Substation to Cadwell Drive
City of Springfield, MA**

AREA DESCRIPTION

Existing Land Use

- City of Springfield
 - Residential
 - Commercial/Industrial
 - Recreational (Angelina Park managed by the City of Springfield)

Future Land Use

- City of Springfield
 - Zoning (current):
 - Industrial A (IA)
 - Residence B (RB)
 - Business A (BA)
 - Residence A (RA)
 - Business B (BB)

Natural Systems

- Poor Brook
- Hardwood forest varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Commercial/Industrial, residential, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to structures 45069-45070, and at East Springfield Substation
- Forest adjacent to structures 45069, 45071-45072, and 45074

Wetlands, Watercourses and Waterbodies

- Stream Nos. S6-44A and S6-44B (Poor Brook)

Potential Access

- Structures 45070-45069 can be accessed from Cadwell Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland Forest (in un-cleared portion of right-of-way)

Terrain

- Broad, hill tops between structures 45069 and 45074

Existing Right-of-Way Width

- 200 feet between structures 45069 and 45074

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 200 feet

Proposed Additional Cleared Right-of-Way Width

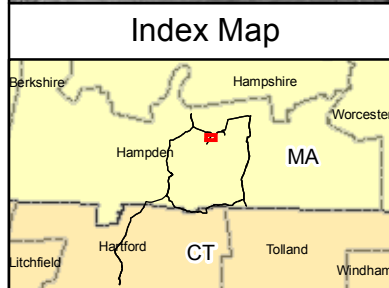
- 0 feet

Road Crossings/Major Utility Crossings

- Cadwell Drive north of structure 45069
- Service Center access road between structures 45069 and 45070
- Exit Ramps between structures 45070 and 45071, and between structures 45071 and 45072
- U.S. Highway 20/Page Boulevard, and U.S. Interstate 291/Springfield Expressway between structures 45072 and 45074



See Preferred Northern Route Mapsheet 21 of 22



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
● Preferred Northern Route	■ MA Protected Open Space	— Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	— Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	— Watercourse
— Existing 115-kV Line		— Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

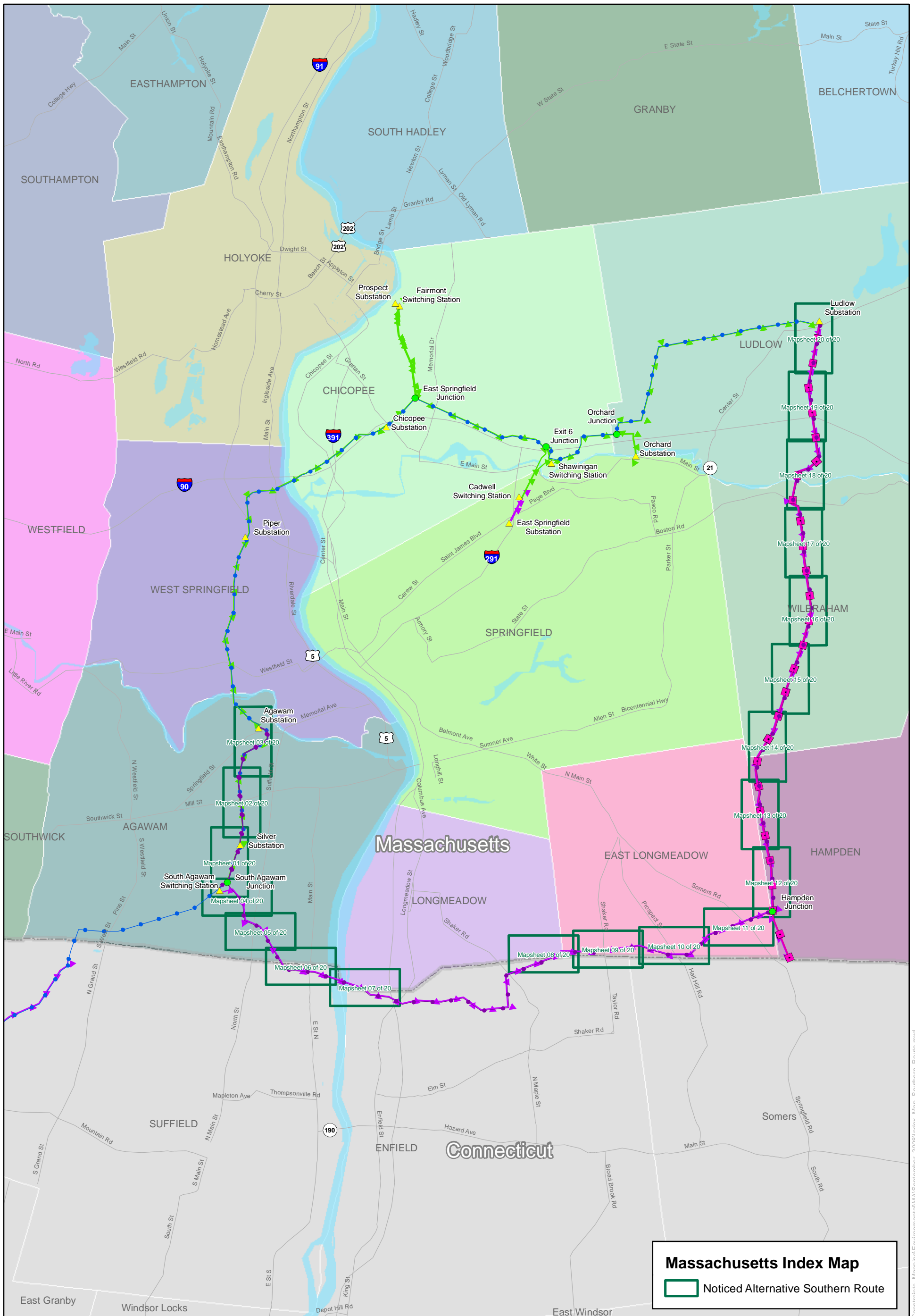
Preferred Northern Route

Mapsheet 22 of 22

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008






Electric Transmission Routes

- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- ▲ 115-kV Existing to Remain in Corridor
- 345-kV Existing to Remain in Corridor

0 1 2 3 Miles 1:100,000

Data Source: Burns & Mac, CT DEP, ENSR 2007


Greater Springfield Reliability Project Index Map
 Massachusetts


Western Massachusetts Electric
 The Northeast Utilities System

 Date: October 2008

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MAPSHEET 1 of 20:

Noticed-Alternative Southern Route Existing Structure Locations 22003 to 2284 Moylan Drive to Silver Street Town of Agawam, MA

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Residential
- Agricultural
- Conservation (Privately owned land)

Future Land Use

- Zoning (current):
 - Industrial A (IA)
 - Residence A-1 (A1)
 - Business A (BA)
 - Business B (BB)
 - Agricultural (AG)
 - Residence A-2 (A2)

Natural Systems

- Tarkill Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest, residential, agricultural, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial between structures 2270 and 2271A, east of structures 2275 and 2278, adjacent to structure 2279, and east of structures 2281 and 2283
- Residential west of structures 2280-2281
- Agricultural between structures 22003 and 22004
- Forest adjacent structures 2271A-2278, structure 2280, structures 22820-2284, and 22002-22001

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W1-15, W1-16, W1-16A, W2-17, W1-18, W1-18A, W1-18B, W1-18C, W1-18D, W2-19, W2-20, and W2-21
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S2-9, S2-10, S2-11, and S1-7 and S1-8 (Tarkill Brook)

Potential Access

- Structures 2271-2281 can be accessed from either Moylan Drive (See Preferred Northern Route and Noticed-Alternative Southern Route Mapsheet 03 of 03) or Silver Street
- Structures 2282-2283 can be accessed from Silver Street
- Structure 2284 can be accessed from Tennis Road (See Noticed-Alternative Southern Route Mapsheet 02 of 20)
- Structures 22003-22001 can be accessed from Shoemaker Lane

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad and flat between structures 2270 and 2283
- Broad, rolling hills between structures 22003 and 22001

Existing Right-of-Way Width

- 100-300 feet

Proposed Expansion of Right-of-Way Width

- 65 feet from structure 2281 to structure 2287 for approximately 0.6 miles

Existing Cleared/Maintained Right-of-Way Width

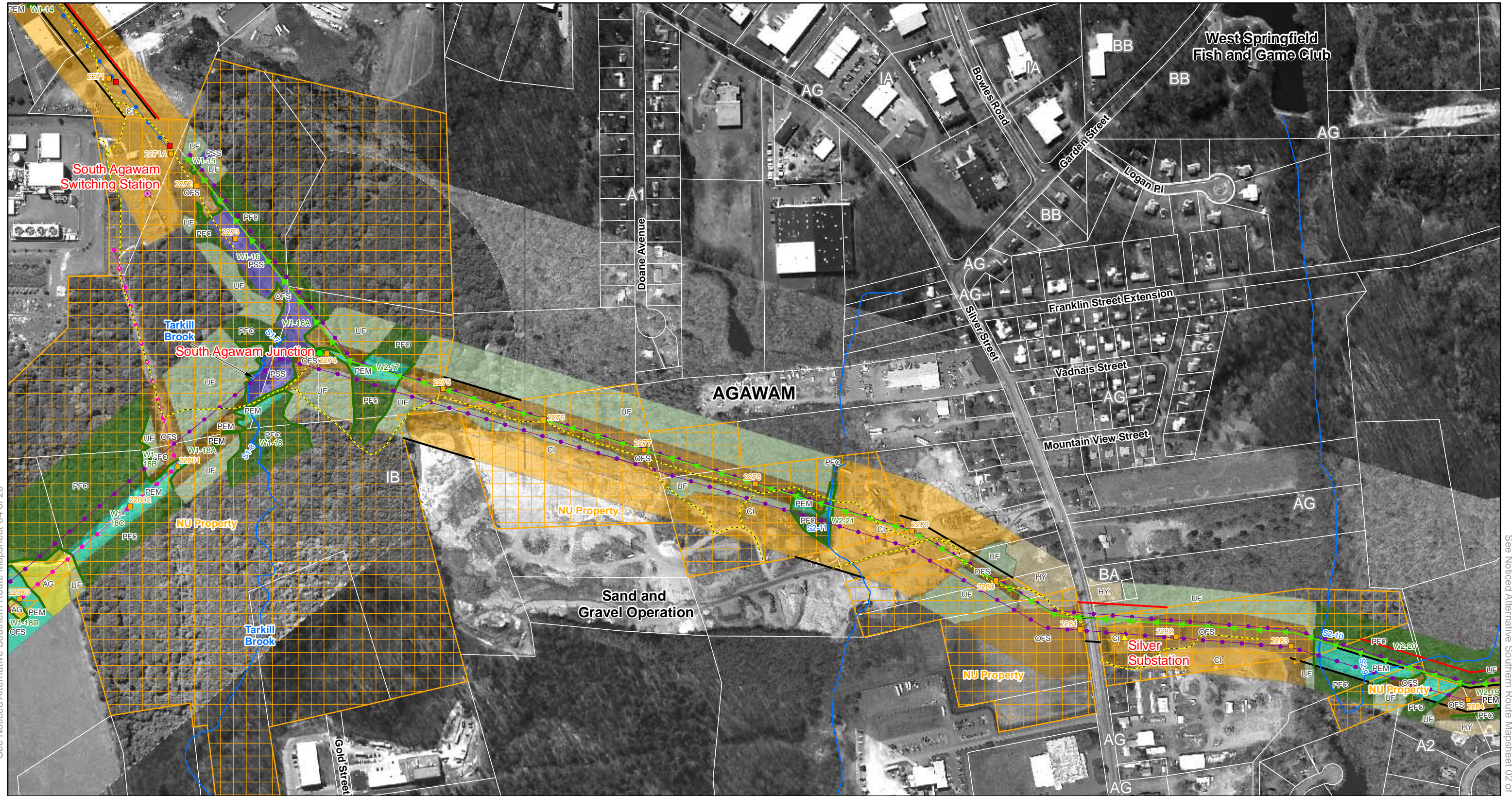
- 70-100 feet

Proposed Additional Cleared Right-of-Way Width

- 0-70 feet from structure 2271 (South Agawam S/S) to structure 2274 (South Agawam Jct.)
- 0-110 feet from structure 2274 (South Agawam Jct.) to structure 2281 (Silver S/S)
- 0-65 feet from structure 2281 (Silver S/S) to structure 2287
- 100 feet from South Agawam Junction to structure 22003

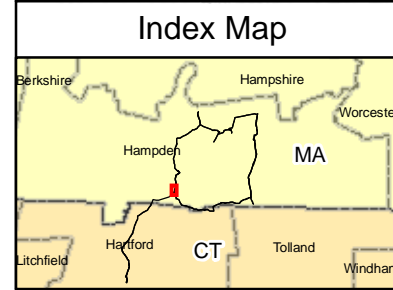
Road Crossings/Major Utility Crossings

- Silver Street between structures 2281 and 2282



See Noticed Alternative Southern Route Mapsheet 04 of 20

See Noticed Alternative Southern Route Mapsheet 02 of 20



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
● Preferred Northern Route	■ MA Protected Open Space	— Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	— Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	— Watercourse
— Existing 115-kV Line		— Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 01 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 2283 to 2294
Silver Street to Rowley Street
Town of Agawam, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial
- Agricultural
- Managed open space (Agawam Senior High School)
- Conservation

Future Land Use

- Zoning (current):
 - Residence B (RB)
 - Agricultural (AG)
 - Residence A-2 (A2)
 - Business A (BA)
 - Business B (BB)
 - Residence A-3 (A3)
 - Residence A-1 (A1)

Natural Systems

- Silver Lake Reservoir
- Threemile Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest, residential, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential east of structures 2284-2287, 2288M-2289, 2291, and between structures 2292 and 2293
- Commercial/Industrial west of structure 2287
- Agricultural east of structure 2294
- Forest adjacent to structures 2283-2286, 2287, 2291-2292, and 2293-2294

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W2-22, W2-23, W2-19, and W2-20
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S2-9, S2-10, S2-12 (Threemile Brook)

Potential Access

- Structures 2284-2288 can be accessed from Tennis Road
- Structures 2288M-2292 can be accessed from either Cooper Street or Lancaster Drive
- Structures 2293-2294 can be accessed from either Lancaster Drive or Rowley Street (See Noticed-Alternative South Route Mapsheet 03 of 20)

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad and flat to rolling hills between all structures

