

3.3.8.2 Potential Impact

Critical areas will be avoided.

3.3.8.3 Mitigation Measures

Since critical areas will be avoided, no mitigation measures are proposed.

3.4 Transportation/Traffic

The proposed St. Lawrence Wind Energy Project area would be located in the Towns of Cape Vincent and Lyme, and would be surrounded by an extensive network of local, county and state managed roads (see Figure 2-1). This section describes the network of roads that may be used during construction of the proposed wind energy project, the potential impact of construction traffic on the existing transportation system, and measures to mitigate potential impact.

3.4.1 Affected Environment

Construction of the proposed Project would require hauling long- and semi-heavy loads on local, county and state managed roads. Most of the roads that may be impacted are paved, but some are surfaced with packed gravel. The general Project area includes NYS Route 12E and County Roads 8, 9 and 4. Nearby roads outside the Project area include Interstate Route 81, NYS Route 12, NYS Route 12F, NYS Route 180 and several other County Roads. NYS Route 12E and County Roads 4 and 9 form a closed network of roads around the proposed Project area. NYS Route 12E is a two-lane asphalt-paved road that extends from Watertown northwest toward the Towns of Lyme and Cape Vincent and then to the northeast toward the Town of Clayton, where it joins Route 12. NYS Routes 12 and 12E represent the major supply arteries for the construction phase of the Project. County Roads 4, 8 and 9 are two-lane asphalt-paved roads which are located within or around the Project.

There are several other local roads located within the Project boundary that would be used during construction. These local roads include McKeever, Pelo, Mason, Peo (Gosier), Favret, Hell, Constance, Vincent (Branche), Vorta, Swamp (Wilson), Grant, Deer Lick, Pleasant Valley, Swart Out (Cemetery), Cold Spring, Burnt Rock, Depot, Wells Settlement (Ashland) and Gibbons (Merchant) Roads. Some of these roads have two names; the names in parentheses are the current reference. A majority of the local roads are asphalt paved except for Constance Road, a portion of Swamp (Wilson) Road, and a portion of Mason Road between Favret at County Road 4 which are gravel packed. In general the paved and gravel roads appear to be in good condition and capable of supporting the anticipated heavy and oversize construction vehicles. The preferred major delivery route to the Project area would include Interstate Route 81 to NYS 12E and County Roads 8, 9, and 4.

3.4.2 Potential Impacts

The potential impacts to traffic and the transportation system are limited to activities that would occur during construction of the Project. There would be no impacts to traffic or transportation during the operation of the proposed wind energy Project.

Impacts during construction include, but are not limited to, the following categories: the adequacy of existing roads and transportation infrastructure to accommodate construction equipment and oversize vehicles delivering wind turbine and tower components; the need for the Project to improve transportation infrastructure to accommodate construction needs, the need for the Project to temporarily re-locate overhead lines and other facilities to accommodate oversize vehicles, traffic delays and road closures due to transportation improvements or construction traffic, and increased traffic over local roads during construction.

SLW investigated several routes throughout the Project area that could be used for delivery of turbine components and related construction materials. The turbine component delivery vehicles would be oversized, requiring modification to intersections to the preferred routes. It is expected that delivery of turbine components and materials would come from the north or south along Interstate Route 81. From Interstate Route 81, the primary routes include NYS Route 12, 12E, and 12F, and secondary routes include County Roads 8, 9, 4 and other local roads. These routes have been selected to minimize impacts to traffic on the local roads and surrounding communities. The roads proposed for material and equipment transport have been minimized, and steps would be taken during construction to make certain that safety is a priority. Material delivery routes would, in most cases, follow the routes established for turbine component delivery. Final construction transportation plans would be approved by state and local officials, as discussed below.

Based upon this preliminary, screening level transportation/traffic evaluation, SLW selected primary delivery routes for construction of the Project including Interstate Route 81. These routes were selected to reach the largest number of wind turbine locations while minimizing potential impacts. For those turbine access roads that do not intersect primary routes, secondary east-west routes were selected. As with the primary routes, the secondary routes were selected to reach the largest number of turbine sites, while minimizing potential impacts.

