

**Solanco High School Activities Building Addition
585 Solanco Road, Quarryville, PA**

Addendum # 01
Issued February 07, 2019

This addendum is to be attached to the Solanco High School Activities Building Addition bid drawings dated January 29, 2019. This addendum modifies and becomes part of the contract documents. Work and/or materials not specifically mentioned herein are to be as shown on the drawings and in the general notes.

Addendum #01 is issued to address changes in the bid documents and Contractor's written questions.

These items in the addendum have no specific order. All contractors are responsible for checking all items.

This addendum consists of 55 pages.

General:

Please find attached, the Pre-Bid Agenda and sign in Sheets.

Contractor's Questions

- A. Please confirm that Bid "A" is 1st Floor as shown on Dwg M-1 **less** items associated with the Girls Locker Room Addition and the Basement?
Correct
- B. Please confirm that Alternate "H-1" is the portion of Dwg M-1 associated with Bid "B"?
Alternate H-1 is the same as Bid A but with the inclusion of items associated with the Girls Locker Room Addition and Adjacent Storage room
- C. Please confirm that Bid "B" is all of Dwg M-1?
Correct
- D. Specification Section 00 31 00; Are there any costs involved for the contractor to obtain cad files from the Architect for coordination drawing backgrounds?
There is no cost to obtain cad files
- E. General Conditions Section 3.9; Will a Full Time On Site Superintendent be required for each Prime Contractor during periods while no physical work is being performed by that Prime or any of its Sub Contractors?
No
- F. Please elaborate on Specification Section 00 72 16, page 56, Exhibit 'A', Incentives.
In Bid "B", a \$50,000 incentive will be provided, split between contractors based on a percentage to be determined, if the basement is substantially complete and occupiable by August 7, 2019

- G. PA Prevailing Wages, page 5 of 11;
- What happens with the Plumber/Pipefitter Wages after the Expiration date of 4/30/2019 as listed in the document?
These wages remain in effect throughout the term of the projects contract, providing awarding the contract is given within 90 days of bid opening.
- H. Please clarify Phasing? Per Spec 01 13 00 we are to review Phasing Plan which I do not find.
No phasing plan is provided. Contractors will need to submit a phasing plan to meet Bid “B” objectives of having the basement work substantially complete prior to the first floor work.
- I. Which Contract Provides Louvers?
- Specification Section 01 12 00, 1.7, A, 5, 11 Under GC Summary indicates they are Provided by the GC. **Architectural exterior louvers are to be provided by the GC.**
 - Note # 6 on Dwg M-1 implies by the HVAC. **Interior adjustable dampers, if required, are to be provided by HVAC.**
 - Dwg A0.0 provides Specification Section 089119 which differs from note 6 on Dwg M-1. **See above.**
- J. Multiple Contract Summary, Spec Section 01 12 00, item 1.9.
- Par. A, 1; “...Loop Water Piping.” Does this item relate to this project? **See revised Spec Section 01 12 00**
 - Par. A, 2; Please provide more detail of any “Preliminary” TAB required as indicated? **See revised Spec Section 01 12 00**
 - Par. A, 3/5/8; Please provide the name of the Owners Controls Contractor? **The School District has been using Conexus and NRG Controls**
 - **Contacts are as follows:**
 - **Ryan Snyder** rsnyder@conexus.biz
 - **Jay Franklin** jfranklin@nrgcontrols.com
 - **Is there a Specification mandating which ATC/BAS manufacturer and Controls Contractor is to be used on this project? Incorporate controls into existing Niagara Building automation system.**
 - Par. A, 7; This section makes references Division 23. There is no Division 23 in the specifications. **The Mechanical Specifications are shown on the drawings and reference Division 15.**
 - **Are there more specifications to be issued? No. Section has been revised**
 - Par. A, 8; Where can information associated with Division 230950 Integrated Security Systems be found as indicated? **See revised Spec Section 01 12 00**
 - Par A, 10; states “...HVAC System Commissioning”; Drawing M-4, Specifications Section 5 par C states “...commissioning of the project...”
 - **Is this to be by the BAS Sub-Contractor or a 3rd party? This shall be by Owners preferred BAS contractor**
 - **Is this to be commissioning of the HVAC Systems or the “Entire” project? HVAC system commissioning**
- K. Drawing M-4, Specifications Section 1, item M, N, & O.
- Construction Contractors are Not Typically Service Contractors. Is this indeed to be part of a Construction Contract? **Yes**
- L. Drawing M-4, Specifications Section 2 and Drawing M-1, 2, & 3;
- Do Outside Air and Exhaust Plenums receive Insulation? **Yes**
- M. The Domestic water Heater Flue and Vent is shown on Dwg M-1. And shown with a Note # 21. The Plumbing drawing P-1 states that the water is to be provided with a “Common Venting Kit”. Who installs this venting and what type of material is it?
The State water heaters “modulating ultra-force common venting kit” is PVC and should be provided and installed by the plumbing contractor.