Existing Right-of-Way Width

- 100 feet between structures 2283 and 2286
- 150 feet between structures 2286 and 2294

Proposed Expansion of Right-of-Way Width

- 65 feet from structure 2282 to structure 2287 for approximately 0.6 miles
- 15 feet from structure 2287 to structure 2303 (Agawam Substation) for approximately 2.4 miles
- 45 feet at structure 2291

Existing Cleared/Maintained Right-of-Way Width

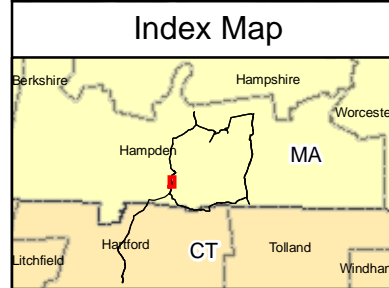
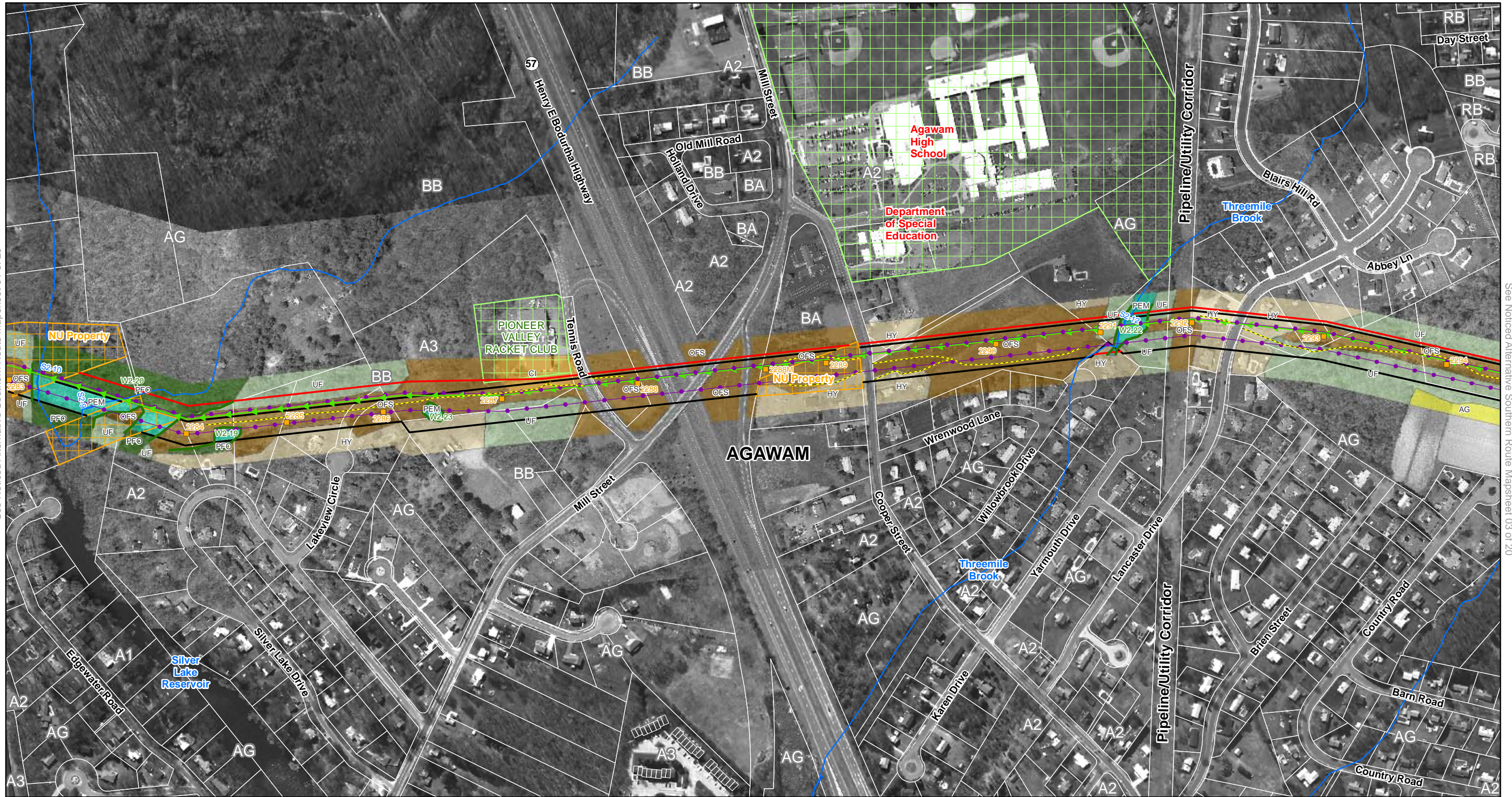
- 70-100 feet between structures 2283 and 2286
- 70-150 feet between structures 2286 and 2294

Proposed Additional Cleared Right-of-Way Width

- 0-95 feet from structure 2282 to structure 2287
- 0-95 feet from structure 2287 to structure 2303 (Agawam Substation)

Road Crossings/Major Utility Crossings

- Tennis Road between structures 2287 and 2288
- State Route 57 and Mill Street between structures 2288 and 2288M
- Cooper Street between structures 2292-2293
- Lancaster Drive between structures 2292 and 2293
- Pipeline/Utility Corridor between structures 2291 and 2292



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- 1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 02 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Location 2293 to Agawam Substation
Rowley Street to Agawam Substation
Town of Agawam, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Agricultural
- Recreational (Shea Field managed by the Town of Agawam and Robinson State Park managed by the MA Department of Conservation and Recreation)

Future Land Use

- Zoning (current):
 - Residence B (RB)
 - Agricultural (AG)
 - Residence A-2 (A2)
 - Business A (BA)
 - Business B (BB)
 - Industrial A (IA)

Natural Systems

- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, recreational, agricultural, forest, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial south of structures 2300-2301, adjacent to and/or between structures 2301 to 2302A
- Residential south of structures 2298-2299, and adjacent to structure 2300
- Agricultural east of structures 2294-2295, adjacent to and/or between structures 2296-2297, and between structures 2297 and 2298
- Forest adjacent structures 2293-2296, 2297-2298, 2299-2301, and 2302A to Agawam Substation

Wetlands, Watercourses and Waterbodies

- W2-26, W2-27, W2-28, W2-29, W2-30, W2-31, W2-32, W2-33, and W2-24 and W2-25 (North of Agawam Substation)
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland
- Stream Nos. S2-15, and S2-13 (North of Agawam Substation)

Potential Access

- Structures 2293-2299 can be accessed from either Lancaster Drive (see Noticed-Alternative Southern Route Mapsheet 02 of 20) or Rowley Street
- Structure 2300 can be accessed from Columbus Street and Ramah Circle
- Structure 2301 can be accessed from Shopping Court
- Structure 2302 can be accessed from Springfield Street and Walnut Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), , House/Yard, Agricultural

Terrain

- Broad and flat between structures 2293 and 2299
- Hilly to steep between structures 2299 and 2303

Existing Right-of-Way Width

- 150 feet

Proposed Expansion of Right-of-Way Width

- 15 feet from structure 2287 to structure 2303 (Agawam Substation) for approximately 2.4 miles

Existing Cleared/Maintained Right-of-Way Width

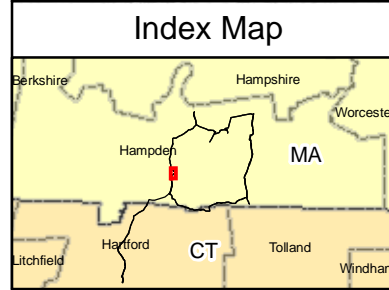
- 70-150 feet

Proposed Additional Cleared Right-of-Way Width

- 0-95 feet from structure 2287 to structure 2303 (Agawam Substation)

Road Crossings/Major Utility Crossings

- Rowley Street between structures 2297 and 2298
- State Route 147/Springfield Street between structures 2301 and 2302A



Electric Transmission Routes

- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

Land Use/Vegetative Cover Type Classes

- Emergent Wetland (PEM)
- Forested Wetland (PFO)
- Scrub - Shrub Wetland (PSS)
- Open Field-Shrub Land (OFS)
- Commercial/Industrial (CI)
- Agricultural (AG)
- Other (OT)
- Open Water (OW)
- House/Yard (HY)
- Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 03 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 22001 to 22006
South Agawam Junction to Suffield Street
Town of Agawam, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Agricultural

Future Land Use

- Zoning (current):
 - Industrial B (IB)
 - Agricultural (AG)
 - Industrial A (IA)
 - Business B (BB)
 - Residence A-2 (A2)
 - Residence A (BA)

Natural Systems

- Tarkill Brook
- Mixed hardwood forests varying in age and size
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, forest, and agricultural

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Commercial/Industrial adjacent to and/or between structures 22004 and 22006
- Forest adjacent to structures 22001-22004, and 22006

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W1-16A, W1-18, W1-18A, W1-18B, W1-18C, W1-18D, W8-135, and W1-12, through W1-16 and W2-17 (North and west of South Agawam Junction)
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland, Palustrine Forested Wetland
- Stream Nos. S1-7 and S1-8 (Tarkill Brook)

Potential Access

- Structures 22001-22006 can be accessed from Shoemaker Lane

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agricultural

Terrain

- Broad, rolling hills between existing structures

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 70 feet

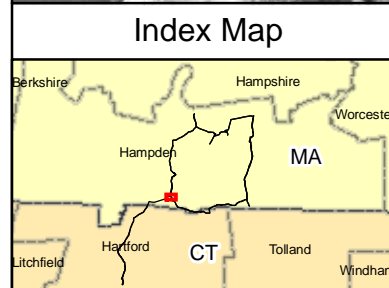
Proposed Additional Cleared Right-of-Way Width

- 100 feet between South Agawam Junction and structure 22006

Road Crossings/Major Utility Crossings

- Moylan Drive between structures 2270 and 2271
- Shoemaker Lane between structures 2269 and 2270

See Preferred Northern Route and Noticed Alternative Southern Route Mapsheet 03 of 03



— Right-of-Way (Existing)	■ Existing Structure	▨ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	▨ Property Line
Electric Transmission Routes	■ MA Protected Open Space	▨ Town/State Boundary
● Preferred Northern Route	■ Article 97 Lands	▨ Wetland Boundary
● Noticed Alternative Southern Route	■ Northeast Utilities Property	▨ Watercourse
▲ 115-kV Improvements		▨ Potential Access Road
— Existing 115-kV Line		
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 04 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 22007 to 22012
Shoemaker Lane to Brookfield Lane
Town of Agawam, MA**

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Residential
- Recreational (Crestview Country Club)

Future Land Use

- Zoning (current):
 - Residence A-5 (A5)
 - Residence A-2 (A2)
 - Business B (BB)
 - Industrial B (IB)
 - Agricultural (AG)
 - Residence A-3 (A3)
 - Industrial A (A1)
 - Residence B (RB)

Natural Systems

- Worthington Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, agricultural, forest, and commercial/industrial

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Agricultural adjacent to structure 22012
- Residential adjacent to structures 22007, 22008-22009, and 22010
- Forest adjacent to structures 22007, and 22009-22012

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-135, W8-136, W8-137, W8-138, W8-139, W8-140, and W8-141
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland
- Stream No. S8-55 (Worthington Brook)

Potential Access

- Structure 22007 can be accessed from Shoemaker Lane
- Structures 22008-22013 can be accessed using State Route 75/Suffield Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Flat hill tops between structures 22006 and 22008
- Hilly between structures 22008 and 22012

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

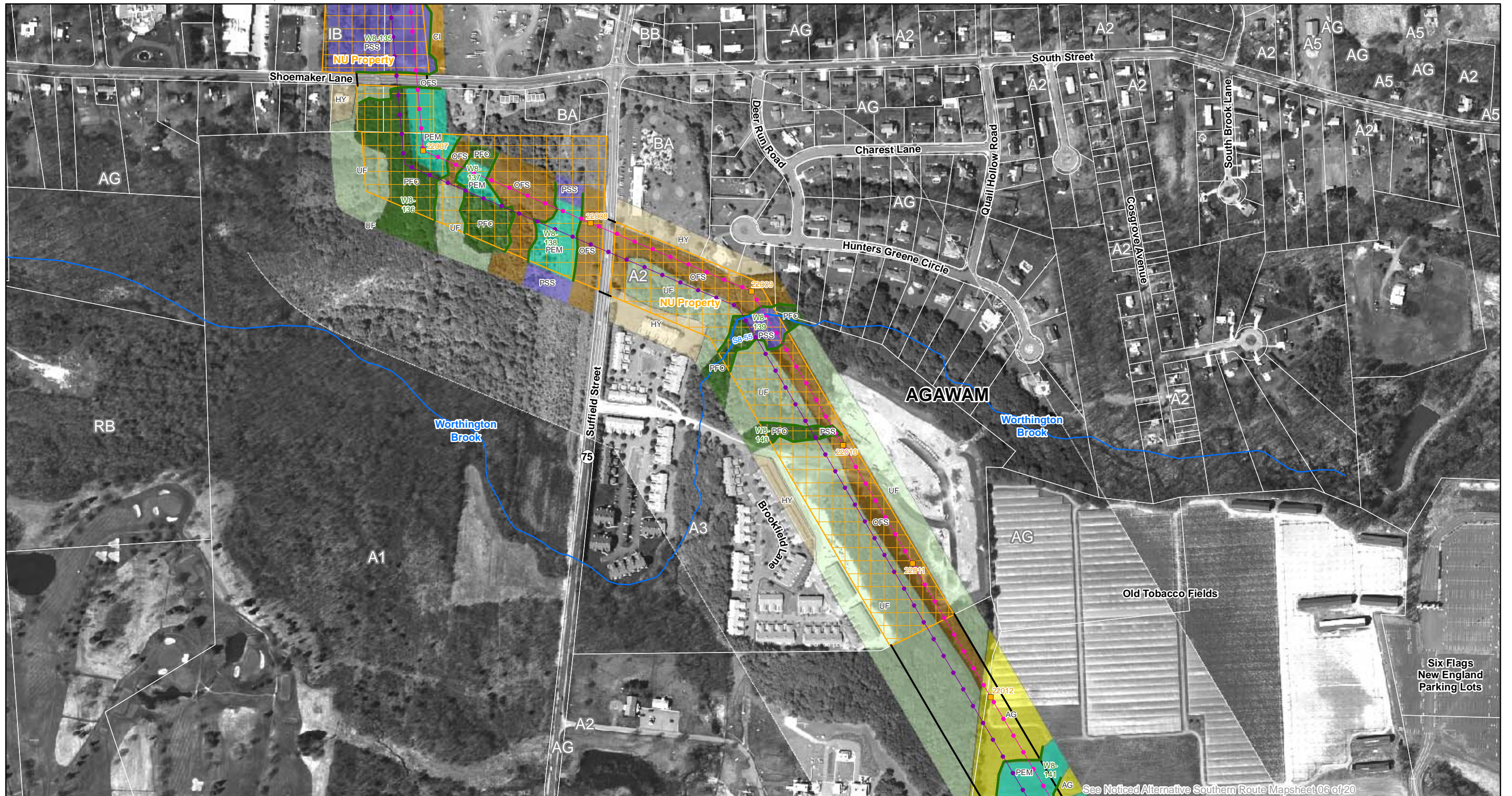
- 70 feet

Proposed Additional Cleared Right-of-Way Width

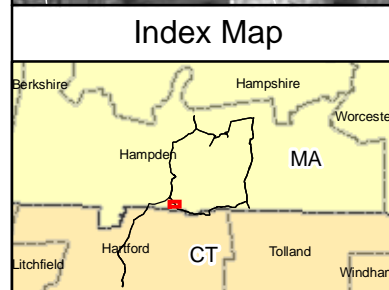
- 100 feet between structures 22006 and 22012

