Trade Partner Scope of Work

Exhibit A

BP-23A HVAC Systems/Controls/Balancing

North Brunswick High School Addition and Renovations

A. The subcontractor shall perform all work and shall furnish all layout, supervision, materials, labor, scaffolding, tools, equipment, supplies, services, rigging, craning and hoisting of all materials and equipment and all other things necessary or reasonably incidental for the construction and completion of their work as portrayed in the enclosed enumerated contract documents and specification sections as referenced below:

Supplemental Instructions to Bidders dated April 17, 2020
S&ME Geotechnical Exploration Report dated August 21, 2019

Associated Specifications:
Division 00 Procurement and Contracting Requirement
Division 01 General Requirements

Division 23 Complete
078413 PENETRATION FIRESTOPPING – as applies to own work
078443 JOINT FIRESTOPPING – as applies to own work
079200 JOINT SEALANTS – as applies to own work
083113 ACCESS DOORS AND FRAMES – as applies to own work
DIVISION 21 – As Applies to this Scope
DIVISION 22 – As Applies to this Scope
DIVISION 26 – As Applies to this Scope

B. Subcontractor's work specifically includes:
1. All bidders to note project includes all plans and specifications for the Two-Story Classroom Addition, ROTC Building, Cafeteria Expansion, and Classroom 413 Renovations.
2. Installation of condensation and mechanical piping for mechanical units & equipment.
   a. Includes condensate drain detail per 6/A401 at ROTC Building
3. Mechanical subcontractor is responsible identifying / labeling piping and HVAC equipment.
4. The permanent HVAC will be used for construction heating and cooling as the final stages of construction. The Mechanical Subcontractor will be responsible to furnish and install temporary and new permanent filters as required as any cost associated with extending any warranties so that the warranty requirement from the date of substantial completion are maintained.
5. The Mechanical Subcontractor is responsible for furnishing and installing blank off panels for louvers that their duct ties into.

6. Mechanical Subcontractor is responsible for power wiring from disconnect to within their mechanical equipment and additional power wiring associated with their equipment that is not specifically shown on the electrical drawing.
7. Required that all Mechanical Unit electrical requirements be reviewed/coordinated to confirm correct fuses and disconnects will be installed.
8. Mechanical Subcontractor is responsible to provide VFD, Controllers and Starters for all equipment.
9. Access doors for own work to be supplied by Mechanical Subcontractor, installed by drywall sub.
10. All louvers are to be supplied and installed by the Mechanical Subcontractor.
11. Mechanical subcontractor is responsible to provide curbs and or roof support system for equipment.
    a. Mechanical subcontractor is responsible for all delegated design of vibration/seismic restraints and support systems for roof top mechanical equipment. Any additional steel not shown on contract documents but required shall be provided and installed by Mechanical Subcontractor.
    b. Include boot / flashing requirements for Exhaust Fan Penetrations for Room 413
12. Mechanical Subcontractor is responsible to layout above ceiling wall penetrations during framing of walls. Any penetrations missed or layout out at the wrong location will be fixed at the Mechanical subcontractor's expense.
13. Mechanical Subcontractor is responsible for sleeves for all penetrations and to seal all smoke and or fire rated penetrations through walls and slab.
14. Mechanical Subcontractor is required to provide foremen for commissioning assistance.
15. Duct must be sealed when delivered and stored on dunnage. Duct must also be sealed at the end of each day for all installed duct. If this is not maintained the Construction Manager reserves the right to reject any duct found un-protected.
16. Mechanical Subcontractor scope includes third party duct pressure testing. Air balancing subcontractor may be used for this testing if qualified to do so and approved by Mechanical Engineer of Record.
17. Subcontractor is responsible to layout of all housekeeping curbs for their own equipment.
18. Installation of duct detectors provided by Fire Alarm contractor BP-26
19. Subcontractor is responsible for all TAB and Controls related to their own scope.
20. Provide all necessary material and labor for a complete and operational Building Automation System (BAS)
21. The system shall provide Direct Digital Control (DDC), Energy Management, and Building Automation for the air conditioning, heating & ventilating systems, and shall interface with other microprocessor based subsystems per the plans and specifications.
22. Failure to mention any specific item or device does not relieve the Contractor of the responsibility for installing or integrating such device/peripheral in order to comply with the intent of the Drawings or this Specification.
23. This scope of work includes but is not limited to all raceways, boxes, wiring, devices, software, and graphic interface.

24. BAS Contractor shall be responsible for all electrical work associated with the BAS control system and as defined In the Contract Documents.
25. BAS Contractor shall provide programming modifications necessary to fine tune sequences during commissioning and through the warranty period of system.
26. Controls Contractor shall provide onsite representation to participate in the commissioning process as put forward in the project specifications.
27. The Contractor shall provide an onsite inspection of the installed Heating, Ventilating and Air Conditioning systems in the school and provide a report listing any system deficiencies that must be addressed by the Mechanical Contractor, Electrical Contractor or the Testing and Balancing Contractor which preclude the completion and testing of the BAS system.
28. Subcontractor to include all demo relating to mechanical trade, including but not limited to: mechanical piping, duct work, and air handling units.
    a. Close coordination with Selective Demo subcontractor and MEP subcontractors will be required
    b. Selective Demo subcontractor and MEP trades are required to walk project prior to demo start (on each phase) to mark items to be removed and where demo should start/begin. This walk through will be recorded (itemized list) and marked on set of drawings to be agreed upon by all trades.
    c. Subcontractor to include an allowance of 20 man hours of selective mechanical demo for any area found needing to be demolished outside of BP-02A/BP-23A scope to be used at the discretion of W.M. Jordan.
29. Mechanical Subcontractor to assist Owner with any and all energy incentives from local power company. This may include supplier invoices, delivery receipts and submittal packaging turned over to owner for verification.
30. Please see bid package for Owner preferred alternates
31. BIM Modeling (as required by Construction Manager):
    a. Prior to and during construction of this project, the Construction Manager will leverage BIM (Building Information Modeling) for various processes. If a subcontractor intends to use a third-party modeling firm, then this should be indicated in their bid. The CM reserves the right to reject third-party modeling firms at their discretion. Subcontractors that have been awarded the above referenced project will be responsible for the following activities and deliverables.
    b. All phases of design (architectural, structural, MEP) been created in AutoDesk Revit and each model will be turned over to subcontractors for their use in creating their own models.
    c. It is the intent of the CM@R to use design models to assist in reducing the time frame of coordination, and coordinate shop drawings, however 3D coordination of MEP trades is still required. Design models must be thoroughly vetted to determine completeness and accuracy.
    d. Drawings shall be sufficient detail to show overall ductwork dimensions, clearance and relative locations of the work in allotted spaces. Duct work routing and sectional elevation shall be provided for congested areas.
    e. Weekly coordination meetings for the duration of the coordination processes