- N. Drawing E2 – What controls 106 football Locker Room Lights? There are no occupancy sensors or switches shown on drawings.
See revised drawing E2
- O. Drawing E3 Alternate Bid A Girls Bathroom – Should there be an exit sign at the exterior door? **Yes, include an exit sign at the exterior door**
- P. Drawing E3 – If Base Bid A is taken, what about the stairs going down that have fixtures and devices. How are these to be handled?
Devices would be eliminated.
- Q. Drawing E5 Alternate Bid A – Storage Room 209 Unit OAU-2 is not shown on Panel HV panel schedule. What is this and what size is it?
Delete reference to Unit OAU-2
- R. Drawing E5 Base Bid A – If there is no basement, what happens to the card reader on the door to basement and the GFI on the stairway wall?
The card reader would be eliminated and the GFI can be moved to the exterior wall.
- S. Is the trench drain in football bathroom 108 really supposed to extend past the showers to the floor of the hand dryers?
Yes
- T. Please provide specs on the 2-way valve called out by note 26 on P1 and clarify who is providing/installing.
Provide a Valworx Electric Actuated Ball Valve Series 5676, 2-way Lead Free Brass, Full Port Valve, or equal. Valve shall be provided and installed by plumbing contractor and incorporated into BAS for remote shut down of girls locker room
- U. Which Contractor provides cutting and patching of roadway and sidewalls for the Electrical feed?
The electrical contractor. The conduit run can be completed without cutting. The conduit should be trenched through existing grass area, with a directional bore to limit disturbance of the emergency access to the existing track.
- V. Which Contractor provides restore and reseeding the lawn for the Electrical feed?
General Contractor is responsible for Site work outside a limit of five feet outside the perimeter of the building.
- W. The Siemens panel that was shown to electrical biddings at the time of the pre-bid appears to not be the correct panel. The panel we were shown is 120/208 volt, but the new feed should be 480 volt. Is there a different location?
The 480V distribution panel “SDP” is located below the existing bleachers. There is a spare sub-feed breaker location in panel to be used.
- X. It was mention at the Prebid that if the basement is not built the panels and the transformers would be moved to the office. Would there be room in mechanical room 210, or can you provide a drawing showing where the panels and the transformer would be located if the basement is not built?
If it is determined the basement will not be built, a new electrical layout will be provided for coordination.
- Y. Note # 13 on plan E-4 states to refer to the civil plans for extension of conduits. Can you provide civil plans?

- The Contractor shall extend the conduits to 5' beyond the building and terminate at a hand box. The School District will provide a connection back to the school and pull cabling.
- Z. Note # 13 on plan E-4 states to stub two 2" diameter conduits 5 foot beyond the building. Is this correct?
Yes, two 2" conduits are requested.
- AA. Notes #14 and #15 on drawing E-4 indicates the EC shall rough in conduits for card reader and security camera. Are these conduits to be extended up to the ceiling, or do they need to be conduit all the way to the telephone board?
Provide conduit to owner provided termination. For bid assume telephone backboard.
- BB. Specifications 01200, paragraph E, 1 states supplying power from the existing water heater QMB switch. Is this correct?
No. All water heaters are new and shall be wired as indicated on design drawings.
- CC. Provide truss detail for the area over the basement stairs?
The contractor may either frame over the stairs with a truss or they can stick build it with 2"x12" rafters.
- DD. If Bid A only is chosen, where would the domestic water heaters in the basement on P1 be located at on the first floor?
Yes. The water heaters would be located along the exterior wall of Office 203.
- EE. If Bid A only is chosen, where would the domestic water service piping in the basement on P1 be brought in to serve the first floor?
The water service would enter the building at Office 203.
- FF. If Bid A only is chosen, where would the 2" gas service piping in the basement on P1 be brought into the building to serve the DOAS-2 unit on the first floor?
The gas service would enter the building at Office 203 and serve the water heaters and DOAS-2
- GG. If Bid A only is chosen, would the underground sanitary piping exit the building at the same location as shown on P1 and at a higher elevation?
Yes
- HH. Need MFG for 019 vented steel soffits and siding. Do you want steel?
The intent of the drawings is to match the existing siding and roof on the Jr. High School Activities Building. We will accept steel or aluminum panel as long as we match the existing profile of the adjacent activities building.
Acceptable manufacturers include CENTRIA Architectural Systems; Fabral; MBCI; PAC-CLAD or equal. Submission must meet the requirements of the specifications.
- II. We would like to request that HYDRALASTIC 836 be included as an acceptable product for Cold Fluid Applied Waterproofing.
This product is acceptable though must meet the warranty period identified on Sheet A0.0 as well as the rest of drawing specification 071416.
- JJ. Which Contractor provides excavation for the Electrical feed?
The Electrical Contractor is responsible for the excavation for the electrical feed.
- KK. Where will the temporary job trailers be located?
The requirement of on-site job trailers has been eliminated from the project. If a contractor wants to install a temporary trailer on the site, the School District will provide area in the southeast edge of the parking lot. Each contractor will be responsible for providing service to their trailer. Progress meetings will either be held in the High School or off site at the Solanco School District Offices.

LL. Note C, on drawing E1 states that Mc Cable can only be used for fixture whips. Specification 2-16050, 6, states that MC Cable can be used for branch circuits and buried in walls. We do not believe that the NEC code would allow MC Cable to be used in new block walls. What is your intend for the use of MC Cable?
MC Cabling may be used for branch circuit distribution where concealed in walls or otherwise protected from damage per NEC requirements. All exposed wiring runs, surface mounted runs, and or wiring encased in concrete shall be in conduit per NEC requirements.

The NEC does specify that MC cabling shall not be encased in concrete, this is to limit the corrosion and impact to the sheathing, however, run in non-filled masonry block walls is not by definition encased, it is surrounded by air.

MM. General Conditions Section 3.9; Will a Full Time On Site Superintendent be required for each Prime Contractor during periods while no physical work is being performed by that Prime or any of its Sub Contractors?

Full Time on site superintendents are not required for each Prime Contractor during periods while no physical work is being performed by that Prime or any of its Sub Contractors.

NN. Is the owner requiring you to purchase a Project Management Liability Insurance? Under 11.1.2.2 in the General Conditions they are asking for Owner's and Contractor's Protective. Are we providing that?

The School District's insurance provider added the item below highlighted in yellow to Section 11.1:

§ 11.1.The insurance required by Subparagraph 11.1.1 shall be written for not less than nay limits of liability required by law or those shown below and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 3.1.8. The following amounts of coverage shall be provided by the Contractor.

