4.6.2 Description of Potential Routes

For the 345-kV overhead line, each of two alternate Agawam to Ludlow route options, located on existing ROWs, together with the North Bloomfield to Agawam line segment, would establish the required North Bloomfield-Agawam-Ludlow 345-kV connection. Although the majority of these two routes differ geographically, each route segment between North Bloomfield Substation and the Connecticut/Massachusetts border and from the border to Agawam Substation would follow the same existing overhead transmission line ROW, passing by the South Agawam Switching Station en-route.

4.6.2.1 The Northern Route

The Northern Route option includes Segments 1, 2A and 3 as shown on Figure 4-6. The Northern Route can be further subdivided into segments between substations and switching stations as shown in Table 4-2. Additional ROW needed and proposed circuit configurations are also set forth in Table 4-2. Segment 2A is included to differentiate potential ROW expansion differences between the two route options between the South Agawam Switching Station and Agawam Substation. The Northern Route would require one 345-kV line constructed on one set of structures. The Northern Route for the Massachusetts portion of the GSRP consists of approximately 23 miles of 345-kV lines to be constructed between the Connecticut/Massachusetts border in Agawam, Massachusetts and WMECO's Ludlow Substation in Ludlow, Massachusetts, passing adjacent to the Piper and Chicopee Substations and the Shawinigan Switching Station. The 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 miles). Upon reaching the Agawam Substation, 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, the 345-kV transmission line would traverse in a northeasterly direction through Agawam and West Springfield, and then would continue in an easterly direction through Chicopee and Ludlow to Ludlow Substation. The Northern Route is shown in Figure 4-7. Photographs taken along the Northern Route are set forth in Exhibit 4.1.

Figure 4-7: Northern Route

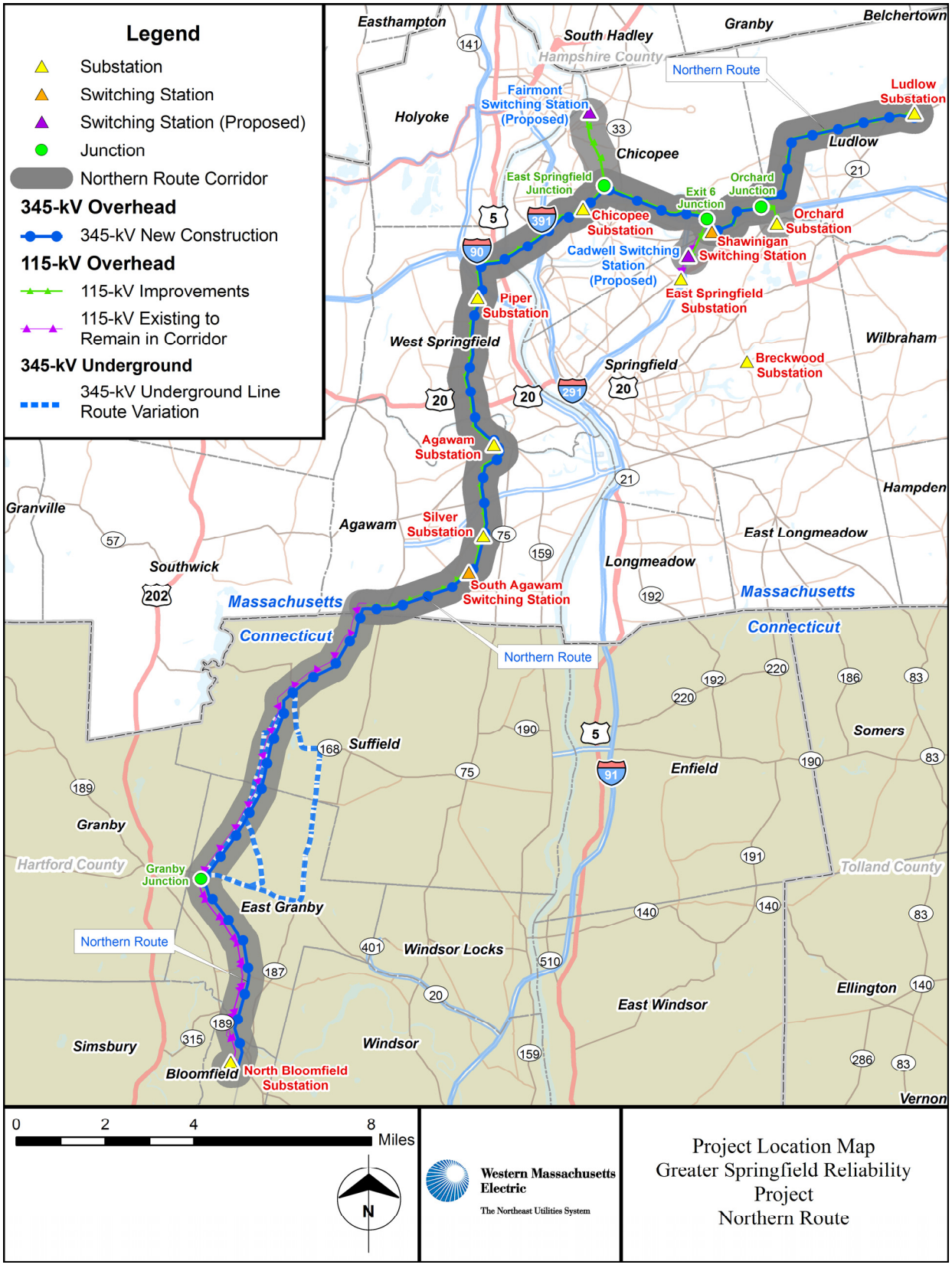

Table 4-2: Right-of-Way Segment Summary of the Northern Route with Proposed Segment Circuits