Road Crossings/Major Utility Crossings

- Shoemaker Lane between structures 22006 and 22007
- State Route 75/Suffield Street between structures 22008 and 22009



See Noticed Alternative Southern Route Mapsheet 06 of 20



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- 1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 05 of 20

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 22013 to 22021
Brookfield Lane to the Connecticut River
Town of Agawam, MA and Town of Suffield, CT**

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial (Town of Agawam)
- Residential (Town of Agawam)
- Agricultural (Towns of Agawam, MA and Suffield, CT)
- Recreation (Six Flags New England Amusement Park managed by a private organization)

Future Land Use

- Town of Agawam
 - Zoning (current):
 - Agricultural (AG)
 - Industrial A (IA)
 - Business B (BB)
 - Residence B (RB)
 - Business A (BA)
- Town of Suffield
 - Zoning (current):
 - Residential (R-45)
 - Zoning (Plan of Development):
 - Residential (R-45)

Natural Systems

- Fourmile Brook
- Connecticut River
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Agricultural, commercial/industrial, residential, recreation, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Agricultural land use adjacent to and between structures 22012 and 22013
- Forest adjacent to structures 22012-22014

Wetlands, Watercourses and Waterbodies

- Massachusetts Wetland Nos. W8-141, W8-142
- Connecticut Wetland Nos. W8-142, W8-143, W8-144, W8-145, W8-146, W8-147, W8-148.
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Open Water
- Stream Nos. S8-56 (Fourmile Brook), S8-57, S8-58 (Connecticut River) – all in Connecticut

Potential Access

- Structures 22013-22014 can be accessed using State Route 75/Suffield Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agricultural

Terrain

- Broad hill tops between structures 22013 and 22014

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

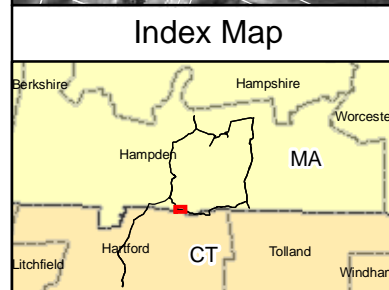
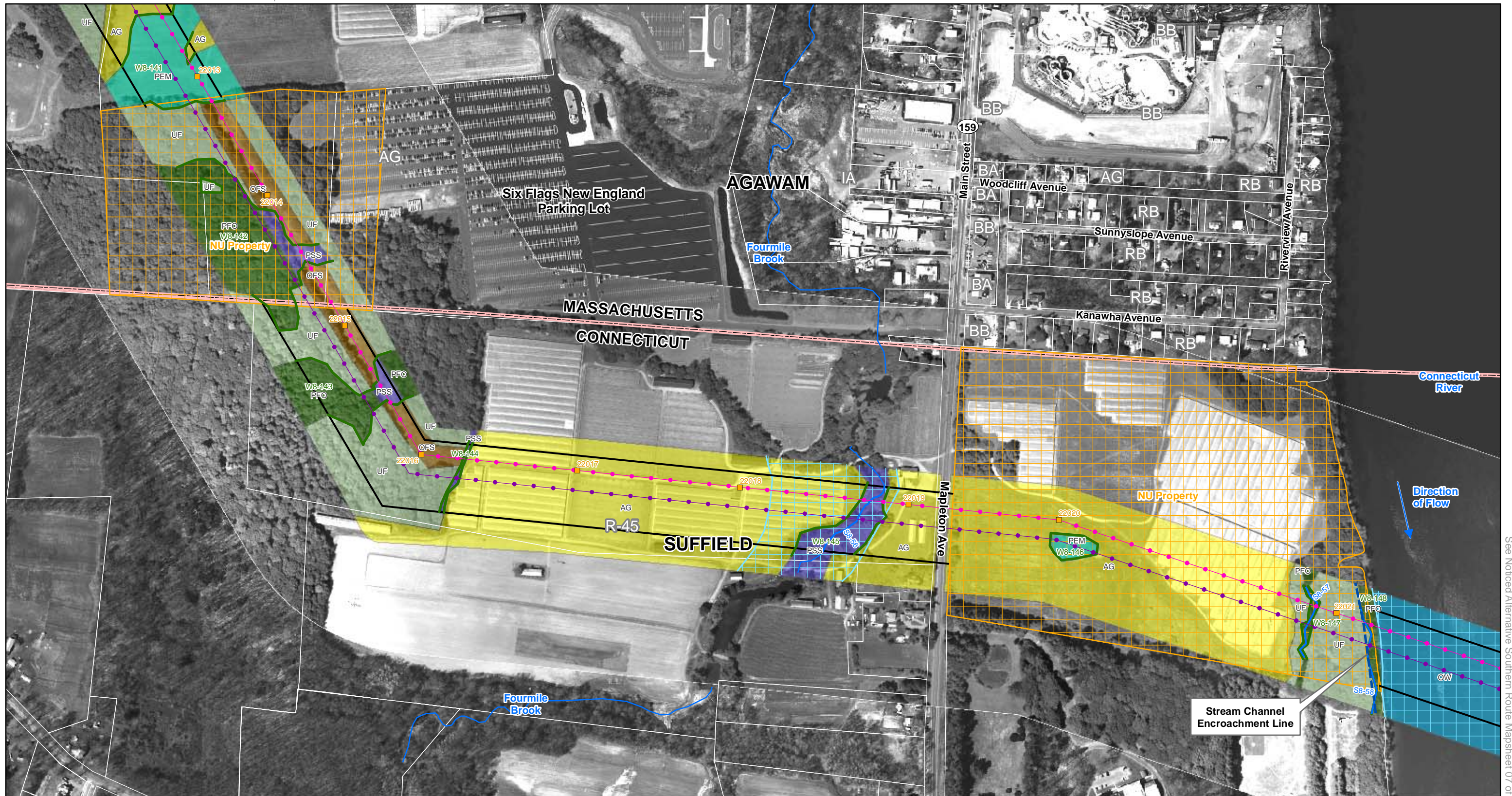
- 100 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 22013 and 22014

Road Crossings/Major Utility Crossings

- Mapleton Avenue between structures 22019 and 22020



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- 1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 06 of 20

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 22022 to 22028
Connecticut River to MA State Line
Town of Longmeadow, MA and Town of Enfield, CT**

AREA DESCRIPTION

Existing Land Use

- Conservation (Fanny Stebbins Memorial Wildlife Refuge managed by the Longmeadow Conservation Commission)
- Residential

Future Land Use

- Town of Longmeadow, MA
 - Zoning (current):
 - Agriculture (AG)
 - Residence A-1 (RA-1)
- Town of Enfield, CT
 - Zoning (current):
 - Residential 33 (R-33)
 - Business General (BG)

Natural Systems

- Raspberry Brook
- Connecticut River
- Fanny Stebbins Memorial Wildlife Refuge
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Forest and residential

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Forest adjacent to structures 22022-22023

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-148, W8-148A, W8-148B, W8-149 (Straddles State Line), W8-150 (Straddles State Line), W8-151(Straddles State Line), W8-152 (CT only)
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent Wetland, Open Water
- Stream Nos. S8-58A (Connecticut River), S8-59 (Ct only)

Potential Access

- Structures 22022-22023 can be accessed from Campania Road [in Enfield, CT]

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way)

Terrain

- Broad hill tops between structures 22022-22023

Existing Right-of-Way Width

- 300 feet between structures 22022-22023

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

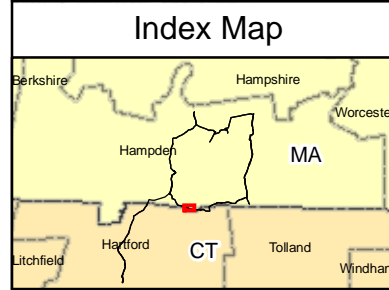
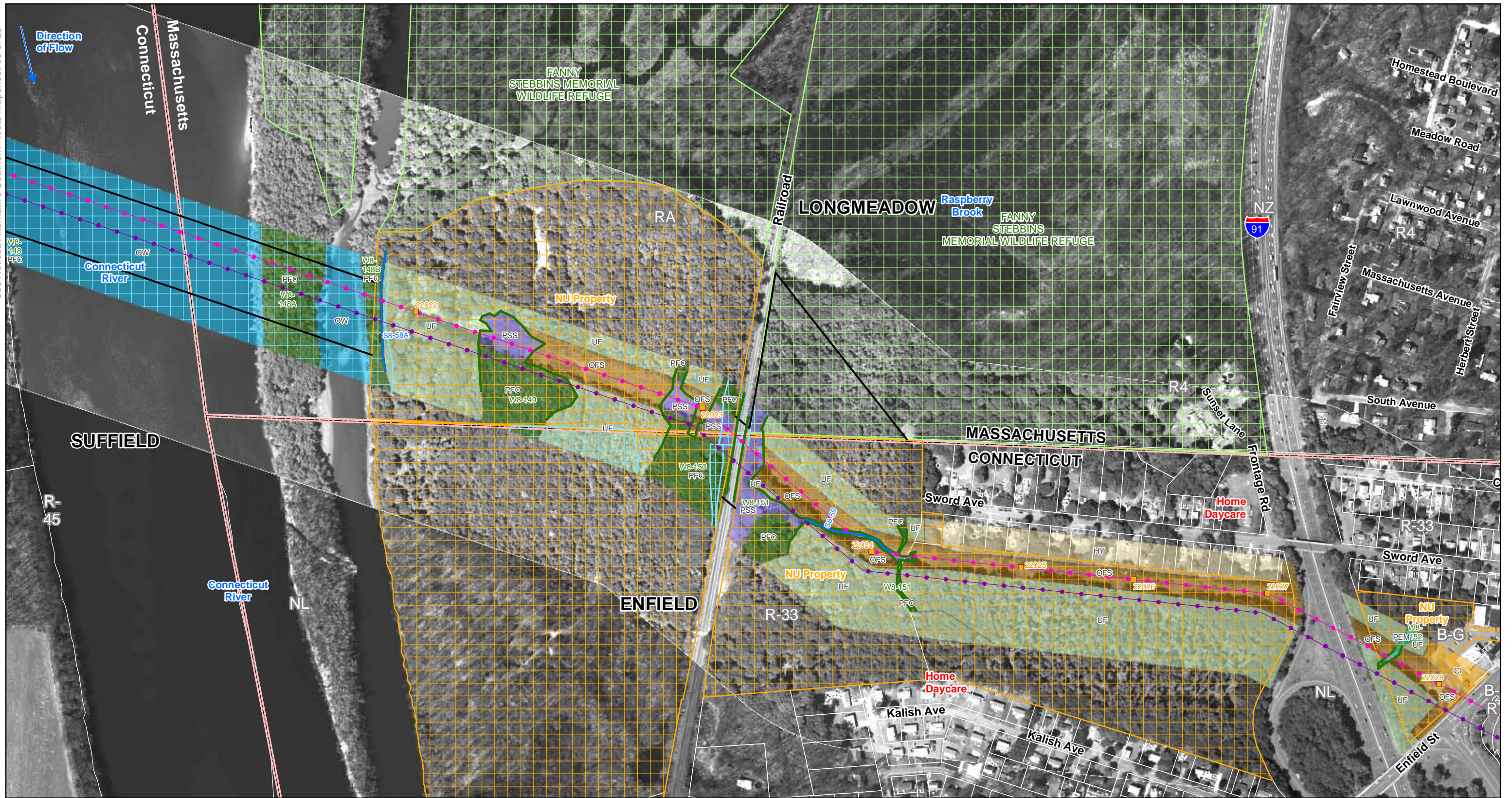
- 120 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 22022 and 22023

Road Crossings/Major Utility Crossings

- Railroad crossing between structures 22023 and 22024
- Interstate 91 between structures 22027 and 22028 [in Enfield, CT]
- Enfield Street between structures 22028 and 22029 [in Enfield, CT]



<ul style="list-style-type: none"> Right-of-Way (Existing) Right-of-Way (Expanded) 	<ul style="list-style-type: none"> Existing Structure Proposed Structure MA Protected Open Space Article 97 Lands Northeast Utilities Property 	<ul style="list-style-type: none"> 100 Year Flood Zone Property Line Town/State Boundary Wetland Boundary Watercourse Potential Access Road
<ul style="list-style-type: none"> Preferred Northern Route Noticed Alternative Southern Route 115-kV Improvements Existing 115-kV Line Existing 345-kV Line 	<ul style="list-style-type: none"> Emergent Wetland (PEM) Forested Wetland (PFO) Scrub - Shrub Wetland (PSS) Open Field-Shrub Land (OFS) Commerical/Industrial (CI) Upland Forest (UF) 	<ul style="list-style-type: none"> Agricultural (AG) Other (OT) Open Water (OW) House/Yard (HY)

