

### **5.3 ENVIRONMENTAL COMPARISON OF PREFERRED NORTHERN AND NOTICED-ALTERNATIVE SOUTHERN ROUTES**

The following subsections describe the following existing environmental conditions along both the Preferred Northern and Noticed-Southern Alternative Routes: traffic/transportation; land use; noise; visual and aesthetics; wetlands and vernal pools; surface waters; drinking water supplies; oil and/or hazardous materials (OHM); electric and magnetic fields; tree clearing; and historic and archeological resources. In addition to describing these existing environmental characteristics, each subsection presents an analysis of the potential impacts that would occur to that environmental feature as a result of the development of the 345-kV facilities along the Preferred Northern Route and the Noticed-Alternative Southern Route, as well as the potential measures that WMECO has identified to mitigate such effects.

#### **5.3.1 Traffic/Transportation Infrastructure**

The existing environment and impacts and mitigation measures for the Preferred Northern Route and the Noticed-Alternative Southern Route are in the following subsections.

##### **5.3.1.1 Existing Environment**

The existing traffic/transportation environment for the Preferred Northern Route and the Noticed-Alternative Southern Route are described below.

###### **5.3.1.1.1 Preferred Northern Route**

A number of local, state, and federal roads are crossed by the existing ROW along the Preferred Northern Route. In addition, the route also follows the existing ROW across four railroads. Access along the Preferred Northern Route will be provided by existing access roads that WMECO has historically used to operate and maintain the existing 115-kV transmission lines that presently occupy the ROW.

The more notable roads traversed include Routes 187, 57, 147, 20, 5, 116, 141, 33, and Interstate Routes 90 (also known as the Massachusetts Turnpike or Mass Pike), 91, and 391. In Agawam, Route 187 crosses the ROW just north of the Massachusetts border, Route 57 crosses north of the Silver Substation, and Route 147 crosses the ROW south of the Agawam Substation. In West Springfield, Route 20 crosses the ROW north of the Westfield River, Route 5 crosses west of the Connecticut River, and Interstate 91 crosses the ROW north of Piper Substation. Route 141 crosses the ROW west of East Springfield Junction in Chicopee while Route 33 crosses east of East Springfield Junction, Route 116 crosses west of Interstate 391, and Interstate 391 crosses the ROW north of the Connecticut River, also in Chicopee.

Route 90 crosses the Preferred Northern Route five times in Chicopee in the following locations: north of the Connecticut River, east of Route 391, south of East Springfield Junction, north of the Shawinigan Switching Station, and east of the Shawinigan Switching Station. Tables 5-1 and 5-2 list these road and railway crossings, respectively.

**Table 5-1: Road Crossings Associated with the Preferred Northern Route 115-kV and 345-kV Facilities: CT/MA State Border to Ludlow**

Street	Route Number	Town
Oakridge Drive	Local	Agawam
Barry Street	Local	Agawam
Pine Street (Route 187)	State	Agawam
South Westfield Street	Local	Agawam
Shoemaker Lane	Local	Agawam
Moylan Drive	Local	Agawam
Silver Street	Local	Agawam
Tennis Road	Local	Agawam
Ramp-Tennis Road Westbound to Route 57 Eastbound	State	Agawam
Henry E. Bodurtha Highway (Rte 57)	State	Agawam
Mill Street	Local	Agawam
Ramp-Route 57 Westbound to Mill Street Westbound	State	Agawam
Cooper Street	Local	Agawam
Rowley Street	Local	Agawam
Shopping Court	Local	Agawam
Springfield Street (Route 147)	State	Agawam
Maple Street	Local	Agawam
High Street	Local	Agawam
Nelson Circle	Local	West Springfield
Ashley Street	Local	West Springfield
Westfield Street (Route 20)	Federal	West Springfield
Kings Highway	Local	West Springfield
Forris Street	Local	West Springfield
Cora Street	Local	West Springfield
Larchwood Street	Local	West Springfield
Clarence Street	Local	West Springfield
Morton Street	Local	West Springfield
Homestead Avenue	Local	West Springfield
Amostown Road	Local	West Springfield
Morgan Road	Local	West Springfield
Piper Road	Local	West Springfield
Brush Hill Avenue	Local	West Springfield
Interstate 91	Federal	West Springfield
Oglore Street	Local	West Springfield
Frederick Street	Local	West Springfield
Riverdale Street (Route 5)	Federal	West Springfield
Massachusetts Turnpike	Federal	Chicopee
Granger Street	Local	Chicopee
Wayfield Avenue	Local	Chicopee