Town	From	To	Mileage (Miles)	Existing ROW Width (Feet)	Proposed ROW Width (Feet)	Additional ROW Width Needed(Feet)	Proposed Circuit Configuration[1]
Agawam	CT/MA Border	Structure 2249	0.2	300	300	0	345
Agawam	Structure 2249	Structure 2252	0.3	300	300	0	345 / 115
Agawam	Structure 2252	South Agawam Switching Station	2.3	100	110	10	345 / 115
Agawam	South Agawam Switching Station	Agawam Substation	0.9	300	300	0	345 / 115 & 115
			0.5	100	135	35	345 / 115 & 115
			1.9	150	150	0	345 / 115 & 115
Agawam, West Springfield	Agawam Substation	Piper Substation	3.6	150	150	0	345 / 115 & 115
West Springfield, Chicopee	Piper Substation	Chicopee Substation	3.5	150	150	0	345 / 115 & 115
Chicopee	Chicopee Substation	East Springfield Junction	0.7	150	150	0	345 / 115 & 115
Chicopee	East Springfield Junction	Exit 6 Junction	1.4	100	125	25	345 / 115 & 115
			1.0	150	150	0	345 / 115 & 115
Chicopee	Exit 6 Junction	Shawinigan Switching Station	0.3	160	160	0	345 / 115 & 115
Chicopee, Ludlow	Shawinigan Switching Station	Orchard Junction	1.4	200	200	0	345 / 115 & 115 / 115
Ludlow	Orchard Junction	Ludlow Substation	4.8	160	160	0	345 / 115 & 115 / 115
Chicopee	East Springfield Junction	Fairmont Switching Station	1.7	150	150	0	115 & 115 / 115 & 115
Chicopee, Springfield	Exit 6 Junction	Cadwell Switching Station	0.9	150 - 248	150	0	115
Chicopee, Springfield	Cadwell Switching Station	Area Adjacent to Shawinigan Switching Station	0.8	200	200	0	115 / 115
Ludlow, Springfield	Orchard Junction	Orchard Substation	0.7	160	160	0	115 & 115

1: "345/115" means 345-kV and 115-kV transmission circuits on the same line structures. "345 & 115" means 345-kV and 115-kV transmission circuits are on separate line structures.

4.6.2.2 The Southern Route

The Southern Route option includes Segments 1, 2B, 3 and 4 as shown on Figure 4-6. Segment 2B shows additional ROW expansion that would be required for this route option because two 345-kV transmission lines on separate sets of structures would be constructed between South Agawam and Agawam Substations. Also, Segment 3 is included in the evaluation of this route option to incorporate the impacts associated with the 115-kV improvements included as part of this Project. The Southern Route can be further subdivided in segments between substations and switching stations as shown in Table 4-3. The portion of the Northern Route that would be in common with Southern Route (CT/MA Border to South Agawam Switching Station) is represented in the first three rows of Table 4-3.

Table 4-3: Right-of-Way Segment Summary of the Southern Route with Proposed Segment Circuits

Town	From	To	Mileage (Miles)	Existing ROW Width (Feet)	Proposed ROW Width (Feet)	Additional ROW Width Needed(Feet)	Proposed Circuit Configuration[1]
Agawam	CT/MA Border	Structure 2249	0.2	300	300	0	345
Agawam	Structure 2249	Structure 2252	0.3	300	300	0	345 / 115
Agawam	Structure 2252	South Agawam Switching Station	2.3	100	110	10	345 / 115
Agawam, MA	South Agawam Switching Station	Agawam Substation	0.9	300	300	0	345 / 115 & 345/115
			0.5	100	165	65	345 / 115 & 345/115
			1.9	150	165	15	345 / 115 & 345/115
Agawam, MA	South Agawam Switching Station	MA/CT Border	1.8	300	300	0	345
Suffield, CT	MA/CT Border	CT/MA Border (CT River)	1.1	300	300	0	345
Longmeadow, MA	CT/MA Border (CT River)	MA/CT Border	0.5	300	300	0	345
Enfield, CT	MA/CT Border	CT/MA Border	4.1	280 - 300	280 - 300	0	345
Longmeadow, East Longmeadow, Hampden	CT/MA Border	Hampden Junction	4.0	300	300	0	345
Hampden, Wilbraham, Ludlow	Hampden Junction	Ludlow Substation	10.7	250	250	0	345

1: "345/115" means 345-kV and 115-kV transmission circuits on the same line structures. "345 & 115" means 345-kV and 115-kV transmission circuits are on separate line structures.

The Southern Route for the Massachusetts portion of the 345-kV transmission line between Agawam and Ludlow Substations would begin and end at the same Massachusetts substation locations as the Northern Route described above and would have a common segment between the Connecticut/Massachusetts border and the Agawam Substation. However, the Southern Route would traverse due south from the Agawam Substation, following an existing transmission corridor currently occupied by one overhead 115-kV transmission line, and passing by the South Agawam Switching Station, then easterly into Connecticut through Suffield, back into Massachusetts through Longmeadow then into Connecticut again through Enfield. The Southern Route would continue easterly through the towns of East Longmeadow and

Hampden to Hampden Junction where it would progress north following an existing transmission line corridor currently occupied by one 345-kV transmission line and one 115-kV transmission line through the towns of Wilbraham and Ludlow to Ludlow Substation.

If the Southern Route is selected by the EFSB, CL&P would need to seek approval from the Connecticut Siting Council for the approximately 5.4 miles of the new 345-kV transmission line that would have to be constructed in Enfield and Suffield, Connecticut, as described above.

The Southern Route is shown in Figure 4-8. Photographs taken along the Southern Route are set forth in Exhibit 4.1.

Figure 4-8: Southern Route