

Agawam and West Springfield, and then would continue in an easterly direction through Chicopee and Ludlow to Ludlow Substation (approximately 16.8 miles).

The Connecticut portion of the Preferred Northern Route would traverse from CL&P's North Bloomfield Substation in Bloomfield, Connecticut through the towns of Bloomfield, East Granby and Suffield northerly to the Connecticut/Massachusetts state border (approximately 12.0 miles). This new 345-kV line would primarily be within the boundaries of an established overhead line ROW, next to existing transmission lines which require re-building for upgrades.

### **1.6.3.2 Noticed-Alternative Southern Route**

The Massachusetts portion of the Noticed-Alternative Southern Route for the 345-kV transmission line between the Agawam and Ludlow Substations would begin and end at the same Massachusetts substation locations as the Preferred Northern Route. They would also share a common route segment between the South Agawam Junction and the Agawam Substation. However, the Noticed-Alternative Southern Route would traverse due south from the Ludlow Substation, along an existing route where one overhead 345-kV transmission line and one 115-kV transmission line now exists through the municipalities of Ludlow, Wilbraham and Hampden (approximately 10.8 miles). At Hampden Junction, the Noticed-Alternative Southern Route would leave this existing transmission line route and proceed in a westerly direction on an existing route where one overhead 115-kV transmission line now exists through East Longmeadow to the Connecticut border with Longmeadow, where the route would turn south and continue into Enfield, Connecticut. Continuing on the existing 115-kV line's route, this Connecticut portion of the Noticed-Alternative Southern Route would then travel in a westerly direction through northern Enfield, approach the border again and cross for a short distance into Longmeadow, Massachusetts. It would then proceed west across the Connecticut River into and through the northeastern portion of Suffield, Connecticut for another short distance until crossing into Massachusetts again and proceeding to South Agawam Junction before turning north for several miles to Agawam Substation. The route segment from Hampden Junction to South Agawam Junction is approximately 11.5 miles.

The 345-kV transmission lines would interconnect with the 115-kV transmission system through new transformation and switchyard equipment to be installed at the expanded Agawam Substation. The Noticed-Alternative Southern Route would be the same as the Preferred Northern Route from CL&P's North Bloomfield Substation to WMECO's Agawam Substation. Two new 345-kV line segments would occupy a widened ROW along with two re-built 115-kV circuits between Agawam Substation and South Agawam Junction.

If the Massachusetts Noticed-Alternative Southern Route is selected by the Siting Board, CL&P would need to seek approval from the Connecticut Siting Council for the approximately 5.4 miles of the new 345-kV line that would have to be constructed in Enfield and Suffield, Connecticut, as described above. This Noticed-Alternative Southern Route would use the existing ROWs described above where a 115-kV line now exists, including a ROW that roughly parallels the Massachusetts/Connecticut state border, for the short distance described, in the towns of Enfield and Suffield. Connecticut regulations do not require a noticed-alternative line route, but the Connecticut Siting Council may nonetheless examine variations to a proposed line route. The following maps, Figures 1-3 and 1-4 illustrate the Preferred Northern and Noticed-Alternative Southern Routes for the 345-kV overhead transmission line facilities, including the portion of the Noticed-Alternative Southern Route that would be in Connecticut.

Exhibit 1.2 contains USGS Maps of the Preferred Northern Route and the Noticed-Alternative Southern Route for the proposed 345-kV transmission lines, with a scale of 1 inch equals 24,000 feet.<sup>5</sup>

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<sup>5</sup> Exhibit 1.2 also shows alternative 115-kV underground line routes which are discussed in detail in Sections 6 and 7 below.