The following summarizes the preferred transportation routes for wind turbine component and material delivery:

- Delivery Route No. 1: This route would be used for transportation from Interstate Route 81 to the access roads leading to proposed wind turbine sites in the northern portion of the Project area. The delivery vehicles would use Interstate Route 81 (Exit 50) and State Route 12 southwest towards the Town of Clayton. At the Town of Clayton, NYS Route 12 connects to NYS Route 12E. The vehicles would then use NYS Route 12E (southwest), towards the Town of Cape Vincent and County Road 9 towards Depauville, and McKeever Road.
- Delivery Route No. 2: This route would also be used for delivery vehicles from Interstate Route 81 to the access roads leading to proposed wind turbine sites in the northern portion of the Project area. The delivery vehicles would use Interstate Route 81 (Exit 48), State Route 342 (west) to NYS Route 12 towards Depauville, County Road 9 and McKeever Road.
- Delivery Route No. 3: This route would be used for delivery vehicles from Interstate Route 81 to the access roads leading to the proposed wind turbine sites in the southernmost and central portions of the Project area. The delivery vehicles would use Interstate Route 81 (Exit 46), State Route 12F (west) towards Dexter, NYS Route 180 (north), NYS Route 12E towards Lyme and then Cape Vincent and Favret Road.
- Delivery Route No. 4: This route would be used for delivery vehicles from Interstate Route 81 to the access roads leading to the proposed wind turbine sites located in the central portion of the Project area. The delivery vehicles would use Interstate Route 81 (Exit 46), NYS Route 12F West towards Dexter, NYS Route 180, NYS Route 12E towards Lyme and Cape Vincent, and County Road 8. County Road 8 connects to both Mason and McKeever Roads in this central portion of the Project area.
- The proposed route for construction and delivery of material and equipment associated with the proposed electrical substation (central portion of the Project area) is NYS Route 12E, Favret, Swamp and Wilson Roads. The delivery route of equipment and materials required for the proposed overhead electrical transmission line are still to be determined, but would use local and state and county roads in the vicinity of the Project.

The preceding delivery and transportation routes for the proposed Project were selected to minimize impact to local traffic, damage to local, county and state highways, the number of roads being used for delivery, and potential improvements to individual roads. A detailed transportation study would be prepared when the location from which turbine and tower components would be delivered is known. Furthermore, private access roads would be

constructed from public roads over privately owned land to the proposed turbine locations. A preliminary layout of access roads is depicted on Figure 2-1.

The turbine construction cranes would be transported to the site in a semi-dismantled manner and hauled to specific crane assembly areas designated along the turbine access roads. The locations of the crane assembly area would depend on the feasibility of walking the crane between turbine sites. This would be further evaluated as part of the comprehensive transportation study pending Project approval.

The physical dimensions of vehicles delivering the turbine and tower components would dictate the road width and turning radius needs at intersections along the delivery route, as these are the heaviest and longest vehicles that would be necessary for construction. Intersections located within the Project area were visually evaluated using a minimum truck turning radius of 130 to 150 feet, the required radius for the oversize vehicles typically used to deliver turbine and tower components. In addition, an engineer also conducted a screening level visual inspection of road surfaces and integrity of roads within the Project area to preliminarily assess the types of improvements that might be necessary to accommodate construction traffic.

Based upon screening level visual observation, it appears that the following asphalt roads are considered acceptable to handle the turbine component deliveries: Interstate Route 81, NYS Route 12E, NYS Route 12, and County Roads 9, 8, and 4. Some intersections may require modifications to handle construction vehicles with a wide turning radius. As stated, a more thorough transportation study would be performed when the delivery route for turbine and tower components has been finalized.