<p>Land Use/Vegetative Cover Type Classes</p> <ul style="list-style-type: none"> Emergent Wetland (PEM) Forested Wetland (PFO) Scrub - Shrub Wetland (PSS) Open Field-Shrub Land (OFS) Commerical/Industrial (CI) Upland Forest (UF) 	<ul style="list-style-type: none"> Agricultural (AG) Other (OT) Open Water (OW) House/Yard (HY)
<p>Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery</p>	<p>1:4,800</p> <p>400 800 Feet</p>

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 07 of 20

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 8 of 20:

Noticed-Alternative Southern Route Existing Structure Locations 22054 to 54/46 Mayfield Drive to MA State Line Towns of Longmeadow and East Longmeadow, MA and Town of Enfield, CT

AREA DESCRIPTION

Existing Land Use

- Residential
- Conservation (Wolf Swamp Park & Conservation Area managed by the Town of Longmeadow)

Future Land Use

- Town of Longmeadow, MA
 - Zoning (current):
 - Residence A-1 (RA-1)
 - Residence A-2 (RA-2)
- Town of East Longmeadow, MA
 - Zoning (current):
 - Industrial Garden District (IGD)
- Town of Enfield, CT
 - Zoning (current):
 - Residential 33 (R-33)
 - Residential 44 (R-44)

Natural Systems

- Wolf Swamp Park and Conservation Area
- Jawbuck Brook Reservoir
- Shaker Pond
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, recreational and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Forest adjacent to structure 22061, and structures 54/47-54/46

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-153 (Straddles State Line), W8-154, and W8-152M, W8-152N and W8-152O (All CT only)
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Palustrine Emergent Wetland, Open Water

Potential Access

- Structures 22061, and 54/47-54/46 can be accessed from Wolf Swamp Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way)

Terrain

- Broad hill tops between structures 22061 and 54/46

Existing Right-of-Way Width

- 300 feet between structures 54/47 and 54/46

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 60 to 150 feet

Proposed Additional Cleared Right-of-Way Width

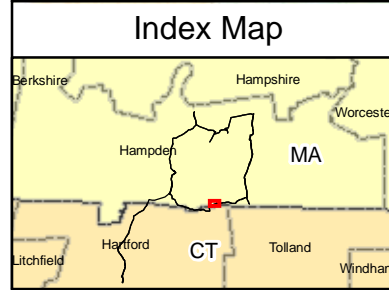
- 100 feet between structures 22054 and 54/46

Road Crossings/Major Utility Crossings

- Mayfield Drive between structures 22056 and 22057 [in Enfield, CT]



See Noticed Alternative Southern Route Mapsheet 09 of 20



- Electric Transmission Routes**
- Preferred Northern Route
 - Noticed Alternative Southern Route
 - 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line


- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road


- Land Use/Vegetative Cover Type Classes**
- | | |
|--|---|
| Emergent Wetland (PEM) | Agricultural (AG) |
| Forested Wetland (PFO) | Other (OT) |
| Scrub - Shrub Wetland (PSS) | Open Water (OW) |
| Open Field-Shrub Land (OFS) | House/Yard (HY) |
| Commercial/Industrial (CI) | Upland Forest (UF) |
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery



Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 08 of 20



Western Massachusetts Electric
 The Northeast Utilities System



Date: October 2008

MAPSHEET 9 of 20:

Noticed-Alternative Southern Route Existing Structure Locations 54/45 to 54/34 MA State Line to Shaker Road Town of East Longmeadow, MA and Towns of Enfield and Somers, CT

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Agricultural

Future Land Use

- Town of East Longmeadow, MA
 - Zoning (current):
 - Industrial Garden District (IGD)
 - Residential AA District (RAA)
 - Residential A District (RA)
- Town of Enfield, CT
 - Zoning (current):
 - Industrial 1 (I-1)
 - Residential 44 (R-44)
 - Residential 88 (R-88)
- Town of Somers, CT
 - Zoning (current):
 - Agriculture (AG)

Natural Systems

- Jawbuck Brook Reservoir
- Freshwater Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structure 54/43-54/42
- Agricultural adjacent to and between structures 54/43-54/42
- Forest adjacent to structures 54/45-54/44, and 54/42-54/34

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-154, W8-155, W8-156, W8-157, and W8-158
- Wetland Cover Types - Open Water, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland
- Stream No. S8-60 (Freshwater Brook)

Potential Access

- Structures 54/45-54/34 can be accessed from Shaker Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad, gentle slopes between structures 54/45 and 54/34

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

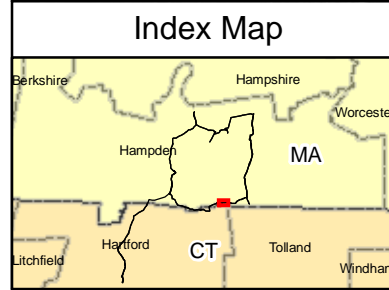
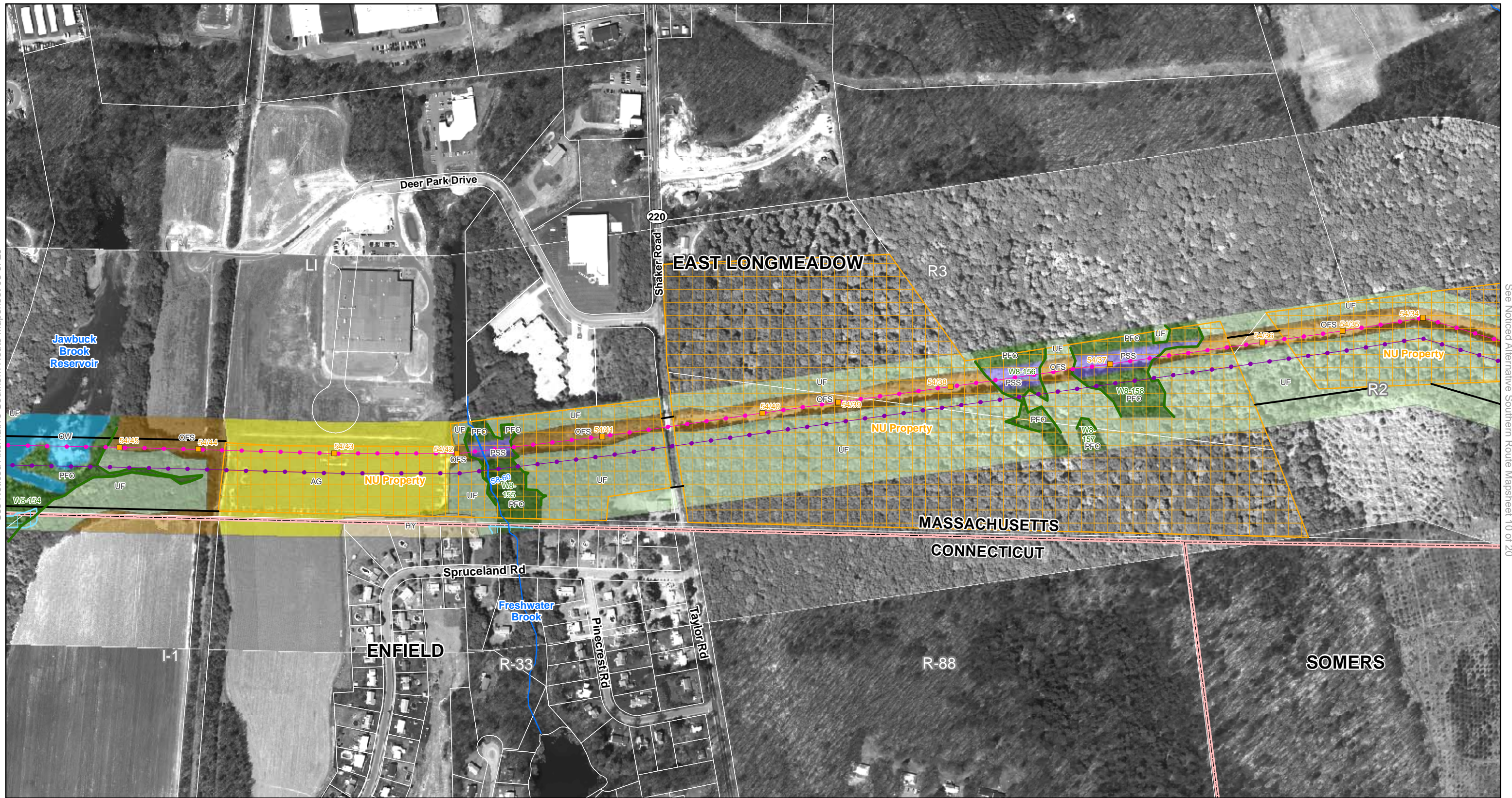
- 100 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 54/45 and 54/44, and between structures 54/42 and 54/34

Road Crossings/Major Utility Crossings

- Shaker/Taylor Road between structures 54/41 and 54/40
- Railroad Crossing (Abandoned) between structures 54/44 and 54/43



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Electric Transmission Routes**
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- 1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 09 of 20

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 10 of 20:

Noticed-Alternative Southern Route Existing Structure Locations 54/33 to 54/20 State Route 186/Prospect Street to Country Club Drive Town of East Longmeadow, MA and Town of Somers, CT

AREA DESCRIPTION

Existing Land Use

- Agricultural
- Residential

Future Land Use

- Town of East Longmeadow, MA
 - Zoning (current):
 - Residential AA District (RAA)
 - Residential A District (RA)
- Town of Somers, CT
 - Zoning (current):
 - Agriculture (AG)
 - Single-Family Development (SF)

Natural Systems

- State/Federal Jurisdictional Wetlands
- Mixed hardwood forests varying in size and age
- 100 year flood zone

Visual Character

- Residential and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 54/29-54/25
- Forest adjacent to structures 54/33-54/28, and 54/26-54/20

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-159, W8-160, W8-161, W8-162, and W8-163
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland
- Stream Nos. S8-61, S8-62, S8-63, and S8-64

Potential Access

- Structures 54/33-54/28 can be accessed from State Route 186/Prospect Street
- Structures 54/27-54/25 can be accessed from either South Brook Road or Country Club Drive
- Structures 54/24-54/20 can be accessed from Country Club Drive

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, rolling hills between existing structures

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

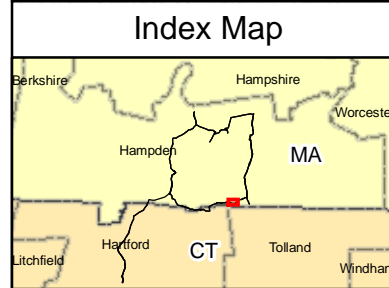
- 75 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 54/33 and 51/28, and between structures 54/26 and 54/20

Road Crossings/Major Utility Crossings

- Prospect Street between structures 54/28 and 54/27
- South Brook Road between structures 54/27 and 54/26
- Country Club Drive between structures 54/25 and 54/24



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
● Preferred Northern Route	■ MA Protected Open Space	— Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	— Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	— Watercourse
— Existing 115-kV Line		— Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 10 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 54/21 to 44096
State Route 83/Somers Road to Hampden Junction
Town of East Longmeadow, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Agricultural
- Conservation (Mill Road Conservation Area managed by the Town of East Longmeadow Conservation Commission)
- Recreational (Elmcrest Country Club)

Future Land Use

- Zoning (current):
 - Golf Recreation District (GD)
 - Residential AA District (RAA)
- Zoning (planned):
 - Planned Unit Residential District (PUR)

Natural Systems

- Watchaug Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Agricultural adjacent to and between structures 54/14 and 54/11, and at structure 44096 (Hampden Junction)
- Forest adjacent to structures 54/21-54/14,54/11- 44096 (Hampden Junction)

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-163, W8-164, W8-165, W8-166, W8-167, and W8-168
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Palustrine Emergent Wetland
- Stream Nos. S8-64, and S8-66 (Watchaug Brook)

Potential Access

- Structures 54/21-54/13 can be accessed from State Route 83/Somers Road
- Structures 54/12-44096 can be accessed from Meadow Brook Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), Agricultural

Terrain

- Broad, floodplains to rolling hills between structures 54/21 and 44096

Existing Right-of-Way Width

- 300 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

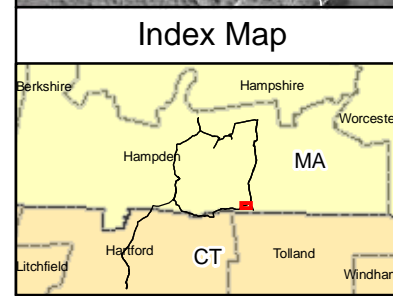
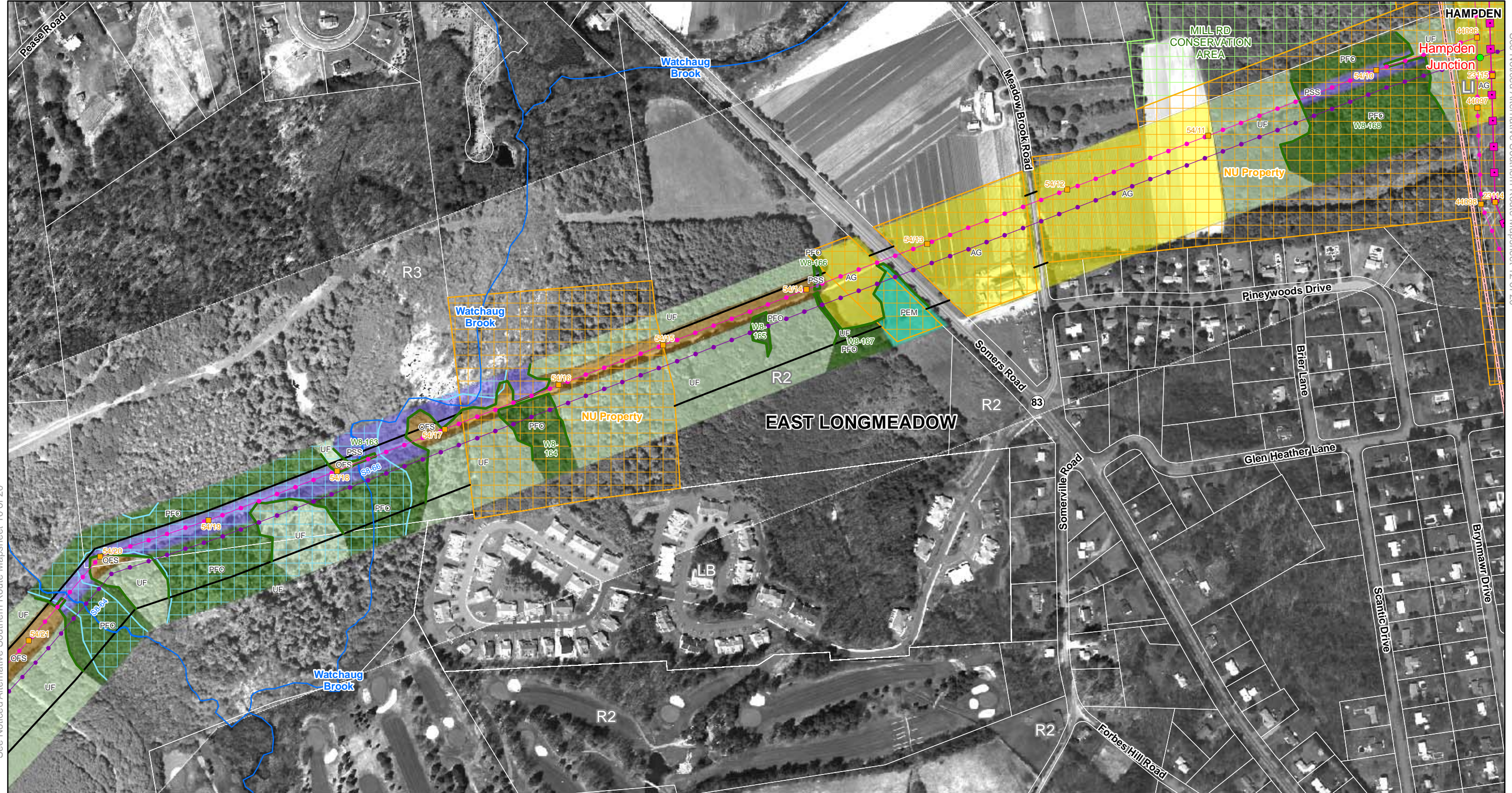
- 75 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 54/21 and 54/14, and 54/11 and 54/10