Figure 1-3: Preferred Northern Route

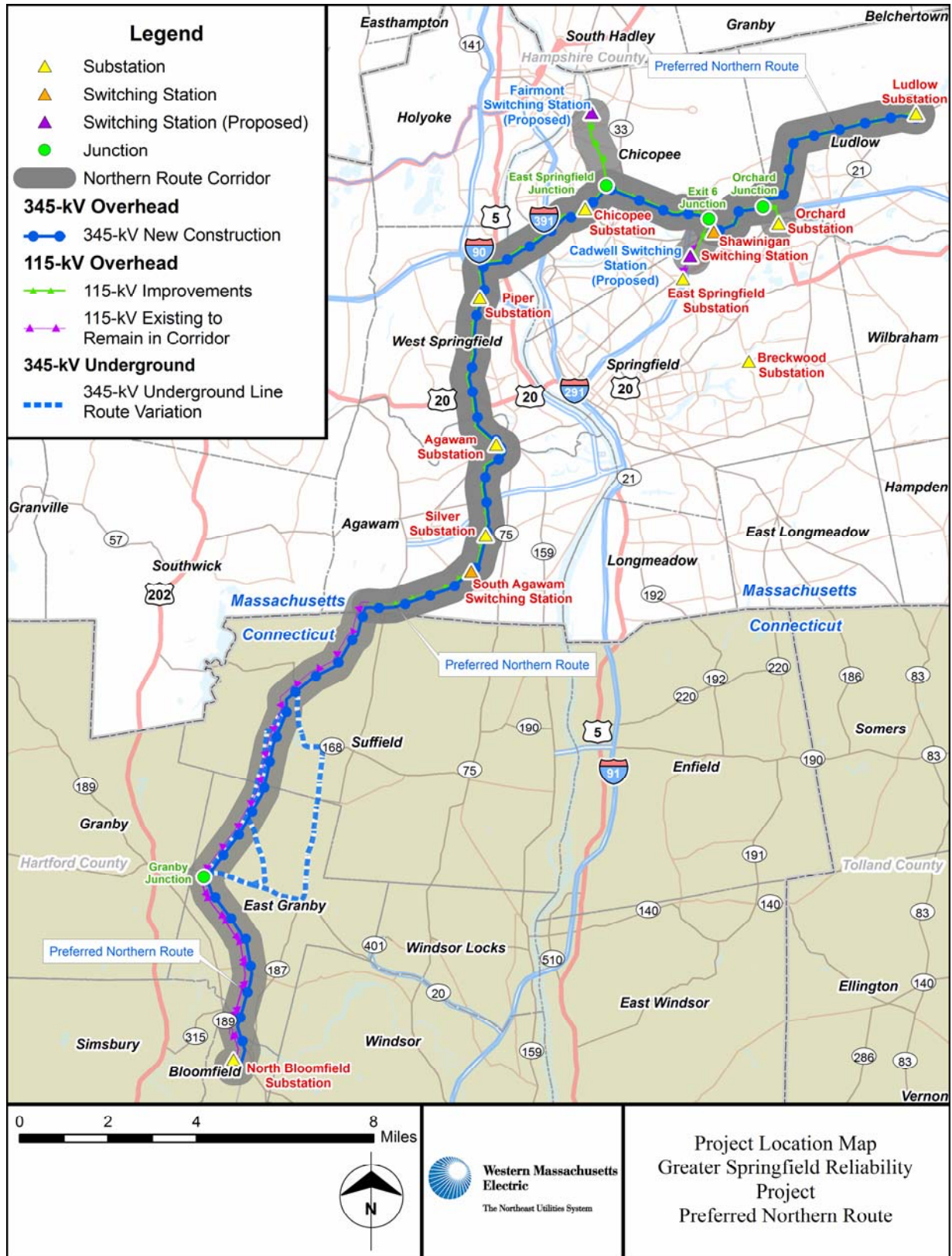
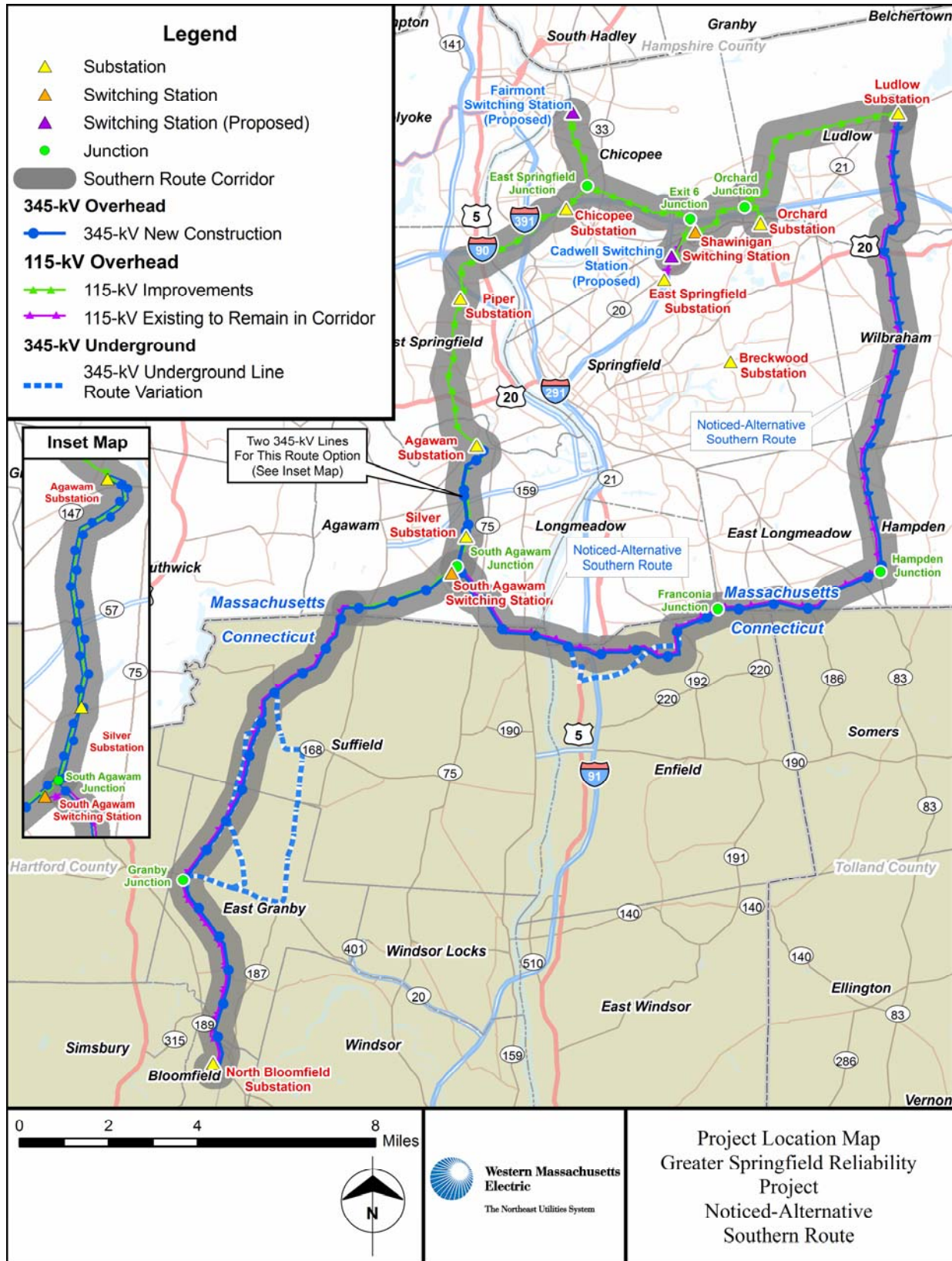


