

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 COORDINATION

A. Contractor Coordination:

1. The Contractor may be responsible to the Owner for the costs of extraordinary services of the Architect, Engineers and Testing Companies due to inaccurate notifications which result in inaccurate, untimely or unnecessary visitations to the site.
2. The Contractor shall bear full responsibility for delays caused by improper compliance with this Section. Failure to provide prior notification shall be grounds for rejection of identified work, requiring removal and reconstruction at the Contractor's expense.
3. All work required to be reviewed or tested by Architect or Engineer shall not be covered until such reviews/tests are completed. The Contractor shall uncover all enclosed work which has not had required reviews/testing and restore areas at his own cost.

B. Special Notifications:

1. The Contractor shall notify the Architect and DPS 72 hours prior to the commencement of the following activities:
 - a. Any construction activity which will produce inordinate noise or dust during normal school operating hours.
 - b. The interruption of any utility service to existing buildings including fire alarm and security systems.
 - c. The Contractor shall allow for rescheduling of any activities which may cause disruption of normal school activities.

C. Submittal Coordination:

1. Under the terms and conditions of this Contract, the Contractor shall submit information to DPS through the Architect prior to commencing identified portions of the work.
2. The Contractor shall be responsible for understanding requirements of this Contract and for the coordination of Architect involvement so as to have no adverse impact upon the schedule for the work.
3. Minimum coordination requirements include the following:
 - a. Section 01 33 23 - Shop Drawings, Product Data and Samples.
 - b. Section 01 45 00 – Quality Control.
 - c. Section 01 31 00 – Project Management and Coordination.
 - d. Section 01 45 29 - Testing & Laboratory Services.
 - e. Section 01 78 23 - Operation and Maintenance Data.
 - f. Section 01 78 36 - Warranties.
4. Refer to other sections of these Division 1 Specifications and specific requirements of individual technical specifications Divisions 2 through 28 for more detailed requirements.

D. Architectural Coordination

1. A/E to coordinate definitions for providing, setting and connecting of all equipment indicated on the Drawings whether provided by Contractor or Others.
2. A/E to provide the coordination schedule listed in part 2 below to his electrical and mechanical consultants for review and approval. Any proposed changes to the coordination schedule are to be approved by DPS.
3. Mechanical and Electrical Specifications shall refer to this section rather than including their own schedules.

E. Mechanical/Electrical Coordination

1. Equipment Furnish/Connect

- a. Refer to Equipment Schedule(s) for definition(s) of responsibilities pertaining to assembly, setting, and connection of equipment items. Unless otherwise noted in the coordination schedule below or herein, final setting and connection of equipment items shall be performed by the Trade Contractor supplying the equipment item.
- b. Unless otherwise specified, all line and disconnect switches, safety cut outs, control panels, fuse boxes, or other electrical controls, fittings, and connections not a part of the fixture as furnished standard by the manufacturer, shall be furnished loose by the Equipment Manufacturer (other than special fabricated items), and shall be mounted and wired complete by the Electrical Contractor.
- c. Any sleeves or conduit required for refrigeration lines furnished and installed under the mechanical contract shall be furnished by the Mechanical Contractor and installed by other Trade Contractors in their portions of the work.
- d. Necessary flues and/or vents and fans of size and capacity required to operate fixtures specified, together with final connection between roughed-in vent openings and fixtures, will be furnished and installed by the Mechanical Contractor unless specifically indicated otherwise.
- e. All plumbing, steam, electrical, and ventilation work, both material and labor required to connect this equipment shall be furnished by the Supplying Contractor unless specifically identified otherwise. The work shall include roughing-in to points indicated on mechanical plans, and final connecting from rough-in point to various pieces of equipment requiring such connections and the supplying of all necessary materials and labor for this work, except as hereinafter noted.

2. Walk-In Coolers

- a. Refrigeration is to be performed by others. Electrical and plumbing connections to compressors, blower coils, lights, controls, etc. shall be performed by the Contractor, including interior wiring in walk-in cooling equipment and drain extensions from fixtures to floor drains and floor sinks.
- b. All traps, drains, tail pieces, valves, stops, shutoffs, and fittings necessary are to be furnished and installed by the Trade Contractor, unless specifically identified otherwise.

3. Mechanical Accessories

- a. All steam traps, valves, shutoffs, condensate pumps, and fittings necessary are to be furnished and installed by the Trade Contractor supplying components.
- b. If, because of jurisdictional trade agreements or other conditions, any work specified to be performed under this contract must be done by others, the Contractor shall sublet such work to those who are qualified to do such work or make other arrangements at Contractor's own expense as approved by the Owner.

1.02 COORDINATION SCHEDULE

A. Mechanical Contractor, Temperature Control Contractor, and Electrical Contractor shall coordinate the supply and installation of mechanical equipment requiring electrical connections for power and control. Unless otherwise indicated, all mechanical equipment and controls shall be furnished, mounted, and wired in accordance with the following schedule:

