

CENTER LINE PUBLIC SCHOOLS  
RISING STARS ACADEMY at  
MILLER ELEMENTARY SCHOOL

121440

MARCH 11, 2013

SECTION 02000  
BID CATEGORY - 15000 MECHANICAL

The work of this bid category includes but is not limited to providing all labor, equipment, materials, scaffolding, hoisting and incidentals to complete all Mechanical Work in accordance with the specifications, drawings, and applicable codes. All work is to be performed as shown on the plans and specified in the following technical specification sections:

<u>Specification Section</u>	<u>Description of Section</u>	
<b><u>DIVISION 2</u></b>	<b><u>SITE</u></b>	
02070	Selective Demolition	6
02300	Earthwork	13
02925	Cleanup and Restoration	2
<b><u>DIVISION 11</u></b>	<b><u>EQUIPMENT</u></b>	
11400	Food Service Equipment	52
<b><u>DIVISION 15</u></b>	<b><u>MECHANICAL</u></b>	
15010	Mechanical General Requirements	14
15050	Basic Materials & Methods	25
15053	Common Work Results for HVAC	6
15055	Motors	10
15060	Hangers and Supports	20
15075	Mechanical Identification	9
15080	Mechanical Insulation	23
15110	Valves	7
15121	Pipe Flexible Conn./Exp Fitting & Loops	3
15128	Heat Tracing for Plumbing Piping	6
15140	Domestic Water Piping	10
15145	Domestic Water Piping Specialties	7
15150	Sanitary Waste and Vent Piping	9
15155	Drainage Piping Specialties	17
15194	Fuel Gas Piping	10
15410	Plumbing Fixtures	9
15815	Metal Ducts	14
15820	Duct Accessories	10
15838	Power Ventilators	9
15855	Diffusers, Registers & Grilles	3
15860	Environmental Equipment	10
15900	Temperature Controls	13
15950	Testing, Adjusting & Balancing	22

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In addition to the above, this bid category includes but is not limited to the Bidding Documents, the Bidding and Contract requirement and Division 1 General Requirements of the Project Manual and various other Technical Specifications interfacing with this work. The bidder is advised to review the work descriptions of the other categories and other referenced documents so as to not misunderstand scope responsibilities.

THE SCOPE OF THIS BID CATEGORY SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS:

1. It is the responsibility of this Bid Category to review all drawings and drawing notes, including architectural, mechanical and electrical drawings, and include items requiring work that is generally defined as the responsibility of this Bid Category within the work description unless otherwise noted above in the scope of work.
2. This contractor will be responsible for all re-mobilization costs for all phases of work.
3. This contractor is to provide all legal disposal off-site of the debris that is a result of their work.
4. Coordination with other trades, including mandatory participation in job meetings.
5. Coordinate the location and sizes of all openings with the appropriate trades.
6. Before sawcutting or making any cuts in the floor, all contractors must use ground penetrating radar, and must provide proof that it was used to the Architect.
7. Referencing drawing A1.0-Demo Plan Notes: This contractor is responsible for work described in the following notes: 2, 3, 5, 6. New work plan notes: 2, 4, 5.
8. Reference drawings A-2.0 - this contractor is responsible for work described in the following notes: Demolition plan notes: 4, 5, 6, 7, 14, 17. Reflected ceiling plan note: 3. Roof framing plan notes: 2, 8, 9, 10, 12.
9. Reference all mechanical drawings (M0.1 thru M7.2) and FSE Drawings (FSE-1 thru FSE-5). This contractor is responsible for all demo notes and new work notes on all mechanical drawings and all FSE drawings.

10. Furnish, install and maintain all shoring and bracing as required. Leave shoring in place until new building systems are in place and then remove as required. Prior to installation of shoring and bracing efforts, provide shop drawings on the proposed shoring and bracing design. A registered engineer in the State of Michigan must seal drawings.
11. Perform all trimming and adjusting of demolition work for installation of new construction. Coordinate limits of wall demolition with architectural drawings and all critical trade contractors.
12. In all locations where this contractor sawcuts the floor, this same contractor is also responsible for pouring back concrete. This contractor must coordinate with flooring contractor as to provide proper floor finish and height.
13. All required permits, fee applications, etc., required for execution of the work as required by code and local authorities shall be included in this bid. This shall include all city, township, gas company and/or other fees related to this contractors work.
14. Coordinate and schedule utility shut-downs as required for this contractors work with Owner.
15. This contractor is responsible for all rigging and hoisting, as required for their work.
16. The first floor sub-grade will be placed and compacted prior to the start of the underground work designated in this package. This contractor is responsible to excavate, install work and replace all fill to the specified density material within the building interior to the same condition it was prior to starting excavation for underground.
17. Contractor is responsible for all excavation, underground piping, backfill and compaction for their work. All backfill must be Class II granular fill.
18. Contractor is responsible for removal of all spoils resulting from their work from the site.
19. This contractor is to verify and stake locations of all underground utilities before beginning their work.
20. Coordinate with Architect/Engineer before penetrating any structural members.

