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Lockport – Batavia Line #112

Rebuild Project

Appendix AD

Specifications for Wetland Mitigation

The Specifications set forth below are in addition to, or refinements of, the elements required in the Specifications for the Development of Environmental Management and Construction Plan ("EM&CP Specifications") contained in Appendix E of the Joint Proposal. The applicant will incorporate in the EM&CP all the information specifically described in this Appendix.

Wetland and Waterbody Construction Specifications

1) Show the extent of clearing and ground disturbance in each wetland, state-regulated wetland adjacent area, and waterbody on the construction drawings.
2) The wetland and waterbodies summary tables required under section (B)(5)(c) of the EM&CP Specifications must include the following information for each wetland and waterbody located within the Project ROW and along access roads: proposed structure/disturbance type; NYSDEC ID; NYSDEC classification code (e.g. , C(T) stream standards, and Class I, II, III, and IV state-regulated wetlands); wetland cover type; wetland functions and values; total area of temporary disturbance (sq. ft.); total area of permanent impact (sq. ft.); conversion of forested and scrub-shrub wetlands (sq. ft.); and stream flow designation (perennial, intermittent, or ephemeral).
3) Provide a narrative description of construction activities within regulated wetlands, state regulated 100-foot wetland adjacent areas, and waterbodies that shows compliance with the following requirements:
    a. Where new permanent access roads are to be constructed through wetlands, a layer of geotextile fabric or equivalent underlayment must be used;

b. In the event that construction results in an alteration to wetland hydrology, the breach must be immediately sealed, and no further activity may take place until DPS and NYSDEC staff are notified and a remediation plan to restore the wetland and prevent future dewatering of the wetland has been accepted by DPS and NYSDEC;

c. Measures to minimize soil compaction in wetlands and waterbodies, including the use of temporary matting, low weight to surface area equipment or constructing when soils are frozen;

d. Measures and details demonstrating how work areas will be isolated from flowing streams and standing water in wetlands, including the use of water handling methods such as sandbags, cofferdam, piping or pumping. The details shall include a discussion of:

(i) the management of waters accumulated in the isolated work area to ensure settling and filtering of solids and sediments before water is returned to a wetland or waterbody;

(ii) restoration measures for the isolated work area in streams including the complete removal of the temporary measures, reestablishment of pre-construction contours, and stabilization and seeding immediately following the completion of work;

(iii) the manner by which low flow conditions will be maintained and water depths and velocities similar to undisturbed upstream and downstream reaches will be preserved so that the movement of native aquatic organisms is sustained;

e. Measures to minimize impacts to fish and wildlife during wetland and waterbody construction, including actions to prevent entrapment of fish and wildlife in the work area and, if entrapment occurs, actions to timely and safely move the animals to appropriate undisturbed locations outside the work area; and

f. Procedures to remove all excess fill materials to upland areas at least 50 feet from waterbodies and outside of the state-regulated 100-foot adjacent area.

Wetland and Waterbody Restoration Specifications

Include the following measures and details:

1) Restoration of pre-construction site conditions and stabilization of disturbed wetlands and waterbodies as site conditions and facility design allow within 48 hours or as soon as practicable after completion of construction;

2) Restoration of disturbed streams as follows:

   a. Stabilization of stream banks above ordinary high-water elevation with natural fiber matting, seeded with an appropriate perennial native riparian seed mix, and mulched with straw within two (2) days of final grading;

   b. Streams must be equal in width, depth, gradient, length, and character as the pre-existing conditions and tie in smoothly to the profile of the stream channel upstream and downstream of the project area. The planform of any stream must not be changed; and

   c. Woody stream bank vegetation must be replaced with ROW compatible native plantings as site conditions and facility design allow;

3) Revegetation of disturbed state-regulated wetlands and 100-foot adjacent areas with native plants. Appropriate native wetland species mixes must be described (e.g., Ernst Wetland

Mix (OBL-FACW Perennial Wetland Mix, OBL Wetland Mix, Specialized Wetland Mix for Shaded OBL-FACW; ROW compatible native plantings; and/or crop seed mixes consistent with existing, continued agricultural use);

4) Monitoring of restoration areas until an 80% cover of native plant species with the appropriate wetland indicator status has been reestablished over all portions of the restored area;
5) If, after two years, monitoring demonstrates that the criteria for restoration (80% native species cover) is not met, the Certificate Holder must submit a Wetland Planting Remedial Plan (WPRP). The WPRP must include an evaluation of the likely reasons for the results, including an analysis of poor survival; a description of corrective actions to ensure a successful restoration; and a schedule for conducting the remedial work. Once accepted by DPS and NYSDEC, the WPRP must be implemented according to an approved schedule.

Wetland Mitigation Plan for State-Regulated Wetlands

The Wetland Mitigation Plan, intended to compensate for unavoidable loss of wetland functions and values, must include the following:

1) The creation of compensatory wetlands at appropriate ratios;
2) A construction timeline for the mitigation activities;
3) Construction details for meeting all requirements contained in the proposed certificate conditions;
4) Agreed-upon performance standards for determining wetland mitigation success;
5) Provisions for post-construction annual monitoring and reporting for a period of five years after completion of the wetland mitigation;

6) After each agreed-upon monitoring period, the Certificate Holder must take corrective action for any areas that do not meet the above-referenced performance standards to increase the likelihood of meeting the performance standards after five years; and

7) If, after five years, monitoring demonstrates that the wetland mitigation is still not meeting the established performance standards, the Certificate Holder must submit a Wetland Mitigation Remedial Plan (WMRP). The remedial plan must include an evaluation of the likely reasons for not achieving performance standards, a description of corrective actions to ensure a successful mitigation, and a schedule for conducting the remedial work. Once accepted by DPS and NYSDEC, the WMRP must be implemented according to an approved schedule.

Stream Crossings Specifications

1) For each new permanent crossing of a "protected stream" (C(T) or higher) and/or "navigable waters of the state" as those terms are defined at 6 NYCRR Part 608, the following must be provided:
    a. Detailed plan, profile, and cross-sectional view plans;
    b. Drainage area and flow calculations to ensure that the design will safely pass the 1% annual (100-year return) chance storm event; and
    c. Location, quantity, and type of fill.
2) Bridges shall be utilized for each new permanent stream crossing and shall span the stream bed and banks. If a bridge is not practicable, an alternatives analysis must be provided, including written justification in the EM&CP for why a bridge is not practicable. If a bridge is deemed not practicable then the following options, in order, shall be considered and evaluated: an open bottom arch culvert; three-sided box culvert and round/elliptical

culvert. NOTE: For stream channels with slopes greater than 3% an open bottom culvert must be used. All culverts shall be designed to:

a. Contain native streambed substrate or equivalent;
b. Be a minimum width of 1.25 times the width of the stream bed. The stream bed is measured bank to bank at the ordinary high-water level or edges of terrestrial, rooted vegetation;
c. Include a slope that remains consistent with the slope of the upstream and downstream channel; and

Facilitate downstream and upstream passage of aquatic organisms.