1. Workers' Compensation
Employer's Liability: As required by law but not less than:
\$ 100,000 Each Accident
\$ 500,000 Disease – Policy Limit
\$ 100,000 Disease – Each Employee
2. General Liability: \$1,000,000 Combined Single Limit
3. Auto Liability: \$1,000,000 Combined Single Limit
4. Umbrella \$5,000,000

Except for Workers' Compensation Insurance, Owner and the Architect shall be named as an additional insured with respect to the Project on all such insurance.

Coverage shall be primary and non-contributory to any other available insurance.

Front End Specifications

Section 00 41 10 GC Bid Form

Delete – Specification Section.

Add – Attached Specification Section 00 41 10

Section 00 41 40 Electrical Bid Form

Delete – Specification Section.

Add – Attached Specification Section 00 41 40

Section 01 12 00 Multiple Contract Summary

Delete – Specification Section.

Add – Attached Specification Section 01 12 00.

Section 01 22 00 Unit Prices

Delete – Specification Section.

Add – Attached Specification Section 01 22 00.

Section 01 50 00 Temporary Facilities and Controls

Delete – Specification Section.

Add – Attached Specification Section 01 50 00.

Drawings

Sheet E2 – Lighting Plan - Basement Notes

Replace with New Sheet E2

Added Occupancy Sensors for lighting control.

Sheet E4 – Power Plan - Basement and Notes

Replace with New Sheet E4

Added Fire Alarm Notes, Typical Fire Alarm Riser and location of devices.

Sheet E5 – Power Plan - First Floor and Notes

Replace with New Sheet E5

Added Fire Alarm Notes and location of devices.

End of Addendum #1



5 South Main Street
P.O. Box 727
Bel Air, Maryland 21014
410-838-7900
www.frederickward.com

Pre-Bid Meeting Agenda

Project: Solanco School District
Solanco High School Activates Building Addition

Date: February 06, 2019 - Pre-Bid Meeting

1. Bidding Documents

- a. Bidding Documents are available to Bidders who have followed the Instructions in the Invitation to Bid. Documents are distributed electronically via DropBox.
- b. Bidding documents have been forwarded to various building exchanges. Bluebook, Altoona Builders Exchange, and ConstructConnect. Please provide names of others that would be of benefit to Bidders.
- c. Bidding Documents consist of electronic copies of Drawings and Project Manual.
- d. Bidders must sign "Pre-Bid Sign-in Sheet" and complete a "Register of Bid Documents and Contact Information" form. Please write legibly so we may communicate properly.

2. Bidding Phase Goal:

- a. Get information to bidders so they can understand the project and present a bid that includes the level of the effort necessary to complete the project. We want you to understand the project.
- b. Ask questions if information is unclear to you. We will answer your questions.
- c. All questions during the bidding period should be addressed to the Architect. All questions involving Site, Structural, Mechanical, Plumbing, and Electrical issues should be addressed to the respective consultant (see list below) with a copy of the question addressed directly to the Architect for quickest response time. Responses involving revisions to the documents will be issued through Architect.
- d. Questions should be emailed to allow for a quick responses. Please ask detailed questions as quickly as possible. Revisions or clarifications will be issued by addendum-it is not official until documented in an addendum.

- e. The last day for questions is **February 11 at noon**. We will attempt to have the final addendum out by the end of the day on February 11th. The Addendum(s) will be added to the drop box link used to download the bid documents.

3. Design Team Communication:

Architect

Frederick Ward Associates
5 S. Main Street, Bel Air, Maryland 21014
Barry Miller – Project Manager 443-371-9296

4. General Information:

- a. **Bidding Documents** are available to Bidders who have followed the Instructions in the Invitation to Bid. Documents are distributed electronically via DropBox.
- b. **Bidders must visit the site.** Bidders must become familiar with the local conditions under which the Work will be performed and must correlate the Bidder's personal observations with the requirements of the proposed Contract Documents. Visits must be arranged through Bruce Bennett: 717-940-6138
- c. **Bidders should be aware this is a Multiple Prime Contract with Prevailing Wages.** Prime base bids will be received for General Construction, Plumbing, HVAC and Electrical work.
- d. **Owner is submitting for permits this week.** The Owner is responsible for the permit fees. Contractors are responsible to complete the necessary paperwork and pick up the Building Permit.
- e. **Bidding Procedures:** Two copies of all bid forms are required. Bids will be opened and read publicly at 3:00 PM February 14, 2019 in the Board Room located in District Office of the Solanco School District:
 - Solanco School District
 - 121 South Hess Street
 - Quarryville, PA 17566
- f. **Product Substitutions:** All bidders are strongly encouraged to submit alternate manufacturers to those listed on the drawings for review and approval by the Architect or Engineers during the bid phase. We will consider all submissions. Acceptable manufacturers will be listed by addendums. Manufacturers not listed in the Project Manual or in an addendum are not acceptable manufacturers and will be considered Product Substitutions. We will strictly conform to the requirements of Product Substitutions as specified in the Project Manual. See Section 012500 - SUBSTITUTION PROCEDURES. In other words, if you have a product that you believe to be an equal to those specified, then the only time to submit them as an "equal product" is during the bid phase.
- g. **Anticipated Project Bidding Schedule:**

Pre-Bid Meeting -	February 6, 2019
Receive Bids —	February 14, 2019
Notice of Intent to Award -	February 18, 2019

Contractors receive Notice to Proceed — ASAP after required paperwork is submitted.
- h. **Project Construction Schedule:**

Bidder agrees that he will commence work within ten (10) days following receipt of notice to proceed from the Architect or Owner.

Bidders shall reach Substantial Completion for BID A work by October 01, 2019.

Bidders shall reach Substantial Completion of the basement fit-out of BID B, by August 19, 2019 and the remainder of the BID B work by October 01, 2019.

Bidders shall complete the BID A work by October 15, 2019.