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21. Provide mechanical identifications for all pipes and valves including a valve schedule.
22. This contractor is responsible for covering and securing, water-tight, all existing curbs on roofs that are to be removed and any of their own new through-floor or roof penetrations.
23. Supply and install all temperature controls including all related wiring and equipment, as specified.
24. In rooms where existing ceiling is not scheduled to be removed and replaced, this contractor will be responsible for removal and replacement of ceiling tile as required to perform their work, as well as any cost associated with replacing with new tiles.
25. Provide and locate all roof curbs or penetrations for mechanical equipment. Contractor will level all curbs, as specified. If roof curbs are not onsite at the time the roof is being installed, this contractor will be responsible for any additional charges incurred by the roofing contractor to flash in said units. Roof flashing at new curbs are to be done by owner's contractor.
26. This contractor is responsible for all sheet metal work, piping and mechanical equipment required for the complete heating and cooling system including but not limited to: AHU's, EF's, grilles, diffusers, pumps, valves, and unit heaters. Store, clean and reinstall diffusers unless noted otherwise.
27. This contractor is responsible for all plumbing (sanitary, storm, gas, hot and cold water, refrigerant vent, acid waste, compressed air, and heating/cooling piping), valves, equipment (water heaters, air compressors, etc.), plumbing fixtures, plumbing specialties, food service equipment, and accessories as required.
28. Pressure test all underground pipes as required in the specifications and plumbing codes.
29. This contractor will be required to direct all related trades as to locations and sizes of penetrations to surfaces. If proper coordination is not provided it will be the responsibility of this contractor to cut, patch and revise all holes and penetrations for the installation of all pipe and ductwork. All penetrations through walls, floors, and ceilings will be fire and smoke stopped so as to comply with the local and state requirements.

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30. This contractor is responsible for cutting any required openings in the metal deck as required for their work. Openings shall be kept protected and water-tight.
31. Prior to final acceptance this contractor shall clean all floor drains and associated piping and remove all dirt and debris. Test with running water for good draining after cleaning.
32. Label all mechanical lines, as specified.
33. Provide protection of equipment. Costs incurred due to damage of equipment because of lack of adequate protection will be the responsibility of this contractor. This includes temporarily capping all floor drains and pipes so as to prevent concrete and other construction debris from entering the plumbing.
34. Coordinate layout and installation of all mechanical piping and ductwork with other trades. This contractor is responsible for the proper location and sizes of all mechanical openings by other trades. Any corrective work necessary to wall or floor openings will be the responsibility of this contractor.
35. This contractor is to furnish duct-work coordination drawings to all related trades prior to their work commencing.
36. This contractor is responsible for the insulation of all mechanical and plumbing systems (pipes, fittings, duct, etc.) as required and specified.
37. The contractor is responsible for all caulking, gaskets, and sealing of mechanical and plumbing systems to provide air, water and weather tight connections including but not limited to sealing of wall and floor penetrations and plumbing fixtures.
38. Furnish and install all motors, starters, disconnect switches that are loose from the equipment or part of packaged mechanical equipment that are necessary for the operation and control of all equipment as required. This contractor will be responsible for all supports necessary to mount the above mentioned items. Category 16000 will provide wiring.
39. The contractors field superintendent shall be present during testing and field reviews conducted by the various inspection agencies.

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40. This contractor will be responsible for all de-watering during excavations of their work.
41. It will be the responsibility of this contractor to be onsite during concrete pours to verify levelness and pitch to all floor drains.
42. This contractor will be responsible for all mechanical demolition as shown on drawings. This is to include all pipe, insulation, sheet-metal, mechanical units, etc. this contractor is responsible for all disconnects for their own demolition.
43. Each contractor performing demolition shall be responsible for protecting new and existing construction from damage due to their own work. If any adjacent surfaces are damaged, it will be the sole responsibility of the contractor at fault to completely repair and replace all damaged construction to the satisfaction of the Owner and Architect.
44. This contractor is responsible for the cutting and patching of all existing materials for the installation of all mechanical work. All penetrations through walls and ceilings will be fire and smoke stopped whereas to comply with the State and local Fire Safety Requirements. Provide and install all firestopping materials. Contractor shall restore all surfaces to match existing conditions. This shall include all drywall, masonry, concrete, acoustical ceiling, steel, roofing, windows, insulated wall panels, plaster, flooring (all types), painting, and caulking work.
45. This contractor is responsible for all saw-cutting required for any underground mechanical work in the existing building. Use of Ground Penetrating Radar is mandatory.
46. Provide complete testing, adjusting, and balancing of the mechanical systems, as specified. Provide additional testing at 90 days after completing the TAB, and during near-peak summer and winter conditions.
47. This contractor shall furnish, upon completion of work, as-built mylar drawings showing the installation of the work as completed and operating and maintenance manuals as described in the specifications. Provide certification of system and equipment as specified. Provide training to the Owner's personnel.

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EXCLUDED FROM THIS CONTRACTORS WORK IS:

1. All required testing (By Owner)

END OF BID CATEGORY 15000 MECHANICAL