Figure 1-4: Noticed-Alternative Southern Route





lines either, because the proposed scope is re-conductoring only. In this regard, a majority of the existing line structures between Orchard Substation and Orchard Junction will not be replaced.

### **1.6.2 WMECO's Route Selection Methodology**

For the Project, WMECO applied an established set of route selection objectives for transmission lines, which are detailed in Section 4.4. Due to the availability of existing overhead transmission line corridors and the huge cost differential between overhead and underground line construction, WMECO focused on maximizing the potential use of existing overhead line corridors for the upgrade replacements of overhead lines. WMECO identified potential routes for the Project and evaluated them in accordance with the requirements of the Siting Board, i.e., to demonstrate the examination of a reasonable range of practical alternatives by establishing and applying a reasonable set of criteria for identifying and evaluating alternatives in a manner that ensures that no clearly superior alternative route has been overlooked or eliminated. Criteria used by WMECO are detailed in Sections 4.6 and 6.5 and include environmental, social, engineering, reliability, and economic factors.

### **1.6.3 North Bloomfield Substation to Ludlow Substation Preferred Northern and Noticed-Alternative Southern Routes**

The Massachusetts portion of the GSRP will include new 345-kV lines to be constructed between the Connecticut/Massachusetts border in Agawam, Massachusetts to WMECO's Agawam Substation and from there to WMECO's Ludlow Substation in Ludlow, Massachusetts. As part of the process of identifying a preferred route for this part of the Project, WMECO and CL&P evaluated a number of alternative routes or alignments for the transmission lines. In accordance with EFSB requirements, WMECO has designated one of these routes for the Agawam to Ludlow 345-kV line as the Preferred Northern Route and one as the Noticed-Alternative Southern Route.

#### **1.6.3.1 Preferred Northern Route**

Along WMECO's Preferred Northern Route for the Project, a new 345-kV transmission line would traverse from the Connecticut/Massachusetts border along existing routes where an overhead 115-kV double-circuit transmission line now exists, in a northerly direction to the Agawam Substation (approximately 6.0 miles). Upon reaching the Agawam Substation in Agawam, Massachusetts, the 345-kV transmission line would interconnect to the 115-kV transmission system through new transformation and switchyard equipment to be installed at the expanded Agawam Substation. From the Agawam Substation, a second 345-kV transmission line would traverse in a northeasterly direction through