Bidders shall complete the basement fit-out of BID B work by September 15, 2019 and the remainder of the BID B work by October 15, 2019.

Bidders are responsible for phased completion dates for portions of the work specifically listed in the Project Manual.

i. **Incentives and Liquidated Damages:**

This project includes incentives and liquidated damages, as outlined in Section 007216 – General Conditions Article 8.3.7 and Exhibit A.

j. **Distribution of Addendums:**

Addendums will be sent via DropBox with email alert. A separate email will be sent to the contact person listed on the approved bidders list.

k. **Bidder's Transmittal for Bidding Documents:**

Please make certain that each Bidder's contact names, phone numbers and email addresses are correct. This will be used to create Bidder's list. Addendums will only be sent to those Contractors who qualify for Bid sets and the Building Exchanges.

l. **Conflicting or Overlapping Requirements:**

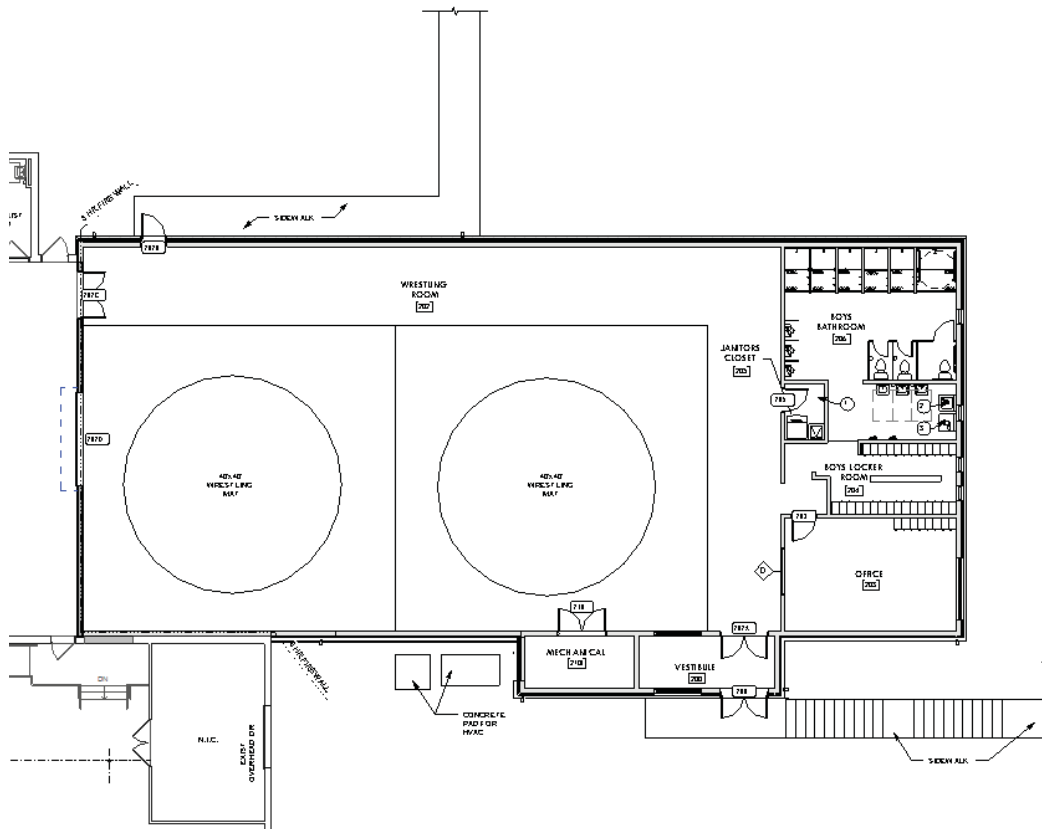
Please review Article 10.2 of 002113 INSTRUCTIONS TO BIDDERS regarding conflicting or overlapping requirements. The most stringent (generally most costly) applies and will be enforced. During bidding phase, please refer any inconsistencies or uncertainties to the Architect for a decision.

m. **Project Overview:**

The Solanco High School Activities Building Addition is a replacement building for the activities building which sustained structural damage during a snow storm in March 2018. Demolition consist of the removal of approximately 4550sf of concrete slab and the foundation from the previously demolished pole building.

The project will be bid as two options: BID A and BID B; both as prevailing wage jobs.

BID A



Bid A will consist of a 5,790 sf one story building 113'-4" long and 51'-2" wide with a 257 sf entry vestibule that is 34'-4" by 7'-6". This proposed one story structure will be slab on grade construction with CMU exterior bearing walls with a veneer of split face and metal siding and a standing seam metal roof on top of scissor trusses. It is the school's intention for this bidding option to represent as a complete replacement of the previous building damaged in March 2018. A three-hour fire wall will be required to separate the existing building from this proposed addition.

Bid A will also have an alternate; the addition of a one-story girls locker room, toilet/shower facility and storage. This alternate is 59'-4" x 18' and is attached Northwest side of the proposed building and will be constructed with the same materials as Bid A, but with flat bottom chord wood trusses that will frame into the main building

This proposed addition will be separated from the existing activities building by the use of a proposed 3-hour fire rated wall.

The First Floor contains the following programmed spaces:

- Wrestling area for two 40x40 mats
- Storage -Alternate
- Boys Locker Room and Toilet/Shower Facilities
- Girls Locker Room and Toilet/Shower Facilities - Alternate
- Office
- Entry Vestibule
- Mechanical Room

The Proposed Mechanical Systems are as follows:

Provide and install one floor mounted 100% outside air unit, one grade mounted condensing unit, one propane gas fired duct heater and one inline exhaust fan. Provide and install all ductwork per SMACNA

standards and all ductwork to be wrapped in insulation. Provide and install volume dampers, motor operated dampers, smoke detectors, louvers and incorporate all controls into existing building automation system (BAS).

