

Project Special Provisions

Culverts

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PROJECT SPECIAL PROVISIONS
STRUCTURE

CRANE SAFETY**(6-20-19)**

Comply with the manufacturer specifications and limitations applicable to the operation of any and all cranes and derricks. Prime contractors, sub-contractors, and fully operated rental companies shall comply with the current Occupational Safety and Health Administration (OSHA) regulations.

Submit all items listed below to the Engineer prior to beginning crane operations. Changes in personnel or equipment must be reported to the Engineer and all applicable items listed below must be updated and submitted prior to continuing with crane operations.

CRANE SAFETY SUBMITTAL LIST

- A. **Competent Person:** Provide the name and qualifications of the “Competent Person” responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.
- B. **Riggers:** Provide the qualifications and experience of the persons responsible for rigging operations. Qualifications and experience should include, but not be limited to, weight calculations, center of gravity determinations, selection and inspection of sling and rigging equipment, and safe rigging practices.
- C. **Crane Inspections:** Inspection records for all cranes shall be current and readily accessible for review upon request.
- D. **Certifications:** Crane operators shall be certified by the National Commission for the Certification of Crane Operators (NCCCO) or the National Center for Construction Education and Research (NCCER). Other approved nationally accredited programs will be considered upon request. In addition, crane operators shall have a current CDL medical card. Submit a list of crane operator(s) and include current certification for each type of crane operated (small hydraulic, large hydraulic, small lattice, large lattice) and medical evaluations for each operator.

INSTALLATION OF STATE SUPPLIED PIPE:**Description**

The Contractor shall be required to be on-site during the delivery and assembly of the State Supplied Pipe. The Contractor shall provide equipment and an operator and rigger to unload and transport same during structure assembly. Care shall be taken not to damage items.

Prior to commencing excavation for the installation of the *State Supplied Pipe* provide a bypass pumping plan, utilizing “Best Management Practices” (BMP’s) 5.2.1 for approval.

Link to BMP’s:

<https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Best%20Management%20Practices%20for%20Construction%20and%20Maintenance%20Activities.pdf>

Prior to commencing excavation for the installation of the State Supplied Pipe, implement the approved bypass pumping plan. (See Special Provision for Impervious Dike). This includes but is not limited to furnishing, installing, maintaining and removal of all pumps and any incidentals required to effectively implement the approved bypass pumping plan and dewatering plan.

Bypass pumping and dewatering is required to isolate the watercourse from the work area and to ensure all work within the limits of the stream is conducted in the dry, in accordance with project environmental permits and Department BMP’s.

Isolate upstream and downstream work area utilizing impervious dikes (See Impervious Dike Special Provision). Every effort shall be made to construct the impervious dikes sufficiently to prevent infiltration of water into the work area and to work in the dry. In the event that water infiltrates the work area, this water shall be immediately and continuously pumped into a special stilling basin prior to impacting work area. The inability of the contractor to isolate the work area from water infiltration and or to properly handle infiltrated water may be cause for excavation work to be temporally suspended in accordance with Article 108-7 of the Standard Specifications, until compliance can be achieved.

There will be no additional payment for furnishing, installing, maintaining and removing pumps and any incidentals required to effectively implement an approved bypass pumping plan and dewatering plan as this is considered incidental to the *Installation of State Supplied Pipe*.

Except as modified below, prepare the work site **in accordance with Section 300 Pipe Installation of the Standard Specifications** to the lines and grades shown on the plans or as established based onsite conditions and approved by the Engineer.

The lines and grades on the plans are for bidding purposes only. The contractor shall shoot survey levels at 25-foot intervals along the centerline of the stream a minimum of 100 feet up and down stream of the inlet and outlet of the existing structure to until the actual stream bed, without excessive sediment build-up, is located. The level shots shall be plotted, and a line drawn between the first and last point to accurately establish the slope or fall of the stream. This

information shall be submitted to Resident Engineer for prompt review and approval for setting pipe's inverts and slope on pipe.

Excavate, undercut, provide material, condition foundation, furnish and place all backfill material as necessary to complete the project to the line and grade established. As part of the excavation, remove and properly dispose of all existing pipe structure. No excavated material shall be allowed to be reused as backfill and shall be properly disposed of at an approved waste facility.

The manufacturer of the State Supplied Pipe and Headwalls will provide a crew that will assemble the structure as required. **(15'-4" x 6'-5" Box Culvert only)** The Contractor shall cooperate with the contract assembly crew, in accordance with Article 105-7, Cooperation between Contractors.

A minimum of a seven (7) calendar days prior to the site availability for delivery of the State supplied Pipe Structure and Headwalls, make notification to the structure manufacturer to schedule delivery and offloading of the culvert structure. The Contractor is required to provide equipment, equipment operator, rigging and adequate personnel to safely offload structure sections and properly stage and secure on site.

A minimum of a ten (10) calendar days advanced notice shall be given to the structure manufacturer for when the site will be available for structure assembly by manufacture's crews so that assembly can be scheduled. The Engineer must be notified of the scheduled date of structure assembly.

After proper advance scheduling, in the event the manufacturer's structure assembly crew is not available, and causes delays to the projects controlling operation, a Department initiated claim may be initiated to provide a day for day time extension for each day the project is delayed due to unavailability of assembly crew. Failure to notify the Engineer of the confirmed scheduled assembly date will bar the Contractor from recovery for any alleged delays due to unavailability of manufacturers assemble crew.

In accordance with Article 105-7, Cooperation between Contractors, the Contractor shall cooperate with the Manufacturer's assembly crew. At the time of the structure assembly, the Contractor must provide equipment, equipment operator and adequate personnel to transport pipe segments and headwalls from the onsite laydown area and deliver materials to the excavation area as directed by assembly crew.

Install all components of supplied proposed pipe structure and headwalls. A representative from the pipe manufacturer will be on site during the assembly and backfilling of the State Supplied Pipe. The Contractor shall cooperate with the manufacturer's representative, in accordance with Article 105-7, Cooperation between Contractors.

Provide bedding material, included with Culvert Backfill, as required in Section 300 of the Roadway Standard Specifications and in accordance with Article 1016-3 for Class II (Type 1 only) or Class III select material as shown in contract.

Provide Culvert Backfill material as required in Section 300 of the Roadway Standard Specification and in accordance with Article 1016-3 for Class II (Type 1) or Class III select material as shown in the contract.

Provide Foundation Conditioning Material as required in Section 414 of the Roadway Standard Specification. Use Class V or VI select material for foundation conditioning material.

Measurement and Payment

Installation of State Supplied Pipe will be measured and paid at the lump sum price for the contract item.

Pay Item

Installation of State Supplied Pipe
Culvert Backfill
Foundation Conditioning Material

Pay Unit

Lump Sum
Ton
Ton

PLACEMENT OF NATRAL STREAM BED MATERIAL: (SPECIAL)

1.0 Description

The existing stream bed material shall be excavated from the stream bed or floodplain during culvert excavation. The material shall be stockpiled on the jobsite for use in backfilling the high flow barrel as shown on the contract plans. If enough natural stream bed material is not available to backfill the high flow barrel, Class I Rip Rap may be used to supplement the stream bed material. If rip rap is used to supplement the stream bed material, it shall be used in the bottom of the culvert barrel and topped with a minimum 6" layer of natural bed material.

The top surface of the natural stream bed material shall be placed and leveled to a flat surface to allow for animal passage.

2.0 Basis of Payment

No separate payment will be made for "Placement of Natural Stream Bed Material". The cost of the material, equipment, labor, placement, and any incidentals necessary to complete the work shall be considered incidental to the "Installation of State Supplied Pipe".