Road Crossings/Major Utility Crossings

- State Route 83/Somers Road between structures 54/14 and 54/13
- Meadow Brook Road between structures 54/13 and 54/12



— Right-of-Way (Existing)	■ Existing Structure	▨ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	▨ Property Line
● Preferred Northern Route	■ MA Protected Open Space	▨ Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	▨ Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	▨ Watercourse
— Existing 115-kV Line		▨ Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commerical/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 11 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 54/11 to 44087
Mill Road to East Longmeadow Road
Towns of Hampden and East Longmeadow, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Agricultural
- Conservation (Mill Road Conservation Area and Hampden Road Conservation Area managed by the Town of East Longmeadow Conservation Commission)

Future Land Use

- Town of East Longmeadow
 - Zoning (current):
 - Residential A District (RA)
- Town of Hampden
 - Zoning (current):
 - Residential R-6 (R6)
 - Residential R-4 (R4)
 - Limited Industrial (LI)

Natural Systems

- Watchaug Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44092-44090
- Agricultural adjacent to structures 54/11, and adjacent to and/or between structures 44096-44094
- Forest adjacent to structures 54/11-54/10, 44094-44090, and 44089-44087

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-168, W8-169, W8-170, W8-171, W8-172, W8-173, and W8-174
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Palustrine Emergent Wetland
- Stream Nos. S8-67 and S8-68 (Watchaug Brook)

Potential Access

- Structures 54/11-44095 can be accessed from Mill Road
- Structures 44094-44090 can be accessed from either Mill Road or East Longmeadow Road
- Structures 44089-44087 can be accessed from East Longmeadow Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad floodplains to rolling hills between structures 44096 and 44087

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

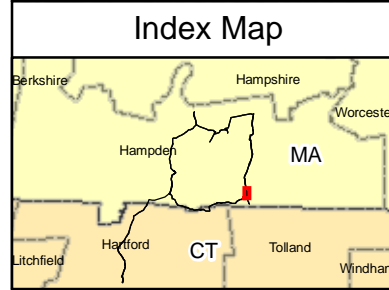
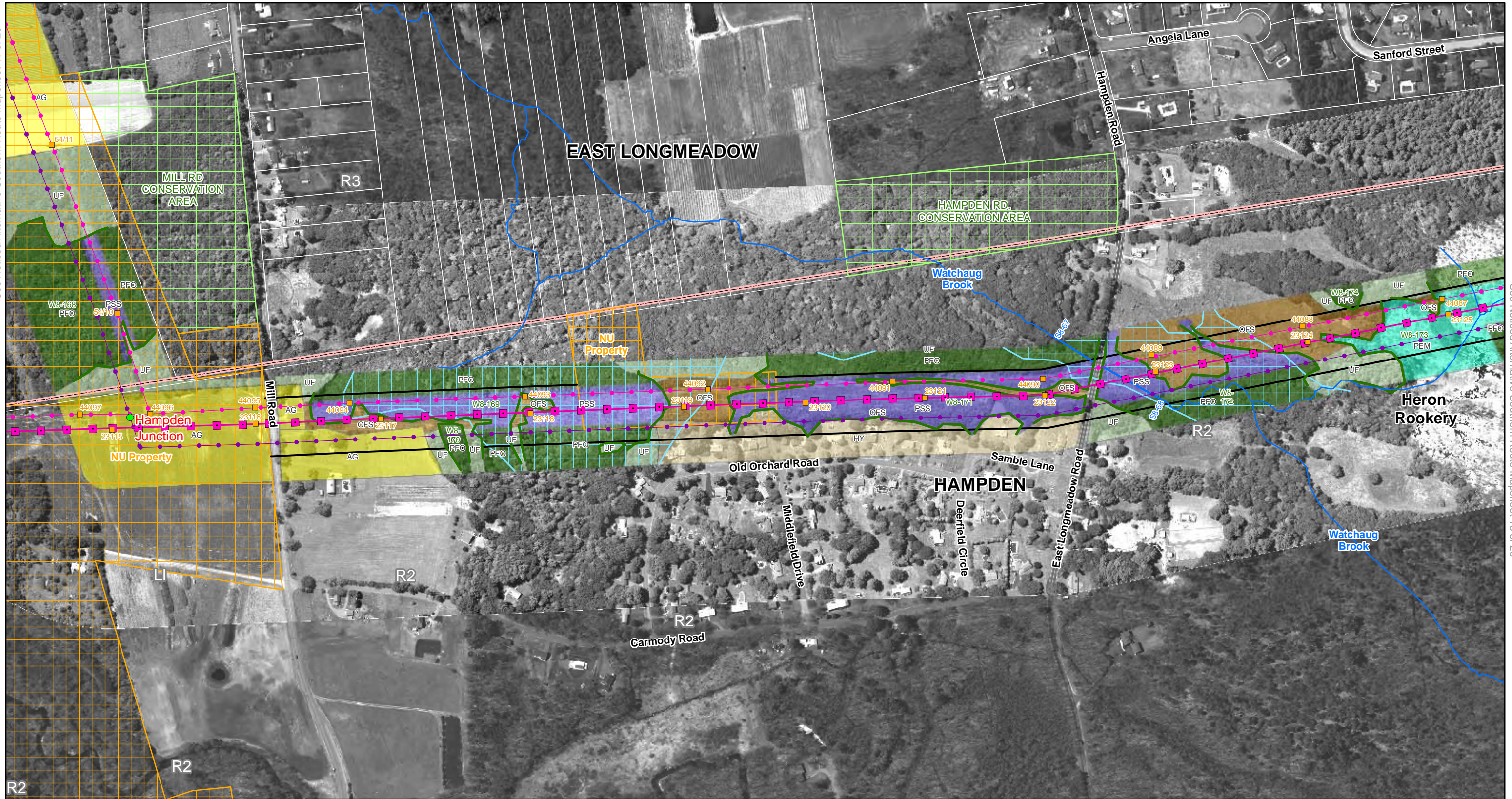
- 150 to 175 feet

Proposed Additional Cleared Right-of-Way Width

- 75 to 100 feet between structures 44094 and 44087

Road Crossings/Major Utility Crossings

- Mill Road between structures 44095 and 44094
- East Longmeadow Road between structures 44090 and 44089



— Right-of-Way (Existing)	■ Existing Structure	▨ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	▨ Property Line
Electric Transmission Routes	■ MA Protected Open Space	▨ Town/State Boundary
● Preferred Northern Route	■ Article 97 Lands	▨ Wetland Boundary
● Noticed Alternative Southern Route	■ Northeast Utilities Property	▨ Watercourse
▲ 115-kV Improvements		▨ Potential Access Road
— Existing 115-kV Line		
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 12 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44086 to 44077
Millbrook Drive to Allen Street
Towns of Hampden and East Longmeadow, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Conservation (Tanglewood Conservation Area managed by the Town of East Longmeadow Conservation Commission)

Future Land Use

- Town of East Longmeadow
 - Zoning (current):
 - Residential A District (RA)
- Town of Hampden
 - Zoning (current):
 - Residential R-6 (R6)
 - Residential R-4 (R4)
 - Recreational District (RD)

Natural Systems

- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44078-44077
- Forest adjacent to structures 44086-44077

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-173, W8-175, W8-176, and W8-177
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland

Potential Access

- Structures 44086-44077 can be accessed from Allen Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad lowlands and floodplains between structures 44086 and 44077

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

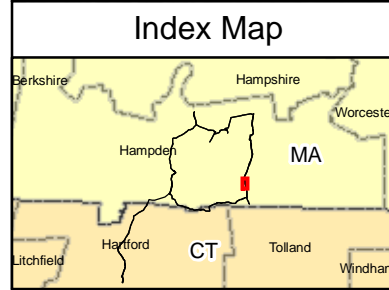
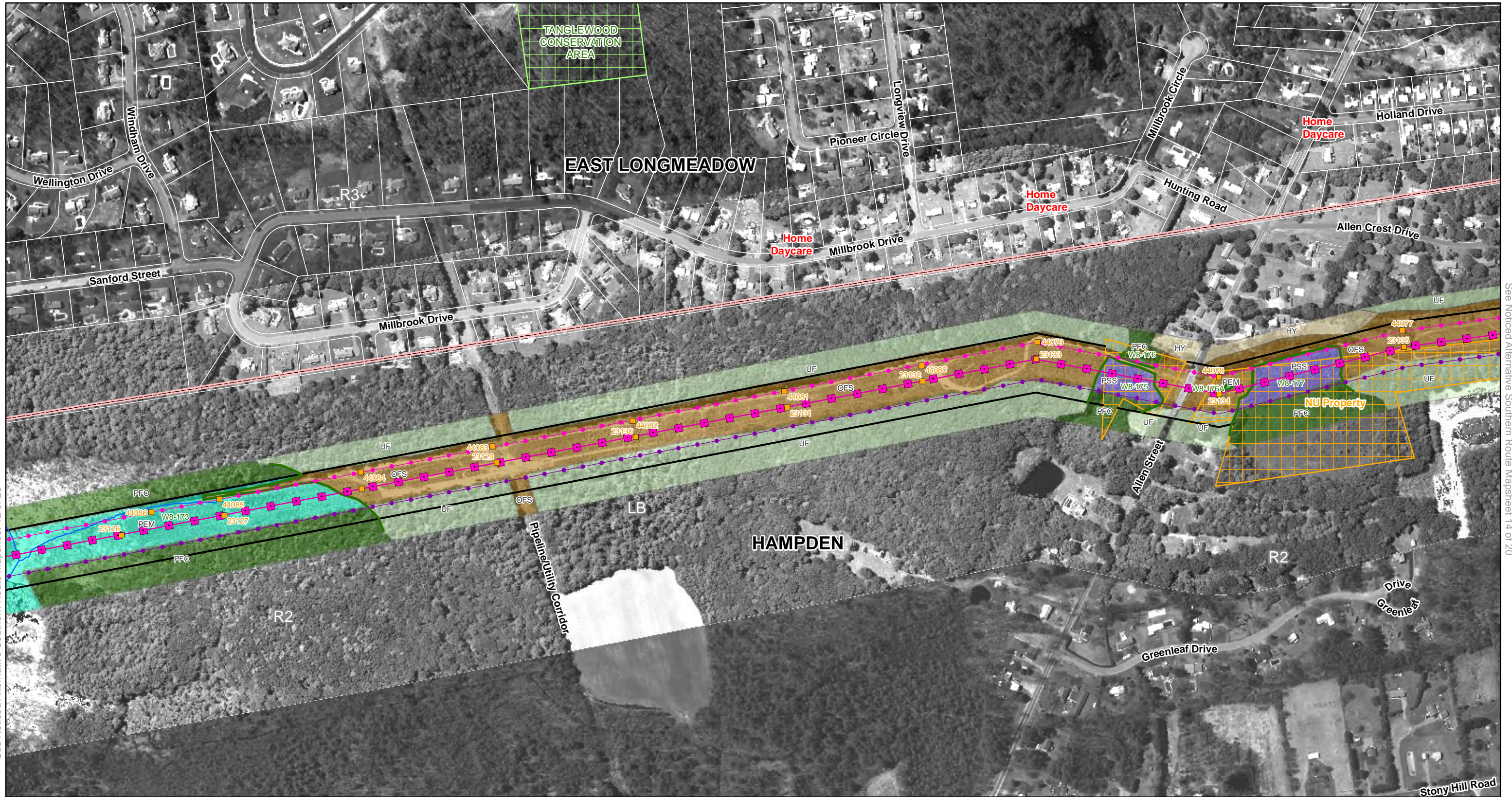
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44086 and 44077

Road Crossings/Major Utility Crossings

- Allen Street between structures 44079 and 44078
- Pipeline/Utility Corridor between structures 44083 and 44082



- Electric Transmission Routes**
- Right-of-Way (Existing)
 - Right-of-Way (Expanded)
 - Preferred Northern Route
 - Noticed Alternative Southern Route
 - ▲ 115-kV Improvements
 - Existing 115-kV Line
 - Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- Scale: 1:4,800
0 400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 13 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44076 to 44066
Allen Crest Drive to Soule Road
Towns of Hampden and Wilbraham, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Recreational
- Conservation (Ester Heffner Bird Sanctuary managed by a private organization)

Future Land Use

- Town of Hampden
 - Zoning (current):
 - Residential R-6 (R6)
 - Residential R-4 (R4)
 - Recreational District (RD)
- Town of Wilbraham
 - Zoning (current):
 - Residence District (R-26 and R-34)

Natural Systems

- South Branch Mill River
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44096-44067, and 44066
- Forested land adjacent to structures 44076-44066

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-178, W8-179, W8-180, W8-181, and W8-182
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland
- Stream Nos. S8-69 and S8-70 (South Branch Mill River).