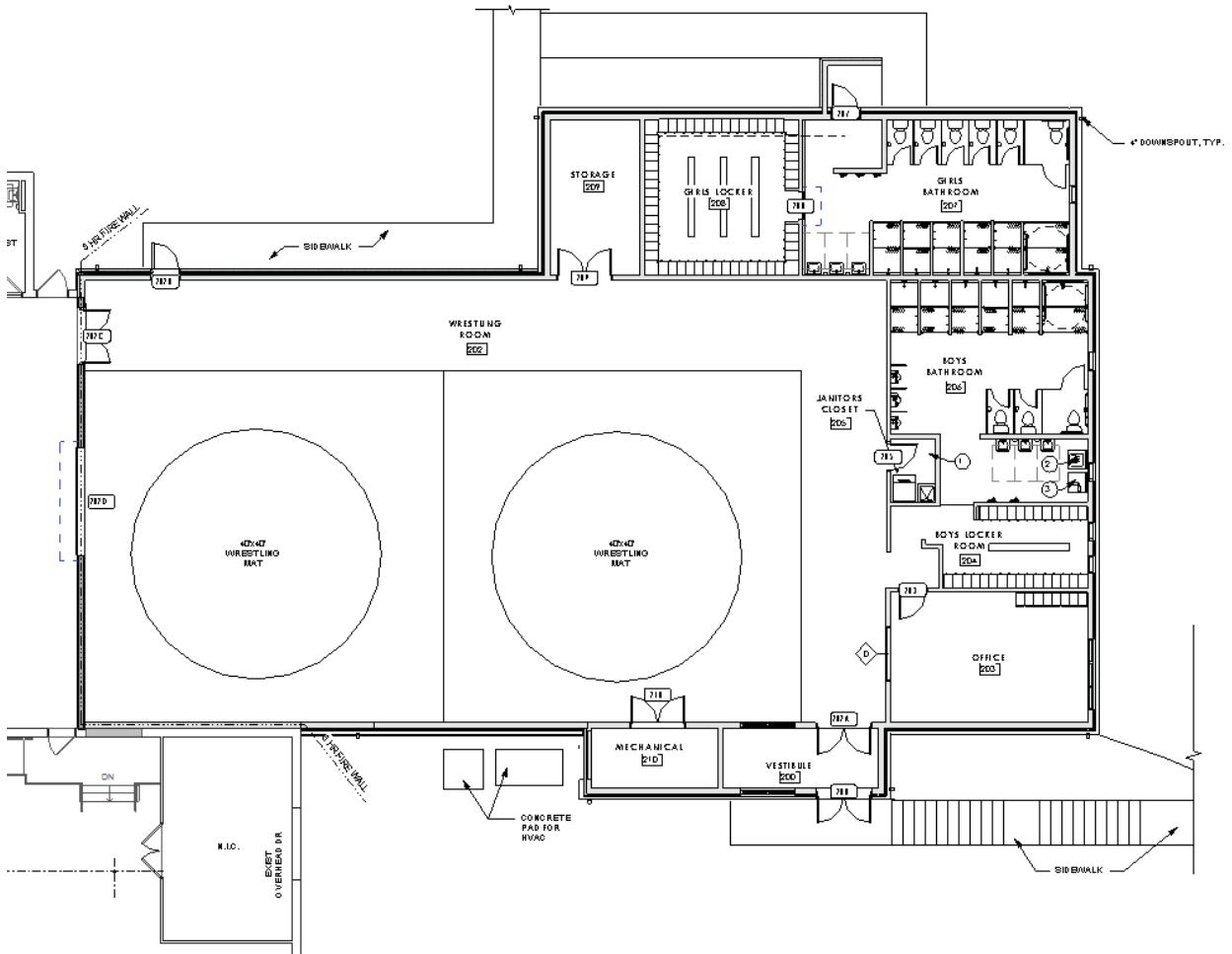
The Proposed Plumbing Systems are as follows:

Provide and install all plumbing fixtures and floor drains throughout the building and install all sanitary, sanitary vent, domestic water, hot water recirculation, condensate and propane gas piping. The building will have a separate locker room with showers containing approximately six showers, three urinals and three floor mounted flush valve water closets, three lavatories and additional plumbing fixtures for ancillary spaces. The alternate (Girls Locker Room and Toilet/Shower Facilities) shall contain approximately six showers, six floor mounted flush valve water closets and three lavatories.

The Proposed Electrical Systems are as follows:

Provide and install 480v/phase service extended from existing service locate near the bleachers. Provide and install a step down transformer to 120v/280v distribution panel for receptacles. Provide and install LED lighting throughout building and install lighting controls per energy code.

BID A with Alternate:



BID B

See Bid Documents

Bid B will consist of a one story building with a basement. This proposed addition will consist of a 5500sf basement and a 7400sf first floor. The construction of the proposed building is type 3B with CMU interior walls and CMU exterior bearing walls and with a veneer of split face and metal siding and a standing seam metal roof. The first floor framing consist of steel beams and composite metal deck/concrete topping, slab on grade reinforced concrete and the roof is framed with wood trusses.

This proposed addition will be separated from the existing activities building by the use of a proposed 3-hour fire rated wall.

The Basement contains the following programmed spaces:

- Football Locker Room and Toilet/Shower Facilities
- Two Coaches Office
- Conference Room
- Storage
- Laundry
- Training Room
- Mechanical Room

The First Floor contains the following programmed spaces:

- Wrestling area for two 40x40 mats
- Storage
- Boys Locker Room and Toilet/Shower Facilities
- Girls Locker Room and Toilet/Shower Facilities
- Office
- Entry Vestibule
- Mechanical Room

The Proposed Mechanical Systems are as follows:

Provide and install two floor mounted 100% outside air units, two grade mounted condensing units, two propane gas fired duct heaters, one propane fired unit heater, and two inline exhaust fans. Provide and install all ductwork per SMACNA standards and all ductwork to be wrapped in insulation. Provide and install volume dampers, motor operated dampers, smoke detectors, louvers and incorporate all controls into existing building automation system (BAS).