f. Maintaining the coordination schedule created by WM Jordan
g. Distribution of models between subcontractors
h. Running web-based or on-site coordination meetings at least once per week or as necessary to meet the coordination schedule
i. Models created in software that is compatible with Autodesk Navisworks Manage, and the .nwc exports of these models. Models must contain all content required for coordination of the following trades: Mechanical (duct and pipe), Plumbing, Fire Protection, Data/IT, Structural Steel, and any other trades with scope in the underground or above-ceiling space.
j. BIM coordination not required for ROTC, Classroom 222 and Classroom 403. 2 Story addition and Cafeteria only.

C. Subcontractor Specific Requirements:

- The following is a general outline of items specifically included, but not limited to, under this agreement:

A. Submittals must be uploaded onto WMJ Sharepoint site for review. To gain access to Sharepoint site please contact the Construction Manager within 5 days of receiving the contract. All submittals are expected to be received no later than 20 days of receiving the contract unless discussed and approved by the Construction Manager.
B. Delivery Requirements: As coordinated by Subcontractor with WMJ on site Superintendent. Subcontractor is responsible to coordinate delivers with vendors. The construction manager will not provide equipment to unload subcontractor materials. Please keep in mind the school will be in session during normal school hours and all deliveries must be scheduled. NO DELIVERIES WILL BE ACCEPTED BETWEEN THE HOURS OF 7:00AM AND 8:00AM and 2:00 and 3:30PM MONDAY THROUGH FRIDAY (this excludes deliveries on small company pickup trucks and/or small box trucks as approved by project superintendent). Saturday deliveries will be accepted only on the approval of the project Superintendent.
C. Subcontractor is responsible for scheduling, coordinating, preparing and documenting all testing, inspections, and punch-list with the Owner, Architect, Engineer, Owner's Commissioning Agent, inspection agencies, and required local authority(s) having jurisdiction. All pre-testing and testing requirements needed to achieve temporary and permanent certificate of occupancy and the construction schedule is included.
D. It is the responsibility of this Subcontractor to anticipate inspection delays in the installation durations and sequence such work ahead of others as not to impose delays in the schedule.
E. Any and all requirements for mockups for approval of assemblies on this project are fully included.
F. In addition to the requirements of the specifications, Subcontractor will supply Shop Drawings that include all dimensions, mounting details, and/or pad layout, weight, color, power requirements, ventilation requirements, and all special attachments and mounting details as applicable to their own scope.
G. This Subcontractor should provide protection for ANY new and existing installations as part of this Project. If protection provided by others is not sufficient to support/protect the

work as part of this scope, this Subcontractor shall provide additional protection as may be required to fully protect that equipment or installation.

H. All damage to paint primers or applied factory finishes damaged during install shall be repaired by this Subcontractor.

I. Final cleaning of all equipment prior to Final Project Completion including removal of shipping stickers, etc. This shall apply to all existing installations as well as new installations

D. Allowances:

a. The Subcontractor is to include the following allowances in their base bid amount. These allowances will include all overhead and profit and will be identified on a separate line item in the payment application schedule of values. The Construction Manager is solely responsible for determining what work will be charged against these allowances and all said work must be authorized in writing by the Project Manager or Superintendent prior to commencing. Subcontractor will submit daily work slips for verification and actual costs against this allowance will be reconciled at the completion of the project. Any work performed by Subcontractor that was not previously authorized by the CM will not be reimbursed.

E. Unit Prices

a. Unit prices quoted and accepted shall apply throughout the duration of the contract and are inclusive of all overhead costs, insurance, bonding and profit. If necessary, Subcontractor agrees to provide labor and/or materials and/or equipment to perform the following work on a unit price basis for the unit prices stated below. Should additional Unit Prices be necessary, these will be agreed upon and included here after the completion of the post-bid scope review meeting

F. Alternates:

a. The subcontractor is directed to reference the big form for applicable project alternate prices to be included with the Subcontractor's Bid. Alternate Prices shall include all cost associated with the changes, omissions, additions or other adjustments to the work of the Bid Package as described in the alternate, or are reasonably inferable therefrom. Alternate Prices shall include all cost of overhead, profit, and bond premiums associated with the work of the Alternate whether additive or deductive. Claims for extras resulting from changes caused by the acceptance or rejection of any alternate will not be allowed. The Drawings, Specifications, Project Manual, Addendum(s), and other Contract Documents shall be considered appropriately modified by either the acceptance or rejection of the various Alternatives. The Construction Manager and Owner expressly reserve the right to accept or reject any, or all, Alternate Prices and in any sequence. Acceptance or rejection of any alternate does not relieve the Bidder of timely completion of the Work within the time periods indicated.