

SECTION 330 – FISH RELOCATION (BY M-NCPPC)

330.01 DESCRIPTION

Work consists of installation and maintenance of Fish Fence and coordination with M-NCPPC for Fish Relocation to avoid/minimize fish mortality from construction activities, including dewatering operations. The Fish Relocation process will be reviewed and discussed at the pre-construction meeting, including the Contractor’s responsibilities listed herein which include, but are not limited to, providing and installing fencing and netting, proper notification to the M-NCPPC Construction Manager (CM), dewatering the active work area sufficiently to allow the M-NCPPC Montgomery Parks Aquatic Resources Team to relocate fish from the work area, and maintenance of fencing and netting throughout the project. All dewatering operations must comply with Maryland’s Waterway Construction Guidelines (MDE).

330.02 REFERENCE STANDARDS

The most restrictive requirements of the latest publications of the following specifications will be complied with for this project:

MDE Maryland’s Waterway Construction Guidelines, latest revision
Best Management Practices for Working in Nontidal Wetlands, Wetland Buffers,
Waterways, and 100-Year Floodplains

M-NCPPC Section 321 – Stream Restoration

330.03 DEFINITIONS

Not applicable.

330.04 MATERIALS

A. Fish Fence: Fish Fence includes the combined use in series of mesh nylon seines (net) and wire mesh fencing, placed at both the upstream and downstream ends of each dewatering area. The fence shall be installed approximately 5 feet upstream of the net. The installed combination of mesh nylon seines and wire mesh fencing shall be referred to as Fish Fence.

1. Nets shall consist of ¼ inch opening mesh nylon seines, 4 feet tall and sufficient length to extend across the width of the stream.
2. Wire mesh fencing shall be at least 4 feet high. Mesh shall consist of wire thickness less than ¼ inch, with openings between 1-inch and 2-inch. Alternative mesh materials (e.g., PVC) may be approved at the M-NCPPC Construction Manager’s discretion.
3. Both nets and fence shall be secured using steel U channel fence posts at least 6 feet long and driven 18 inches (minimum) into the ground, with maximum post spacing of 3 feet. If bedrock or other impediment is present, minor adjustments to the location of the metal

fence posts may be made. Wire mesh and net shall be secured to the posts by hanging on clips and wrapping a tie wire around the horizontal fence strands and the posts. Install a top tension wire to prevent sagging.

- B. Intake Pump Screening: A metal screen or anchored perforated plastic 5-gallon bucket shall be used to cover each intake pump hose. The mesh size or perforations shall have ¼ inch (maximum) openings.
- C. Sandbags: Standard sandbags (either 14” x 26” or 18” x 30”) made of polypropylene or other material resistant to ultra-violet radiation, tearing, and puncture and woven tightly enough to prevent leakage of sand. Large rocks may be substituted for sandbags to eliminate gaps between netting and stream bottom.

330.05 SUBMITTALS

Not applicable

330.06 QUALITY ASSURANCE

- A. The contractor shall implement best practices as outlined in MDE’s Guidelines to Waterway Construction and Best Management Practices for Working in Nontidal Wetlands, Wetland Buffers, Waterways, and 100-Year Floodplains.
- B. The contractor shall always have at least one representative onsite who has successfully completed the MDE Responsible Personnel Certification (RPC) training course and can provide upon request their RPC number and date completed.

330.07 CONSTRUCTION

- A. All construction shall take place “in the dry” using Maryland Department of Environment approved stream diversion techniques to dewater the construction area and minimize downstream sediment. Contractor is responsible for control of water throughout the duration of construction, including stream flows and runoff through disturbed areas.

Refer to the plans for locations of pump-arounds and sandbag diversions, as applicable.

- B. The contractor shall install Fish Fence at both upstream and downstream ends of each dewatering area of the project. Exact locations of Fish Fence shall be field adjusted in coordination with M-NCPPC Construction Manager. Fish Fence shall include the wire mesh fence and net, placed 5 feet apart, and both extending the full width of the stream from bank to bank. Stone or sandbag weights shall be placed at the base of the net to eliminate gaps between the streambed and Fish Fence. It is necessary to maintain Fish Fence flush with the bottom of the streambed. The final Fish Fence installation shall be approved by M-NCPPC Construction Manager prior to dewatering activities.

- C. The Contractor shall notify the M-NCPPC Construction Manager in writing 72 hours (minimum) in advance of the first dewatering activity within each reach of instream work to allow the M-NCPPC Montgomery Parks Aquatic Resources Team to coordinate and perform Fish Relocations in the area to be dewatered.
- D. Before 10a.m. on the date agreed upon between the Contractor and the M-NCPPC Montgomery Parks Aquatic Resources Team, the Contractor shall dewater the work area such that the remaining water in the reach is isolated into pools. This will allow M-NCPPC to complete the Fish Relocation work.
- E. Once M-NCPPC has completed the Fish Relocations, the Contractor may completely dewater work area as needed throughout the duration of the project to complete the Stream Restoration work as outlined in M-NCPPC Section 321.
- F. The Contractor shall inspect Fish Fence and clear accumulated debris daily. If throughout the project duration Fish Fence is in disrepair or comprised, the Contractor shall repair Fish Fence prior to continuing work within that stream reach.
- G. In the event a large storm is forecast for the project area, the Contractor will coordinate with the M-NCPPC Construction Manager to jointly decide if the Fish Fencing should be removed until after the storm event and then reinstalled. In the event this occurs, the Contractor will be responsible for re-installation of Fish Fence as per 321.07.B. the next working day after the storm event passes. However, the Contractor does not need to coordinate as per 321.07.C and 321.07.D for subsequent Fish Relocation events. Dewatering can occur and work can continue immediately following Fish Fence reinstallation.
- H. Fish Fence shall not be permanently removed until all dewatering operations in the associated reach are demobilized from the project site. Upon removal of Fish Fence, the streambed and banks shall be restored to their original condition, as acceptable to the M-NCPPC Construction Manager.

330.08 MEASUREMENT AND PAYMENT

Payment will be full compensation for all material, labor, equipment, tools coordination, and incidental items necessary to complete the work. Payment shall be made as a lump sum for this effort as shown in the bid proposal.