The Proposed Plumbing Systems are as follows:

Provide and install all plumbing fixtures and floor drains throughout the building and install all sanitary, sanitary vent, domestic water, hot water recirculation, condensate and propane gas piping. The building will have three separate locker rooms with showers containing a total of approximately twenty showers, seven urinals and twelve floor mounted flush valve water closets, ten lavatories and additional plumbing fixtures for ancillary spaces.

The Proposed Electrical Systems are as follows:

Provide and install 480v/phase service extended from existing service locate near the bleachers. Provide and install a step down transformer to 120v/280v distribution panel for receptacles. Provide and install LED lighting throughout building and install lighting controls per energy code.

Good Luck: On behalf of the Solanco School District, we thank you for your interest in bidding this project. Our experience with SSD is very positive. They greatly value and respect the work completed by good contractors. They realize that successful construction projects require good teamwork between contractors, owners and

architects/engineers. Solanco School District and Frederick Ward Associates will do all that we can to make this project successful for all parties.

Open the meeting to any other questions, comments or concerns.

DOCUMENT 00 41 10 – GENERAL CONSTRUCTION BID FORM

(This form is the official Bid Form to be executed and submitted in duplicate by the Bidder.)

Submitted By:

Bidder's Name

Bidder's Address

County

State

Bidder's Phone No.

Bidder's Fax No.

This proposal is submitted in response to your Invitation to Bid in which Proposals were requested to be submitted for the Project identified as: Solanco High School Activities Building Addition for the Solanco School District, 121 South Hess Street, Quarryville, PA 17566.

Contract No. 1 – General Construction

BASE BIDS

Having carefully examined the Contract Documents together with all addenda thereto, all as prepared by the architectural firm Frederick Ward Associates, and being familiar with the various conditions affecting the Work, the undersigned herein agrees to furnish all materials, perform all labor, and do all else necessary to complete the Work in accordance with the Contract Documents for the Base Sum of:

BASE BID “A” – One Story Structure for Contract No.1 General Construction for Work to Solanco High School Activities Building Addition:

Dollars

(\$ _____).

BASE BID “B” - Complete Basement and First Floor for Contract No.1
General Construction for Work to Solanco High School Activities Building Addition:

_____ Dollars

(\$_____).

Accompanying this proposal is security in the form of _____ Dollars
in the amount of _____ Dollars

(\$_____).

The undersigned proposes to complete the Work covered by this Proposal in such time and such manner and in cooperation with all others engaged on the Project, so that all Work will be fully completed by the date stated in Article 9 of the Supplementary Instructions to Bidders.

ALTERNATES

Contractor(s) are required to bid alternate prices on the following items:

The undersigned proposes the following alternates to the Basic Proposal in accordance with the Description set forth in Section 012300 - Alternates, and respective Specification Sections.

All line items must be completed indicating amount to be added to or deducted from the base bid, or N.C. indicating no change in the dollar amount.

- A. **Alternate Bid No. G-1 (General Construction Contract)** – State the amount to be added to the Base Bid “A” to provide the addition of the Girls Locker Room and Storage Room as indicated in the Contract Documents.

Add _____ Dollars

(\$_____)

UNIT PRICING

The Contractor is required to bid unit prices on the following items as identified in Section 012200-Unit Prices and respective Specification sections. If any extra work is required in these categories beyond the contract requirements, the unit prices shall be used as a basis for determining the amount of additional payment to the Contractor. If any deletions are to be made in these categories, the unit prices shall be used as a basis for determining the amount of credit the Contractor is to allow.

- A. Unit Price #G-1: Removal and Replacement of Unsuitable Soils
 - 1. ~~Description: Contractor shall remove and replace unsuitable soils as directed in the field by the Owner's representative.~~
 - 2. Add/Deduct \$ _____ per cubic yard.

ADDENDA

The undersigned hereby acknowledges receipt of, and has included in this Proposal the Work covered by the following Addenda:

Addendum No.	Dated
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

In submitting this Proposal, it is understood that the unrestricted right is reserved by the Owner to reject any and all proposals, or parts thereof, or to waive any informalities or technicalities in said proposals, and it is agreed that this proposal may not be withdrawn for a period of 60 days, or as provided by Pennsylvania law, from the opening thereof, except as permitted by law.

Should the Owner notify the undersigned of its intention to award a Contract to the undersigned based upon this Proposal the undersigned will furnish properly executed bonds and insurance certificates and will execute the proposed contract within the time and in the forms and amounts required by the Contract Documents, as defined in the Specifications, and that upon his failure, neglect or refusal to do so, he shall forfeit to the Owner, this security accompanying this Proposal, not as a penalty, but as liquidated damages.

In submitting this proposal, it is understood the Contract Documents for this project, and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of local, state and federal law(s), including but not limited to, the latest amendments of the following:

Williams-Steiger Occupational Safety & Health Act of 1970, Public Law 91-596;

Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;

Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

The undersigned hereby certifies that this proposal is genuine, and not sham or collusive, or made in the interest of or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other bidder.

In witness whereof, the undersigned has caused this Proposal to be executed this _____ day of _____, 2019.

INDIVIDUAL

(SEAL)

WITNESS:

PARTNERSHIP

(Name of Partnership)

WITNESS:

Partner

By: _____ (SEAL)

Partner

By: _____ (SEAL)

Partner

By: _____ (SEAL)

CORPORATION

(Name of Corporation)

By: _____ (SEAL)

(Vice) President

Attest

(Ass't) Secretary

(SEAL)

Address

The Corporation has been organized and is existing under the laws of the State of _____

END OF DOCUMENT

DOCUMENT 00 41 40 – ELECTRICAL CONSTRUCTION BID FORM

(This form is the official Bid Form to be executed and submitted in duplicate by the Bidder.)