Potential Access

- Structures 44076-44075 can be accessed from Allen Street (See Noticed-Alternative Southern Route Mapsheet 13 of 20)
- Structures 44074-44069 can be accessed from Stony Hill Road
- Structures 44068-44066 can be accessed from Soule Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad hill tops between structures 44076 and 44066

Existing Right-of-Way Width

- 250 feet between structures 44076 and 44066

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

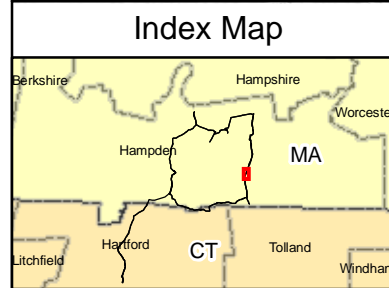
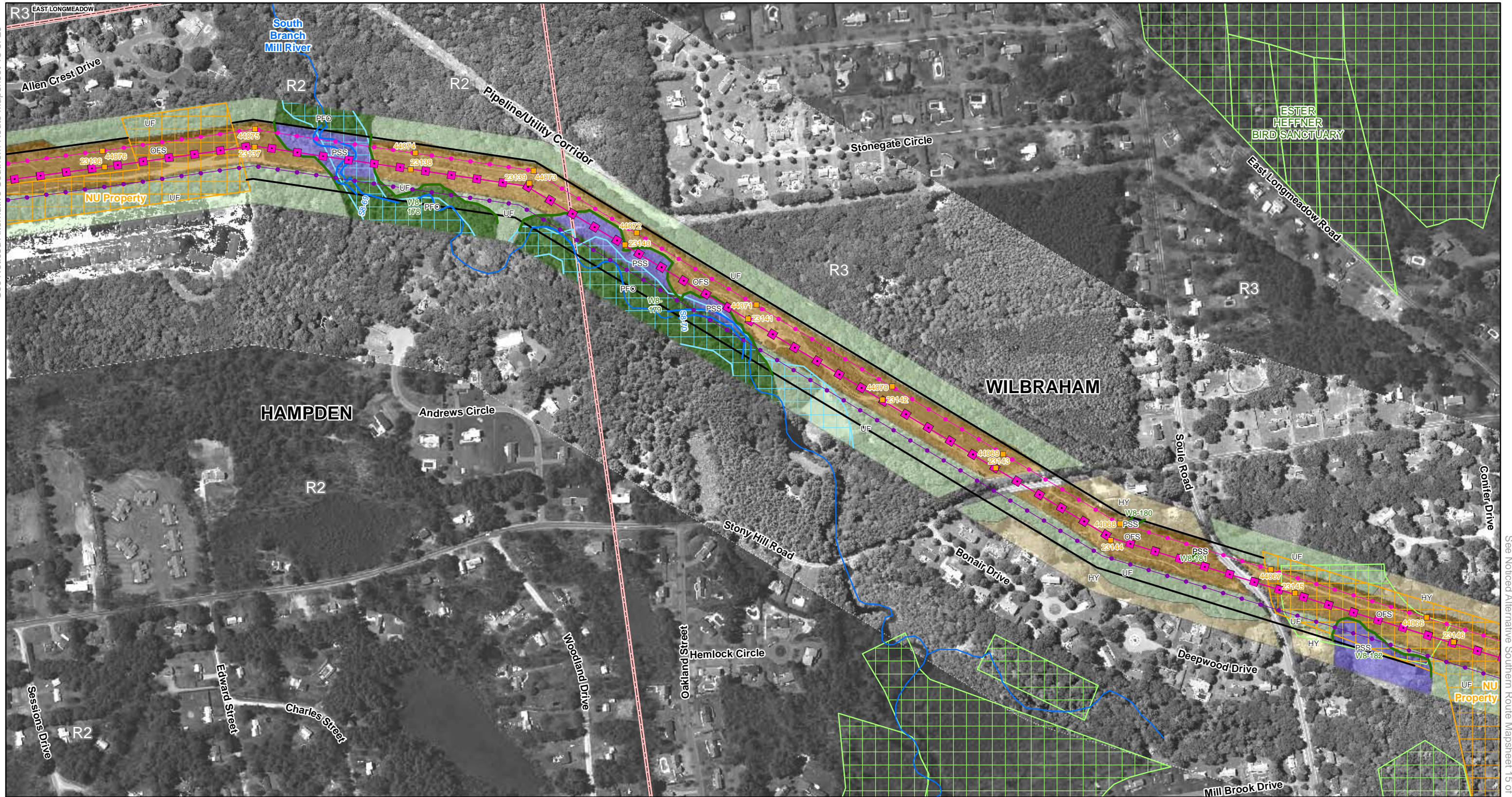
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44076 and 44066

Road Crossings/Major Utility Crossings

- Stony Hill Road between structures 44069 and 44068
- Soule Road between structures 44068 and 44067



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- 1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 14 of 20

Western Massachusetts Electric
 The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44065 to 44055
Conifer Drive to Tinkham Road
Town of Wilbraham, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Agricultural
- Recreational (Wilbraham Country Club)
- Conservation (Wilbraham Game Farm managed by the MA Department of Fish and Game)

Future Land Use

- Zoning (current):
 - Residence District (R-26 and R-34)

Natural Systems

- North Branch Mill River
- Wilbraham Game Farm
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44062-44061
- Forest adjacent to structures 44065-44063, and 44061-44055

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-183, W8-184, W8-185, W8-186, W8-187, W8-189, and W8-190
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Palustrine Emergent Wetland

Potential Access

- Structures 44065-44063 can be accessed from Soule Road (See Noticed-Alternative Southern Route Mapsheet 14 of 20)
- Structures 44062-44055 can be accessed from Tinkham Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard
-

Terrain

- Broad floodplains and hill tops between structures 44065 and 44055

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

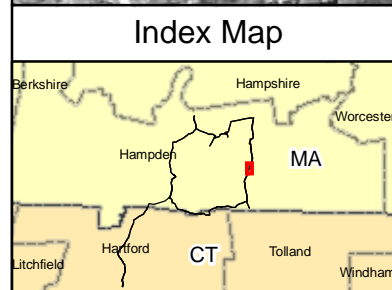
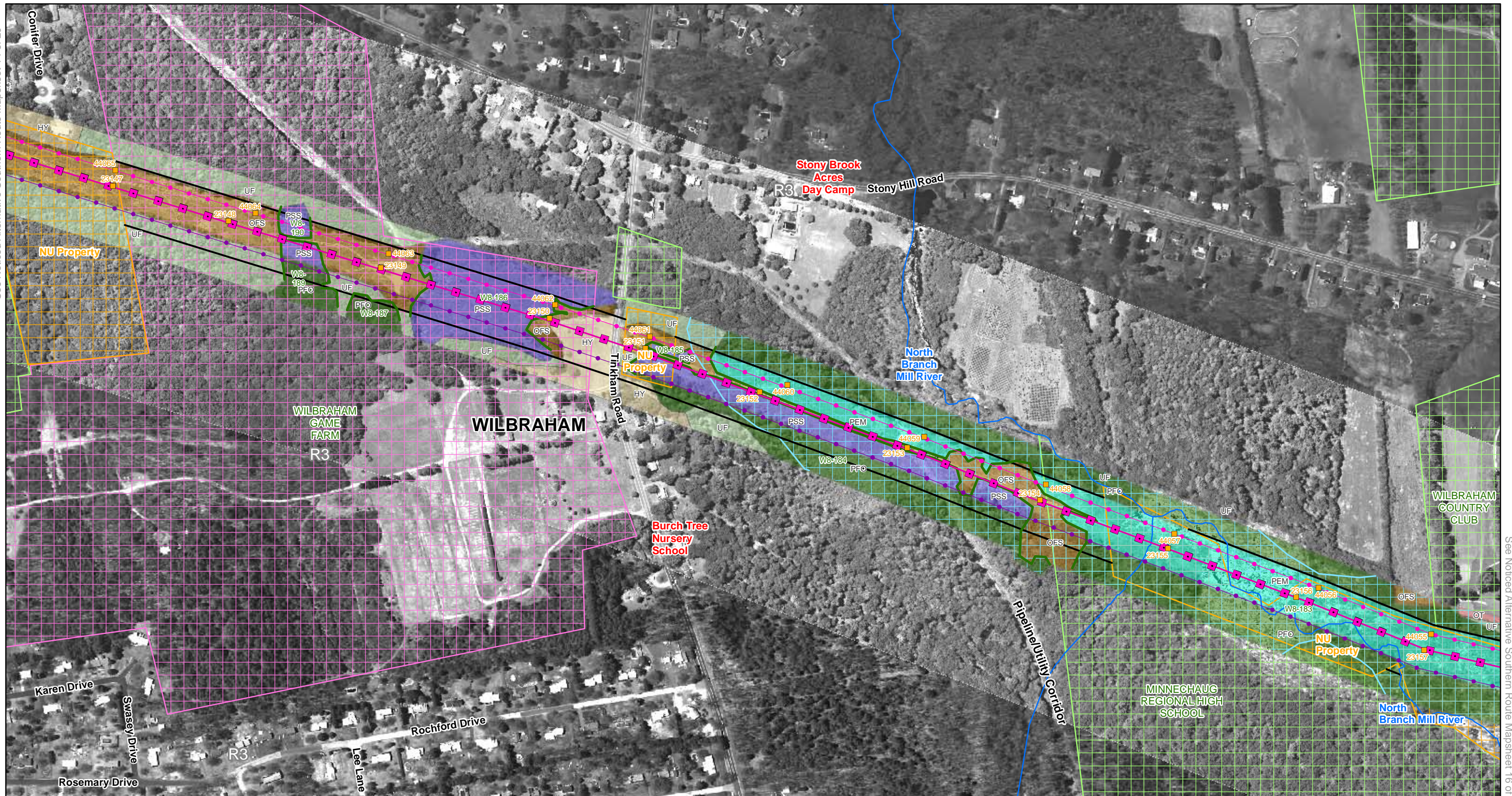
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44065 and 44055

Road Crossings/Major Utility Crossings

- Tinkham Road between structures 44062 and 44061
- Pipeline/Utility Corridor between structures 44059 and 44058



— Right-of-Way (Existing)	■ Existing Structure	■ 100 Year Flood Zone
— Right-of-Way (Expanded)	■ Proposed Structure	■ Property Line
● Preferred Northern Route	■ MA Protected Open Space	— Town/State Boundary
● Noticed Alternative Southern Route	■ Article 97 Lands	— Wetland Boundary
▲ 115-kV Improvements	■ Northeast Utilities Property	— Watercourse
— Existing 115-kV Line		— Potential Access Road
— Existing 345-kV Line		

Land Use/Vegetative Cover Type Classes	
■ Emergent Wetland (PEM)	■ Agricultural (AG)
■ Forested Wetland (PFO)	■ Other (OT)
■ Scrub - Shrub Wetland (PSS)	■ Open Water (OW)
■ Open Field-Shrub Land (OFS)	■ House/Yard (HY)
■ Commercial/Industrial (CI)	■ Upland Forest (UF)

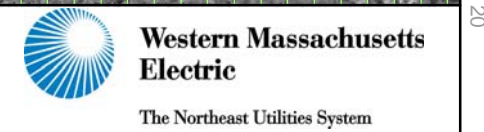
Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 15 of 20



Date: October 2008

MAPSHEET 16 of 20:

**Noticed-Alternative Southern Route
Existing Structure Locations 44054 to 44044
Country Club Road to Springfield Street
Town of Wilbraham, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Recreational (Wilbraham Country Club)
- Commercial/Industrial

Future Land Use

- Zoning (current):
 - Residence District (R-26 and R-34)

Natural Systems

- North Branch Mill River
- Cedar Swamp
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands
- 100 year flood zone

Visual Character

- Residential, recreational, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44050-44049
- Forest adjacent to structures 44054-44045

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-183, and W8-191
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland
- Stream No. S8-70A and S8-71 (North Branch Mill River)

Potential Access

- Structures 44054-44044 can be accessed from Springfield Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Other (Country Club)
-

Terrain

- Broad floodplains between existing structures

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

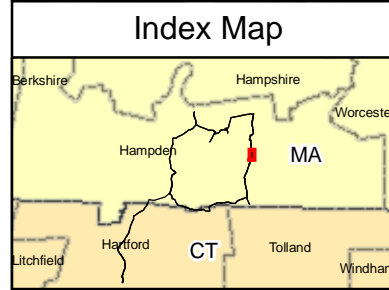
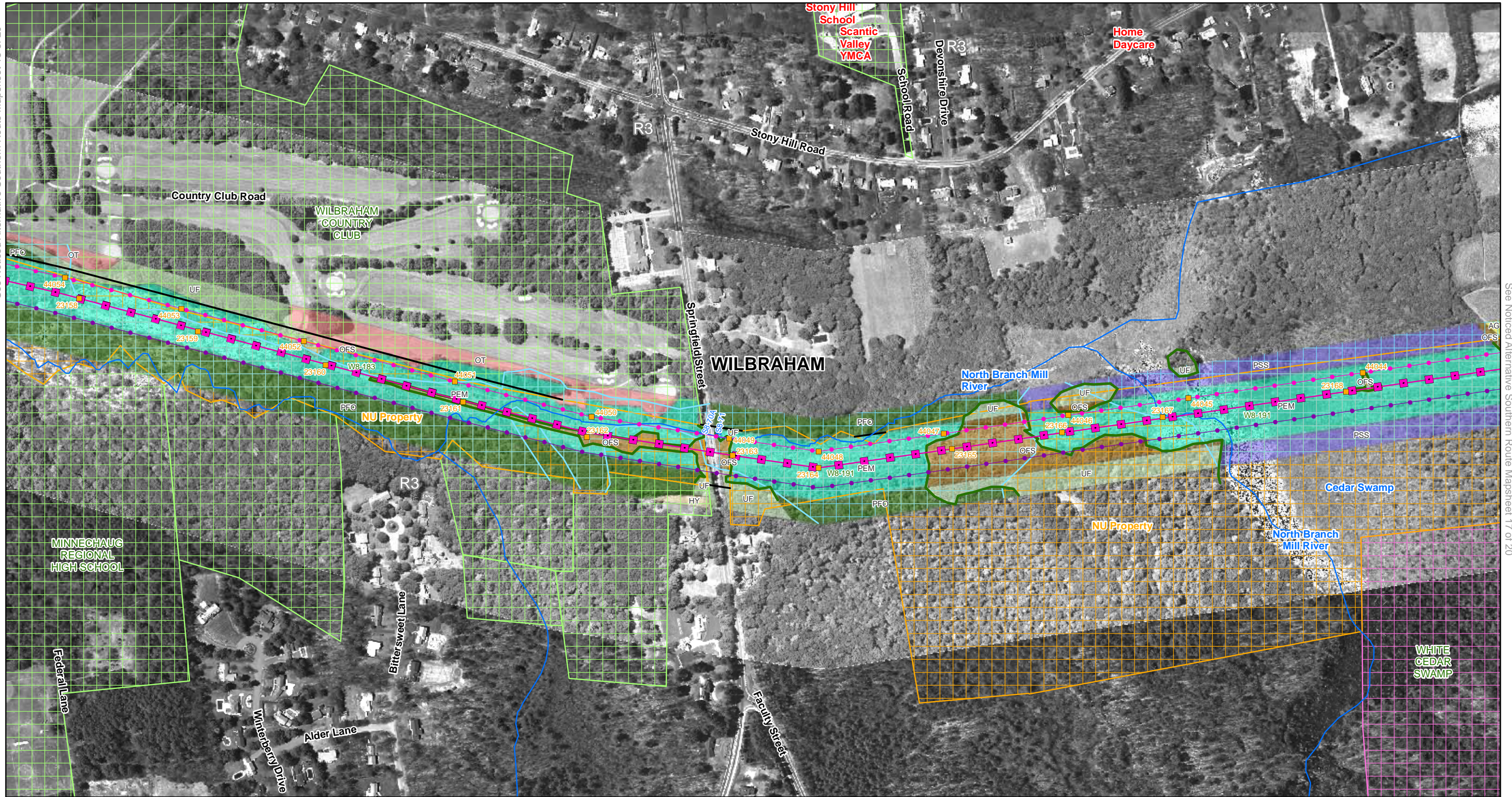
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44054 and 44044