Street	Route Number	Town
Trafton Street	Local	Chicopee
Gaspee Street	Local	Chicopee
Whitin Avenue	Local	Chicopee
Truro Street	Local	Chicopee
Bill Street	Local	Chicopee
Pajak Street	Local	Chicopee
Chester Street	Local	Chicopee
Chicopee Street (Route 116)	State	Chicopee
East Meadow Street	Local	Chicopee
Interstate 391	Federal	Chicopee
Massachusetts Turnpike	Federal	Chicopee
Sophia Street	Local	Chicopee
Pond Street	Local	Chicopee
Columba Street	Local	Chicopee
Granby Road	Local	Chicopee
Grattan Street (Route 141)	State	Chicopee
Montgomery Street	Local	Chicopee
Ramp-Montgomery Street to Route 90	Federal	Chicopee
Ramp-Route 90 to Montgomery Street	Federal	Chicopee
Ramp-Route 33 to Route 90	Federal	Chicopee
Ramp-Route 90 to Route 33/Montgomery Street	Federal	Chicopee
Memorial Drive (Route 33)	State	Chicopee
Sheridan Street	Local	Chicopee
Burnett Road	Local	Chicopee
Springfield Expressway	Local	Chicopee
Lombard Road	Local	Chicopee
Shawinigan Drive	Local	Chicopee
Shawinigan Drive	Local	Chicopee
Old Fuller Road Extension	Local	Chicopee
Lark Drive	Local	Chicopee
Dove Drive	Local	Chicopee
Wren Drive	Local	Chicopee
Pipit Drive	Local	Chicopee
Puffin Drive	Local	Chicopee
Quail Drive	Local	Chicopee
Cady Street	Local	Ludlow
West Street	Local	Ludlow
Keith Circle	Local	Ludlow
Holyoke Street	Local	Ludlow
Tank Farm Road	Local	Ludlow
Fuller Street	Local	Ludlow
Rood Street	Local	Ludlow
Munsing Street	Local	Ludlow
Booth Street	Local	Ludlow
Lyon Street	Local	Ludlow

**Table 5-2: Railroad Crossings Associated with the Preferred Northern Route 115-kV and 345-kV Facilities: CT/MA State Border to Ludlow**

Owner	Line	Town
B&M	Connecticut River Main Line	Chicopee
CSX	CSX Berkshire Sub	West Springfield

### 5.3.1.1.2 Noticed-Alternative Southern Route

The Noticed-Alternative Southern Route crosses various local, state, and federal roads, including Routes 75, 220, 186, 83, 20, and Interstate 90. Route 75 crosses the ROW south of South Agawam Junction in Agawam. In East Longmeadow, Route 220 crosses just north of the border between East Longmeadow and Enfield, Connecticut, Route 186 crosses just north of the border between East Longmeadow and Somers, Connecticut, and Route 83 crosses west of Hampden Junction. Route 20 crosses the ROW south of the Chicopee River and Interstate 90 crosses the ROW north of Chicopee River, both in Ludlow. In addition, there are three railroad crossings. A listing of roadways and railroad crossings associated with the Noticed-Alternative Southern Route is provided in Tables 5-3 and 5-4, below.

**Table 5-3: Road Crossings Along the Noticed-Alternative Southern Route**

Street	Road Type	Town
Shoemaker Lane	Local	Agawam
Suffield Street (Route 75)	State	Agawam
Shaker Road (Route 220)	State	East Longmeadow
Prospect Street (Route 186)	State	East Longmeadow
South Brook Road	Local	East Longmeadow
Country Club Drive	Local	East Longmeadow
Somers Road (Route 83)	State	East Longmeadow
Meadow Brook Road	Local	East Longmeadow
Mill Road	Local	Hampden
East Longmeadow Road	Local	Hampden
Allen Street	Local	Hampden
Stony Hill Road	Local	Wilbraham
Soule Road	Local	Wilbraham
Tinkham Road	Local	Wilbraham
Springfield Street	Local	Wilbraham
Washington Road	Local	Wilbraham
Manchonis Road	Local	Wilbraham
Boston Road (Route 20)	Federal	Wilbraham
Chapin Street	Local	Ludlow
East Street	Local	Ludlow
Massachusetts Turnpike	Federal	Ludlow
Eldorado Drive	Local	Ludlow
Carmelinas Circle	Local	Ludlow
Miller Street	Local	Ludlow
Center Street (Route 21)	State	Ludlow

**Table 5-4: Railroad Crossings Along the Noticed-Alternative Southern Route**

Owner	Line	Town
AMTRAK	Hartford & New Haven	Ludlow
CSX	CSX Boston Sub	Wilbraham

### 5.3.1.2 Impacts and Mitigation

The impacts and mitigation for traffic/transportation for the Preferred Northern Route and the Noticed-Alternative Southern Route are listed below.