Submitted By:

Bidder's Name

_____ Bidder's Address County State

Bidder's Phone No.

Bidder's Fax No.

This proposal is submitted in response to your Invitation to Bid in which Proposals were requested to be submitted for the Project identified as: Additions & Renovations to Swift Middle School and Clermont Elementary School for the Solanco School District, 121 South Hess Street, Quarryville, PA 17566

Contract No. 4 – Electrical Construction

BASE BID

Having carefully examined the Contract Documents together with all addenda thereto, all as prepared by the architectural firm Lewis & Associates Architects, and being familiar with the various conditions affecting the Work, the undersigned herein agrees to furnish all materials, perform all labor, and do all else necessary to complete the Work in accordance with the Contract Documents for the Base Sum of:

BASE BID “A” – One Story Structure for Contract No.4 Electrical Construction for Work to Solanco High School Activities Building Addition:

Dollars _____

(\$ _____).

BASE BID “B” - Complete Basement and First Floor for Contract No.4
Electrical Construction for Work to Solanco High School Activities Building Addition:

Dollars _____

(\$ _____).

Accompanying this proposal is security in the form of _____ in the amount of _____ Dollars

(\$ _____).

The undersigned proposes to complete the Work covered by this Proposal in such time and such manner and in cooperation with all others engaged on the Project, so that all Work will be fully completed by the date stated in Article 9 of the Supplementary Instructions to Bidders.

ALTERNATES

Contractor(s) are required to bid alternate prices on the following items:

The undersigned proposes the following alternates to the Basic Proposal in accordance with the Description set forth in Section 012300 - Alternates, and respective Specification Sections.

All line items must be completed indicating amount to be added to or deducted from the base bid, or N.C. indicating no change in the dollar amount.

A. Alternate Bid No. E-1 (Electrical Construction Contract) – State the amount to be added to the Base Bid “A” to provide the addition of the Girls Locker Room and Storage Room as indicated in the Contract Documents.

_____ Dollars

(\$ _____)

UNIT PRICING

The Contractor is required to bid unit prices on the following items as identified in Section 012200-Unit Prices and respective Specification sections. If any extra work is required in these categories beyond the contract requirements, the unit prices shall be used as a basis for determining the amount of additional payment to the Contractor. If any deletions are to be made in these categories, the unit prices shall be used as a basis for determining the amount of credit the Contractor is to allow.

A. ~~Unit Price #E-1: Duplex Receptacles and Wiring~~

1. ~~Description: Provide an additional duplex receptacle assembly including 20A, 120V duplex receptacle, back box, cover plate, 3/4" conduit/raceway with two (2) #12 conductors and one (1) #12 ground wire to a point of authorized connection, necessary wall penetration, cutting and patching, terminations and labeling. Perform in accordance with drawing requirements for similar work.~~
2. ~~Unit of Measurement: One assembly~~
3. ~~Add/Deduct \$ _____ per assembly.~~

B. ~~Unit Price #E-2: Exit Sign and Wiring~~

1. ~~Description: Provide an additional exit sign assembly consisting of (1) luminaire type EX1, including appropriate mounting equipment, 3/4" conduit/raceway with two (2) #10 conductors and one (1) #12 ground wire, necessary wall penetration, cutting and patching, terminations and connections. Connect to closest normal/emergency "Exit Sign" circuit. Perform in accordance with drawing requirements for similar work.~~
2. ~~Unit of Measurement: One assembly.~~
3. ~~Add/Deduct \$ _____ per assembly.~~

C. ~~Unit Price #E-3: 2x4 Light Fixture and Wiring~~

1. ~~Description: Provide an additional 2' x 4' light assembly consisting of (1) luminaire type RC1, appropriate mounting equipment, 3/4" conduit with two (2) #12 conductors and one (1) #12 ground wire to a point of authorized connection, necessary wall penetration, cutting and patching, terminations and connections. Perform in accordance with drawing requirements for similar work.~~
2. ~~Unit of Measurement: One assembly~~
3. ~~Add/Deduct \$ _____ per assembly.~~

D. ~~Unit Price #E-4: 1x4 Light Fixture and Wiring~~

1. ~~Description: Provide an additional 2' x 4' light assembly consisting of (1) luminaire type RC3, appropriate mounting equipment, 3/4" conduit with two (2) #12 conductors and one (1) #12 ground wire to a point of authorized connection, necessary wall penetration, cutting and patching, terminations and connections. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: One assembly.~~
 3. ~~Add/Deduct \$_____ per assembly~~
- E. ~~Unit Price #E-5—Heat or Smoke Detector & Wiring:~~
1. ~~Description: Provide an additional heat or smoke detector assembly, consisting of detector of type required for application, appropriate backbox (as applicable) and mounting equipment, cabling, conduit, necessary wall penetration cutting and patching, terminations, connections to fire alarm system, and programming required. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$_____ per assembly.~~
- F. ~~Unit Price #E-6—Duct Detector & Wiring:~~
1. ~~Description: Provide an additional duct detector assembly, consisting of detector of type required for application, appropriate backbox (as applicable) and mounting equipment, remote indicating, cabling, conduit, necessary wall penetration cutting and patching, terminations, connections to fire alarm system, and programming required. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$_____ per assembly.~~
- G. ~~Unit Price #E-7—Fire Alarm Pull Station & Wiring:~~
1. ~~Description: Provide an additional pull station assembly, consisting of pull station device, Backbox, cabling, conduit, necessary wall penetration cutting and patching, terminations, connections to fire alarm system, and programming required. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$_____ per assembly.~~
- H. ~~Unit Price #E-8—Fire Alarm Audible/Visual Device & Wiring:~~