Road Crossings/Major Utility Crossings

- Springfield Street between structures 44050 and 44049



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Electric Transmission Routes**
- Preferred Northern Route
- Noticed Alternative Southern Route
- 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commerical/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 16 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44043 to 44033
Springfield Street to U.S. Highway 20/Boston Road
Town of Wilbraham, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Agricultural

Future Land Use

- Zoning (current):
 - Residence District (R-15, R-26, and R-34)
 - Adult Care Facilities District (ACF)

Natural Systems

- Cedar Swamp and White Cedar Swamp
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, agricultural, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44035-44034
- Agricultural adjacent to and/or between structures 44043-44042, and 44039-44038
- Forest adjacent to structures 44041-44039, 44038-44035, and 44034-44033

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-191, W8-192, W8-193, and W8-194
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested wetland
- Stream No. S8-74A

Potential Access

- Structures 44043-44035 can be accessed from Washington Road
- Structures 44034-44033 can be accessed from Manchonis Road

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Agricultural

Terrain

- Broad hills and hill tops between existing structures

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

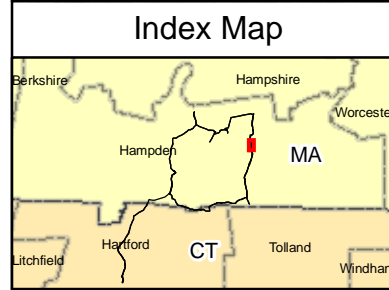
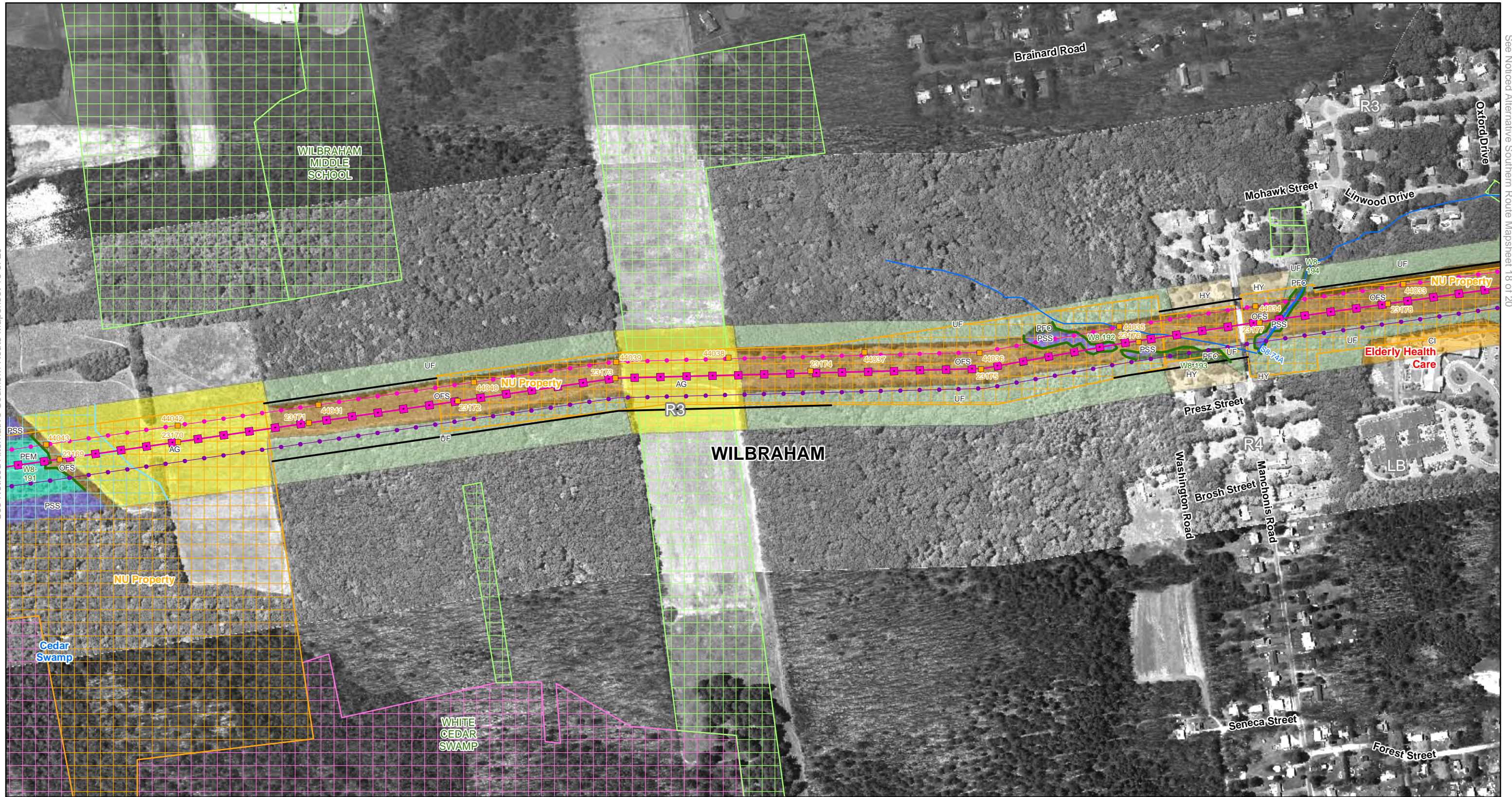
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44041 and 44039, and 44038 and 44033

Road Crossings/Major Utility Crossings

- Manchonis Road and Washington Road between structures 44035 and 44034



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project
 Noticed Alternative Southern Route
 Mapsheet 17 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

MAPSHEET 18 of 20:

Noticed-Alternative Southern Route Existing Structure Locations 44032 to 44019 U.S. Highway 20/Boston Road to Chapin Street Towns of Wilbraham and Ludlow, MA

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Recreational (Ludlow Country Club)

Future Land Use

- Town of Wilbraham
 - Zoning (current):
 - Residence (R-15 and R-26)
 - General Business District (GB)
 - Industrial-Professional Office Park-General Business (I-POP-GB)
- Town of Ludlow
 - Zoning (current):
 - Industrial A (IA)
 - Residence A (RA)
 - Residence A-1 (RA-1)
 - Agricultural (AG)

Natural Systems

- Chicopee River
- Minechoag Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, and recreational

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structures 44031, and 44023-44020
- Commercial/Industrial adjacent to structures 44032, and 44030, and adjacent to and between 44029-44028
- Recreational adjacent to and/or between structures 44026-44023
- Forest adjacent to structures 44032-44030, 44029-44028, 44027-44025, and 44023-44019

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-195, W8-196, W8-197, W8-198, W8-199, W8-200, W8-201, W8-202, and W8-203
- Wetland Cover Types - Palustrine Emergent Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Open Water
- Stream Nos. S8-74, S8-73, and S8-72 (Chicopee River)

Potential Access

- Structures 44032-44028 can be accessed from U.S. Highway 20/Boston Road
- Structures 44027-44019 can be accessed from Chapin Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard, Other (golf course)

Terrain

- Hilly between structures 44032 and 44027, and 44022 and 44019
- Flat and broad between structures 44027 and 44022

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

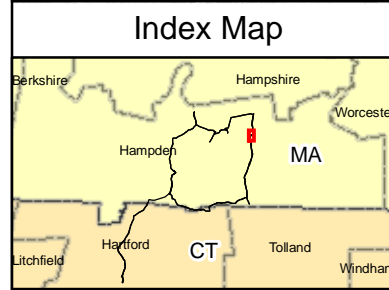
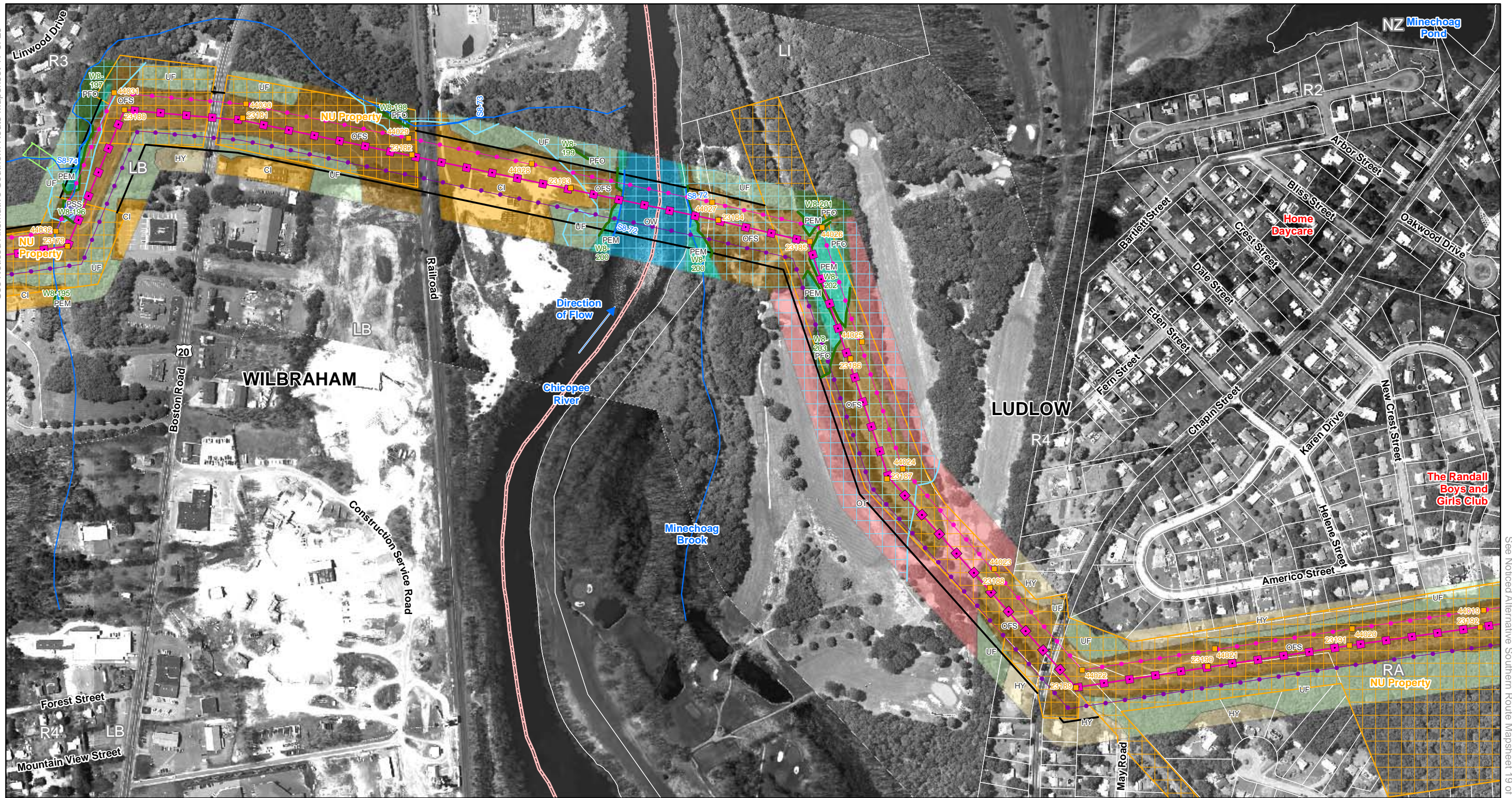
- 150 feet

Proposed Additional Cleared Right-of-Way Width

- 100 feet between structures 44032 and 44031, and between structures 44027 and 44019

Road Crossings/Major Utility Crossings

- U.S. Highway 20/Boston Road between structures 44031 and 44030
- Chapin Street between structures 44023 and 44022
- Railroad crossing between structures 44029 and 44028



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)
- Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery
- Scale: 1:4,800
- 0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 18 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44019 to 44009
East Street to Miller Street
Town of Ludlow, MA**

AREA DESCRIPTION

Existing Land Use

- Commercial/Industrial
- Residential

Future Land Use

- Zoning (current):
 - Industrial A (IA)
 - Residence A (RA)
 - Business B (BB)
 - Agricultural (AG)

Natural Systems

- Higher Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Commercial/Industrial, residential and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structure 44009
- Commercial/Industrial adjacent to structures 44015-44012
- Forest adjacent to structures 44019-44016, and 44014-44009