#### 5.3.1.2.1 Preferred Northern Route and Related Facilities

Because the planned transmission lines along the Preferred Northern Route will span roadways, the installation and operation of the Project will not affect the normal use of the transportation infrastructure. Certain, highly localized and short-term traffic congestion may occur on roads during construction, as a result of the movement of construction equipment, materials, and vehicles to and from work sites. However, any such effects will be temporary and will be mitigated by the use of flagmen to direct traffic.

In addition, signs identifying construction work zones will be posted, in accordance with specific requirements.

#### **5.3.1.2.2 Noticed-Alternative Southern Route**

Because the planned transmission lines along the Noticed-Alternative Southern Route will span roadways, the installation and operation of the Project will not affect the normal use of the transportation infrastructure. Certain, highly localized and short-term traffic congestion may occur on roads during construction, as a result of the movement of construction equipment, materials, and vehicles to and from work sites. However, any such effects will be temporary and appropriate flagmen and signs will be posted, as applicable.

#### **5.3.1.2.3 Comparison of Traffic Impacts**

While the Preferred Northern Route encompasses a higher density of roads and railways than the Noticed-Alternative Southern Route, the installation and operation of the overhead transmission line facilities will not affect the normal use of the transportation infrastructure within the GSRP area regardless of which route is chosen. The well-established public road network in the Project area will afford ready access for construction vehicles and equipment to most work sites. Further, the access roads that exist within the existing transmission ROWs, which may require temporary improvements, are expected to be used to perform most construction activities, along with other roads that may be identified during subsequent Project planning efforts. Therefore, the routes are roughly comparable.

#### **5.3.1.2.4 Mitigation Measures**

No transportation infrastructure mitigation measures are expected to be needed for the GSRP, with the exception of the installation of gravel (or equivalent) track pads at the entry and exit points between public roads and the off-road utility line ROWs, and the posting of appropriate construction zone signs/use of flag persons to direct traffic, as needed, near the transmission line crossings.

The use of gravel track pads will minimize the amount of soils and other debris that may be tracked onto public roads from the construction equipment movements between the ROW and the local transportation network. In addition, in the vicinity of ROW entrance/exit points onto public roads, the roads will be periodically swept to remove soil that may be tracked through the gravel pads.

Further, WMECO would employ local police to direct traffic at construction work sites along roads, as needed, and would erect appropriate traffic signs to indicate the presence of construction work zones. In addition, WMECO would develop an access and traffic control plan for the construction contractor(s); the objective of this plan would be to define requirements for traffic controls, consistent with the specifications of the highway departments with jurisdiction over each road, and to provide for the safe ingress and egress to the ROWs for construction equipment and other vehicles.

### 5.3.2 Land Use

The existing environment and impacts and mitigation measures for the Preferred Northern Route and the Noticed-Alternative Southern Route are in the following subsections.

#### 5.3.2.1 Existing Environment

The existing land use for the Preferred Northern Route and the Noticed-Alternative Southern Route are summarized below.

##### 5.3.2.1.1 Preferred Northern Route

Lands along the existing Preferred Northern Route are characterized by a variety of uses and developments, including residential, commercial/industrial, open space, agricultural, recreation<sup>2</sup>, and transportation (e.g., highway and railroad corridors). Agricultural and open space uses are more predominant along the southern portion of the route, and the density of urban/suburban development near the ROW generally increases from south to north. The Preferred Northern Route encompasses both rural and urban areas, which are characterized by a variety of vegetative communities. The typical upland vegetative communities found in the Project area include:

- **Old Field/Shrubland.** This habitat type includes the existing maintained ROW, as well as abandoned fields, natural shrublands, and early successional forests. WMECO conducts vegetation maintenance along the existing overhead transmission line ROWs in accordance with WMECO's Operation & Maintenance Plans to assure that non-compatible plants (i.e., species that mature into trees) do not interfere with the reliability of the transmission lines and that maintenance and emergency crews have ready access to existing structures.
- **Mature Mixed Upland Forest.** This forest type includes mature mixed deciduous/coniferous forests in upland areas. Mature mixed forests consist typically of tree species common to the

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<sup>2</sup> The Oak Ridge Golf Course and Robinson State Park – both in Agawam, are the principal recreational areas the Preferred Northern Route ROW crosses through.