COORDINATION SCHEDULE

| | FURNISHED UNDER | SET IN PLACE OR MOUNTED | POWER WIRED & CONNECTED | CONTROL WIRED & CONNECTED |
|---|-----------------|-------------------------|-------------------------|---------------------------|
| Mechanical equipment motors | MC | MC | EC | TC |
| Mechanical magnetic motor starters | MC | MC | EC | TC |
| Other equipment motors/starters | I | I | EC | I |
| Fused and unfused disconnect switches & thermal overload switches | EC | EC | EC | - |
| Pushbutton stations and pilot lights | MC | MC | EC | TC (Note 2) |
| Manual operating switches | MC | MC | EC | (Note 3) |
| Control wiring – regardless of voltage | TC | TC | TC (Note 1) | TC |
| Control components: control relays, thermostats, control transformers, switches, transmitters | TC | TC | TC (Note 1) | TC |
| Temperature control panels, time clocks, controllers | TC | TC | TC (Note 1) | TC |
| Valve and damper motors and actuators | TC | TC | TC (Note 1) | TC |
| Control valves, solenoid valves | TC | MC | EC / TC | TC |
| Control dampers integral with a fan unit | MC | MC | TC | TC |
| Control dampers (duct mounted) | TC | MC | TC | TC |
| Thermowells in piping | TC | MC | - | - |
| Duct detectors | EC | EC | EC | TC |
| Thermostats | MC | MC | EC / TC | TC |
| Temporary heating or cooling services | MC | MC | EC | TC |

EC = Electrical Contractor

I = Installer of Equipment Requiring Electrical Service (Trade Contractor Supplying the Equipment Item)

MC = Mechanical Contractor

TC = Temperature Control Contractor

Note 1: It is the intent of this specification for all conduit and wiring, which connects to control equipment or provides controls to mechanical equipment, to be provided by the Temperature Control Contractor. Other portions of this specification, which may be in conflict with this concept, shall be brought to the attention of the engineer for clarification prior to bidding the project. The electrical division (Division 26) shall provide line voltage wiring in conduit and junction boxes for the express purpose of temperature controls. It shall be the responsibility of the Temperature Control Contractor to coordinate the location of the junction boxes (if not otherwise shown on the electrical drawings) and to utilize these junction boxes for temperature control wiring. The Temperature Control Contractor shall extend line and/or low voltage wiring from junction boxes to all mechanical and control components, which required control wiring.

Note 2: Connection of auxiliary contacts, if required.

Note 3: Device is used in power wiring circuit to the equipment. Control functions are not required.

- B. All temperature control conduit and wiring will be furnished and installed under the Temperature Control contract.
- C. Division 26 Contractor shall furnish and install all wiring and conduit required for power wiring to carrying equipment full load amperage to all mechanical equipment, unless shown otherwise.
- D. All Contractors shall confirm their scope of supply prior to ordering equipment. DPS shall not be responsible for delays due to missing equipment, charges for expediting equipment, or charges for restocking equipment overages.

1.03 SUBMITTALS

- A. Submit coordination drawings for locations where several elements of equipment, mechanical or combined mechanical and electrical work must be sequenced and positioned with precision in order to fit into available space.
- B. Lay out the mechanical and electrical work in conformity with the contract drawings, coordination drawings, and other shop drawings, product data, and similar requirements, so that the entire mechanical system will perform as an integrated system properly interfaced with electrical work and other systems.
- C. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination of mechanical and electrical work. Include such items as required notices, reports, and attendance at meetings. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.

PART 2 PRODUCTS No standards

PART 3 EXECUTION

3.01 SITE UTILIZATION

- A. Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water and materials.
- B. The Contractor shall note that concurrent with their work, other contractors, suppliers, and DPS personnel may be working in relatively close proximity. The Contractor will be solely responsible for coordinating their work with that of other contractors and will make no claims for failure to do so.

3.02 SALVAGE OF MATERIALS

- A. Salvage materials and equipment involved in performance of, but not actually incorporated in the work. Refer to other sections for disposition of salvaged materials that are designated to be returned to DPS. DPS wants first right of refusal on all demolished equipment.

3.03 LAYOUT

- A. It is recognized that the contract documents are diagrammatic in showing certain physical relationships of the various elements and systems and their interfacing with other elements and systems. Establishment and coordination of these relationships is the exclusive responsibility of the Contractor. Do not scale the drawings. Lay out and arrange all elements to contribute to safety, efficiency and to carry the harmony of design throughout the work. In case of conflict or undimensioned locations, verify required positioning with the architect.

3.04 LARGE AND HEAVY EQUIPMENT

- A. The Contractor shall coordinate the requirements to be maintained for subsequent entry of large equipment units. Coordinate the movement of heavy items with shoring and bracing so that the building structure will not be overloaded during the movement and installations.

- B. Where equipment or products to be installed on the roof are too heavy to be hand-carried, do not transport across roof deck; position by crane or other device so as to avoid overloading the roof deck.

3.05 INSTALLATION

- A. Comply with manufacturer's installation instruction and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in the contract documents.
- B. Coordinate the installation of materials and equipment above and below ceilings with suspension systems, light fixtures and other building components. Where mounting heights are not detailed or dimensioned, install services and overhead equipment to provide the maximum headroom possible.
- C. Coordinate ceiling and joist cavity space carefully with all trades. In the event of conflict, install mechanical and electrical systems within the cavity space allocation in the following order of priority:
 - 1. Plumbing waste and vent piping, roof drain mains and leaders.
 - 2. Supply, return and exhaust ductwork.
 - 3. Steam and condensate piping and traps.
 - 4. Fire sprinkler mains and leaders.
 - 5. Electrical conduit.
 - 6. Domestic hot and cold water, lab gas piping.
 - 7. Heating and cooling water supply and return piping.
 - 8. Fire sprinkler branch piping and sprinkler runouts.
 - 9. Pneumatic control piping and tubing.
- D. Coordinate the installation of equipment and piping support, sleeves, and other structural components that penetrate walls, floors, ceilings, or roofs.

END OF SECTION 01 31 00