SECTION 33 63 13

**HYDRONIC HEATING AND STEAM UTILITIES**

**BASED ON DFD MASTER SPECIFICATION DATED 5/9/2022**

***This section has been written to cover most (but not all) situations that you will encounter. Depending on the requirements of your specific project, you may have to add material, delete items, or modify what is currently written. The Division of Facilities Development expects changes and comments from you.***

**P A R T 1 - G E N E R A L**

**SCOPE**

This section contains specifications for all hydronic heating & steam utility distribution systems for this project. Included are the following topics:

PART 1 - GENERAL

Scope

Related Work

Reference

Shop Drawings

Quality Assurance

PART 2 - PRODUCTS

None

PART 3 - EXECUTION

Excavation

Bedding and Utility Cover

Direct Buried Underground Steam/Condensate Conduit

**RELATED WORK**

Section 01 91 01 or 01 91 02 – Commissioning Process

Division 23 – Heating, Ventilating and Air Conditioning

Division 31 – Earthwork

Section 33 08 00 – Commissioning of Utilities

**REFERENCE**

Applicable provisions of Division 1 govern work under this section.

**SHOP DRAWINGS**

Refer to division 1, General Conditions, Submittals.

**QUALITY ASSURANCE**

Any installed material not meeting the specification requirements must be replaced with material that meets these specifications without additional cost to the Owner.

**DESIGN CRITERIA**

See Division 23 for other piping requirements.

**P A R T 2 - P R O D U C T S**

NONE.

**P A R T 3 - E X E C U T I O N**

**EXCAVATION**

The Contractor is responsible for all demolition, excavation, surveying, grading, dewatering, bedding and backfilling required to install direct buried conduits.

Where the native soil condition is determined to be poor provide excavation below subgrade (EBS) and undercut backfill material to underside of steam pits, box conduit or tunnels mud slab.

Work shall be made and erected square, plumb, straight and true, smooth, with accurately fitted joints and intersections. Work shall be reinforced and anchored in place.

Contractor shall be responsible for location and levels of work of this Section, this contractor shall assist others in properly locating equipment and pipe systems.

**bedding AND UTILITY cover**

Coordinate material installation in accordance with the applicable requirements of Section 31 23 16.13– Trenching.

Provide bedding from excavation to bottom of direct buried conduits a minimum of 6”.

Provide utility cover to 12” above top of direct buried conduits and/or box conduits.

**DIRECT BURIED UNDERGROUND STEAM AND CONDENSATE HEATING SYSTEM**

Install system where indicated on drawings and according to manufacturer's instructions.

Dig trench, shore as needed and provide dewatering control per Division 31.

Fill bottom of excavation with sand or controlled backfill per specifications. Set conduits on sandbags during fabrication so that the conduits do not sag or droop.

Handle all conduits according to manufacturer’s instructions with proper supports and proper rigging materials. Do not use chains or steel cables to handle conduits as damage could occur to jacketing material.

Hand tamp beneath conduits after joint work is complete.

Backfilling shall not begin until the heat shrink sleeve(s) has cooled. All insulation and jacketing materials for the field joint shall be furnished by system manufacturer.

Contractor shall take care to maintain the dry status of the preinsulated pipe at all times.  If the preinsulated pipe becomes wet the contractor shall dry the preinsulated pipe until the certified factory representative is satisfied the system is again dry and will carry the full manufacturer’s warranty.  The contractor shall dry the wet system per the manufactures recommended procedures at no additional cost to the project.

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END OF SECTION