Modifications to intersections may include increasing the corner radii, adding road width upstream of necessary intersections, adding road width downstream of necessary intersections, or a combination of these modifications. The degree to which corner radii can be enlarged is limited by houses, bridges and/or culverts located in proximity to the intersections, which may make it necessary to increase road width either upstream or downstream of intersections requiring improvement. Intersection modifications may require the acquisition of additional property and, in some cases, re-location of utility poles and/or guardrails. Where culverts or ditches cross under existing intersections, culverts may have to be extended. The drainage features at applicable intersections may be modified or new drainage features may be created along the edges of modified intersections to maintain proper drainage. Such improvements or modifications would be coordinated with the appropriate highway departments and appropriate

wetland and stormwater permits would be obtained. Existing culverts and bridges would also be inspected and, if required, approvals for improvements would be obtained.

Local roads may require modifications to allow for use during turbine component and other types of construction use. These modifications may include: gravel overlay to reduce rippling and to smooth grade changes; widening to provide sufficient road width for delivery vehicles; raising the profile of the road to provide additional structural capacity and sufficient surface drainage; and adding larger culverts to smooth grade changes.

The materials used for construction would be obtained from many locations. In addition to the wind turbine and tower components, typical construction materials may include, but are not limited to: gravel, concrete, reinforcing bar, electrical poles, electrical and miscellaneous materials. The vehicles used for delivery of Project materials would likely be of standard highway type, which are normally used on roads located within the Project area. These vehicles may include dump trucks, 18-wheel tractor trailers, flat-bed type trucks, short wheel base trucks, and concrete delivery trucks. Since physical dimensions of these vehicles are smaller than the turbine component delivery vehicles, they would be able to employ the preferred routes established for delivery of the turbine components. Since these vehicles are standard size and smaller, they can use a greater number of local roads. As a last resort, possible deviation from the preferred turbine component delivery routes may be considered.

It is estimated that 35 to 40 concrete trucks would be required for each turbine foundation. This would result in 70 to 80 delivery trips for each turbine or approximately 6,500 to 10,000 total trips over the duration of the project. In addition, material delivery would include gravel for the development of access roads, road improvements, and intersection modifications. Other material deliveries would include reinforcing bar for each foundation, electrical equipment and materials for each turbine and the electrical transmission and interconnect line network.

The potential for lane and possibly road closures during road improvements exists. In addition, the increase in traffic over Project roads during construction would impact travel time for those people using county and local roads. SLW does not anticipate adverse safety impacts to the area due to material delivery vehicles. Although there would be a significant number of vehicles in the area during construction activities, safety measures would be implemented to reduce the potential adverse traffic conditions as described in Section 3.4.3.

3.4.3 Mitigation Measures

The proposed Project transportation routes have been selected to minimize impacts to roads and surrounding communities. The number of roads used for material and equipment transportation has been limited to the minimum needed for construction. Material delivery routes would, in most cases, follow the routes established for turbine component delivery. Aside from the oversized vehicles that would deliver turbine and tower components, construction vehicles would be similar in nature to vehicles currently traveling over the road network and therefore would likely not require special mitigation measures.

Construction equipment and workforce vehicles would not be parked along public roadways, but rather in designated parking areas, so as to preserve safety along local roadways. In consultation with appropriate local officials, a Project speed limit would be established. SLW would work with local officials to enforce all traffic safety requirements, including the Project speed limit. Construction vehicles may create dust plumes on gravel roads. The Project would develop a dust control plan to ensure that visibility along roadways is maintained. See Section 3.9 for further detail on the dust control plan.

SLW would obtain all necessary permits from the New York State Department of Transportation (NYSDOT) and respective local highway department(s) in order to make necessary road improvements and to operate oversize vehicles. Construction related wear and tear to county and local roads would be discussed with the entities that manage the transportation system and an appropriate strategy for road restoration would be developed. SLW would continually assess work areas approximately two weeks ahead of construction and would provide schools (during the school-year), police, fire, and emergency service agencies with advance notice of lane or road closures.

3.5 Land Use and Zoning

Land use and zoning in the Project area was determined through review of local town laws and aerial photographs. Land use and zoning are discussed in terms of regional land use patterns, Project area land use and zoning, agricultural land use, and future land use.

3.5.1 Affected Environment

Existing land use, potential impacts, and proposed mitigation measures are discussed in the following sections.