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-204, W8-205, W8-206, and W8-207
- Wetland Cover Types - Palustrine Scrub-Shrub Wetland, Palustrine Forested Wetland, Palustrine Emergent Wetland
- Stream Nos. S8-75, S8-76

Potential Access

- Structures 44019-44016 can be accessed from East Street
- Structure 44015 can be accessed from Eldorado Drive
- Structures 44015-44010 can be accessed from Carmelinas Circle
- Structure 44009 can be accessed from Miller Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Rolling hills between existing structures

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

- 175 feet

Proposed Additional Cleared Right-of-Way Width

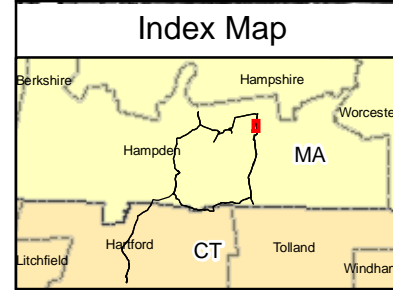
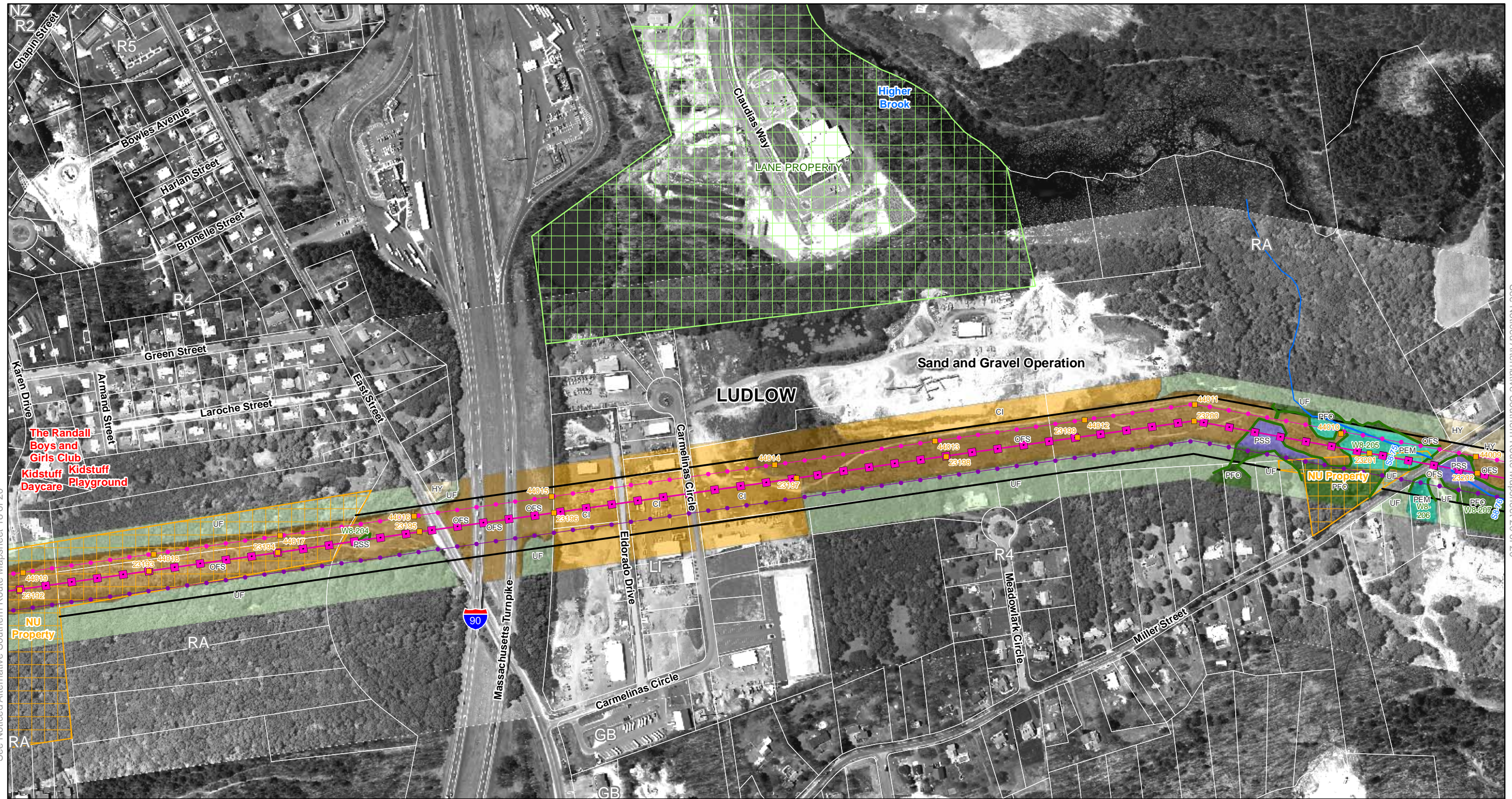
- 75 feet between structures 44019 and 44016 and between structures 44014 and 44009

Road Crossings/Major Utility Crossings

- East Street and Interstate 90/Massachusetts Turnpike between structures 44016 and 44015
- Eldorado Drive and Carmelinas Circle between structures 44015 and 44014
- Miller Street between structures 44010 and 44009

See Noticed Alternative Southern Route Mapsheet 18 of 20

See Noticed Alternative Southern Route Mapsheet 20 of 20



- Right-of-Way (Existing)
- Right-of-Way (Expanded)
- Preferred Northern Route
- Noticed Alternative Southern Route
- ▲ 115-kV Improvements
- Existing 115-kV Line
- Existing 345-kV Line

- Existing Structure
- Proposed Structure
- MA Protected Open Space
- Article 97 Lands
- Northeast Utilities Property

- 100 Year Flood Zone
- Property Line
- Town/State Boundary
- Wetland Boundary
- Watercourse
- Potential Access Road

- Land Use/Vegetative Cover Type Classes**
- Emergent Wetland (PEM)
 - Forested Wetland (PFO)
 - Scrub - Shrub Wetland (PSS)
 - Open Field-Shrub Land (OFS)
 - Commercial/Industrial (CI)
 - Agricultural (AG)
 - Other (OT)
 - Open Water (OW)
 - House/Yard (HY)
 - Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

1:4,800
400 800 Feet

Greater Springfield Reliability Project
Noticed Alternative Southern Route
 Mapsheet 19 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008

**Noticed-Alternative Southern Route
Existing Structure Locations 44009 to 44001
Miller Street to Ludlow Substation
Town of Ludlow, MA**

AREA DESCRIPTION

Existing Land Use

- Residential
- Commercial/Industrial
- Conservation (Facing Rock Wildlife Management Area managed by the MA Department of Fish and Game)

Future Land Use

- Zoning (current):
 - Industrial A (IA)
 - Residence A (RA)
 - Agricultural (AG)

Natural Systems

- Higher Brook
- Fuller Brook
- Mixed hardwood forests varying in size and age
- State/Federal Jurisdictional Wetlands

Visual Character

- Residential, commercial/industrial, and forest

RIGHT-OF-WAY DESCRIPTION

Adjacent Land Use

- Residential adjacent to structure 44009
- Forest adjacent to structures 44009-44002
- Commercial/Industrial adjacent to Ludlow Substation

Wetlands, Watercourses and Waterbodies

- Wetland Nos. W8-207, W8-208, W8-209, W8-210, W8-211, W8-212, W3-111, W3-115, and W3-110 (West of Ludlow Substation)
- Wetland Cover Types - Palustrine Forested Wetland, Palustrine Scrub-Shrub Wetland, Palustrine Emergent wetland
- Stream Nos. S3-40, S3-41 (Fuller Brook), S8-76, S8-77, S3-39A, and S3-39 (Higher Brook)

Potential Access

- Structures 44009-44002 can be accessed from either Miller Street (See Noticed-Alternative Southern Route Mapsheet 19 of 20) or Center Street
- Structures 44001, 1, 1B, 23210, and 49001-49002 can be accessed from Center Street

Right-of-Way Vegetation

- Open Field-Shrub Land, Upland and Wetland Forest (in un-cleared portion of right-of-way), House/Yard

Terrain

- Broad, gentle slopes between structures 44015 and 44014, and 44013 and 44009
- Moderate to steep slope between structures 44014 and 44013

Existing Right-of-Way Width

- 250 feet

Proposed Expansion of Right-of-Way Width

- 0 feet

Existing Cleared/Maintained Right-of-Way Width

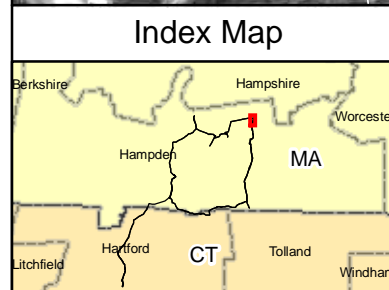
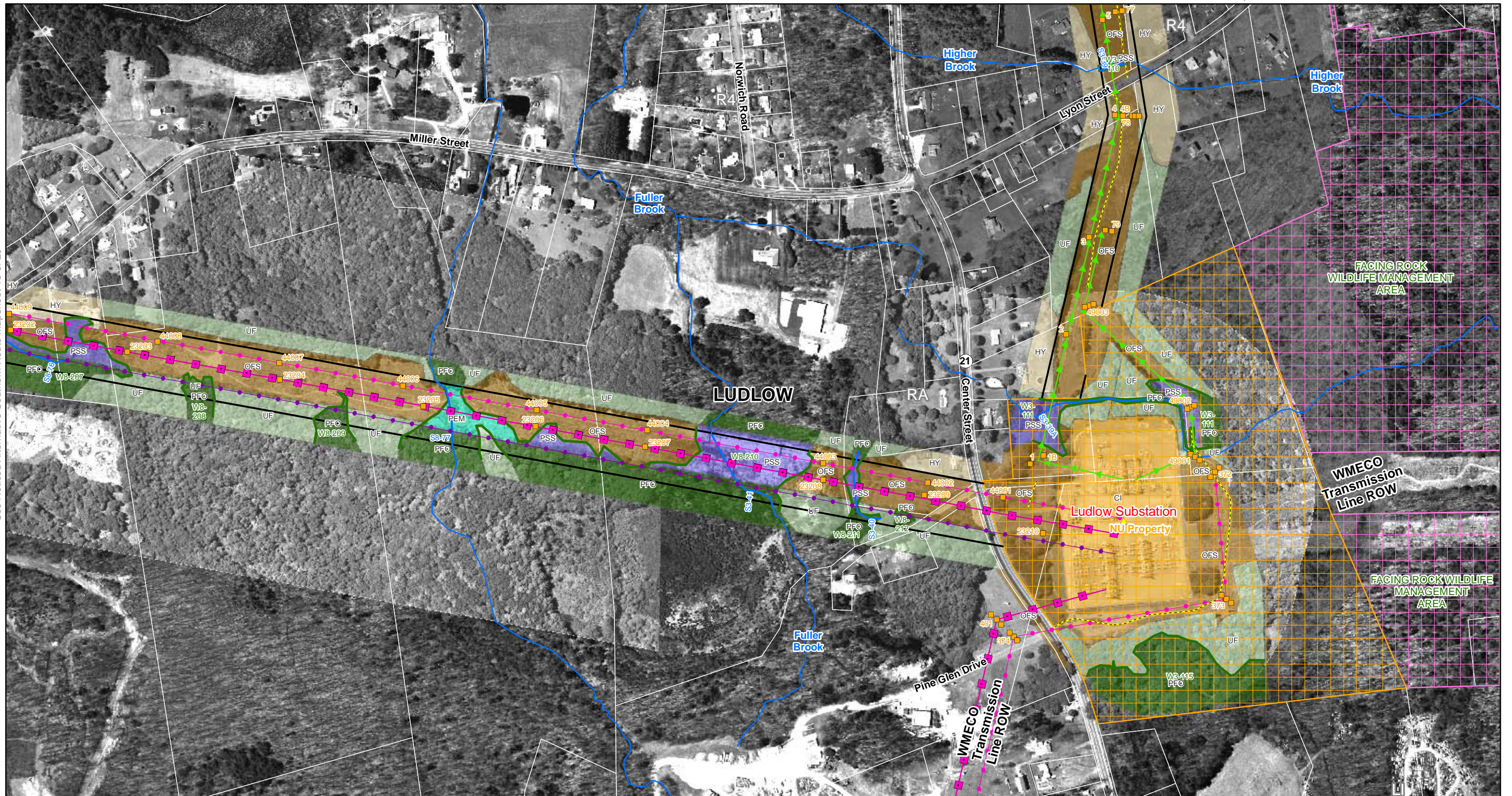
- 175 feet

Proposed Additional Cleared Right-of-Way Width

- 75 feet between structures 44009 and 44002

Road Crossings/Major Utility Crossings

- Center Street between structures 44002 and 44001



<ul style="list-style-type: none"> Right-of-Way (Existing) Right-of-Way (Expanded) 	<ul style="list-style-type: none"> Existing Structure Proposed Structure MA Protected Open Space Article 97 Lands Northeast Utilities Property 	<ul style="list-style-type: none"> 100 Year Flood Zone Property Line Town/State Boundary Wetland Boundary Watercourse Potential Access Road
<ul style="list-style-type: none"> Preferred Northern Route Noticed Alternative Southern Route 115-kV Improvements Existing 115-kV Line Existing 345-kV Line 	<ul style="list-style-type: none"> Emergent Wetland (PEM) Forested Wetland (PFO) Scrub - Shrub Wetland (PSS) Open Field-Shrub Land (OFS) Commerical/Industrial (CI) 	<ul style="list-style-type: none"> Agricultural (AG) Other (OT) Open Water (OW) House/Yard (HY) Upland Forest (UF)

Land Use/Vegetative Cover Type Classes

Emergent Wetland (PEM)	Agricultural (AG)
Forested Wetland (PFO)	Other (OT)
Scrub - Shrub Wetland (PSS)	Open Water (OW)
Open Field-Shrub Land (OFS)	House/Yard (HY)
Commerical/Industrial (CI)	Upland Forest (UF)

Data Source: ENSR Survey 2007; Opt. Geom. 2007 Imagery; 0 2005 MASS GIS Imagery

Scale: 1:4,800

0 400 800 Feet

Greater Springfield Reliability Project

Noticed Alternative Southern Route

Mapsheet 20 of 20

Western Massachusetts Electric
The Northeast Utilities System

ENSR | AECOM

Date: October 2008