1. ~~Description: Provide an additional fire alarm A/V device assembly, consisting of A/V device, backbox, cabling, conduit, necessary wall penetration cutting and patching, terminations, connections to fire alarm system, programming, and additional power supplies required. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$ _____ per assembly.~~
- I. ~~Unit Price #E-9—Fire Alarm Addressable Device & Wiring:~~
1. ~~Description: Provide an additional fire alarm addressable device assembly, consisting of addressable device, backbox, cabling, conduit, necessary wall penetration cutting and patching, terminations, connections to fire alarm system, programming, and additional power supplies required. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$ _____ per assembly.~~
- J. ~~Unit Price #E-10: Intercom Speaker and Wiring:~~
1. ~~Description: Provide an additional intercom speaker (type as required for space) consisting of backbox, mounting equipment, cabling, conduit and all terminations and connections to program system. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$ _____ per assembly.~~
- K. ~~Unit Price #E-11: Secondary Clock and Wiring:~~
1. ~~Description: Provide an additional secondary clock (type as required for space) consisting of backbox, mounting equipment, cabling, conduit and all terminations and connections to master clock system. Perform in accordance with drawing requirements for similar work.~~
 2. ~~Unit of Measurement: Per assembly~~
 3. ~~Maximum Distance: 100'~~
 4. ~~Add/Deduct \$ _____ per assembly.~~

Should the Owner notify the undersigned of its intention to award a Contract to the undersigned based upon this Proposal the undersigned will furnish properly executed bonds and insurance certificates and will execute the proposed contract within the time and in the forms and amounts required by the Contract Documents, as defined in the Specifications, and that upon his failure, neglect or refusal to do so, he shall forfeit to the Owner, this security accompanying this Proposal, not as a penalty, but as liquidated damages.

In submitting this proposal, it is understood the Contract Documents for this project, and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of local, state and federal law(s), including but not limited to, the latest amendments of the following:

Williams-Steiger Occupational Safety & Health Act of 1970, Public Law 91-596;

Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;

Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

The undersigned hereby certifies that this proposal is genuine, and not sham or collusive, or made in the interest of or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other bidder.

In witness whereof, the undersigned has caused this Proposal to be executed this _____ day of _____, 2019.

INDIVIDUAL

(SEAL)

WITNESS:

PARTNERSHIP

(Name of Partnership)

WITNESS:

Partner By: _____ (SEAL)

Partner By: _____ (SEAL)

Partner By: _____ (SEAL)

Partner By: _____ (SEAL)

CORPORATION

(Name of Corporation)

By: _____ (SEAL)
(Vice) President

Attest

(Ass't) Secretary (SEAL)

Address

The Corporation has been organized and is existing under the laws of the State of _____

END OF DOCUMENT

SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- B. Specific requirements for work of each contract are also indicated in individual Specification Sections and on Drawings.
- C. Related Sections:
 - 1. Division 01 Section "Summary" for the Work covered by the Contract Documents, restrictions on use of the Project site, phased construction, coordination with occupants, and work restrictions.
 - 2. Division 01 Section "Project Management and Coordination" for general coordination requirements.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, the condition at which roofing is insulated and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures equivalent in weather protection to permanent construction.

1.4 PROJECT COORDINATOR

- A. Project coordinator shall be responsible for coordination between the General Construction Contract, Plumbing Contract, HVAC Contract, Electrical Contract, and Bore Field Contract.
 - 1. General Construction Contractor shall act as project coordinator.
- B. Mechanical/electrical coordinator, who shall be under the direction of the Project coordinator, shall be responsible for coordination between the Plumbing Contract, HVAC Contract and Electrical Contract.
 - 1. HVAC Contractor shall act as mechanical/electrical coordinator.

1.5 COORDINATION ACTIVITIES

- A. Coordination activities of Project coordinator include, but are not limited to, the following:
 - 1. Provide overall coordination of the Work.
 - 2. Coordinate shared access to workspaces.
 - 3. Coordinate product selections for compatibility.
 - 4. Provide overall coordination of temporary facilities and controls.
 - 5. Coordinate, schedule, and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.

6. Coordinate construction and operations of the Work with work performed by each Contract, Owner's construction forces, and separate contracts.
 7. Prepare coordination drawings in collaboration with each contractor to coordinate work by more than one contract.
 - a. Prepare a coordination drawing of the utilities on the site. Drawing should include stormwater lines, propane lines, electrical lines, fire protection lines, data lines, water main, propane tanks, etc. All utilities lines should be indicated on this drawing with elevations indicated. G.C. to coordinate sequence of activities. All other primes shall coordinate their activities and information with GC. Indicate foundations and details for installing utilities in association with foundations.
 - b. Coordinate information with Mechanical/Electrical Coordinator in regards to completing MPE Systems Coordination Drawings. Mechanical/Electrical Coordinator is responsible for the completion of the MPE Systems drawings as indicated in SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION. GC to confirm backgrounds (and any other equipment information supplied by GC) to Mechanical/Electrical Coordinator for inclusion in MPE Systems drawings.
 - c. Excludes work required by Mechanical /Electrical Coordinator included in item 1.5.C6.a of this section.
 8. Coordinate sequencing and scheduling of the Work. Include the following:
 - a. Initial Coordination Meeting: At earliest possible date, arrange and conduct a meeting with contractors for sequencing and coordinating the Work; negotiate reasonable adjustments to schedules.
 - b. Prepare a combined Contractors' construction schedule for entire Project. Base schedule on preliminary construction schedule. Secure time commitments for performing critical construction activities from contractors. Show activities of each contract on a separate sheet. Prepare a simplified summary sheet indicating combined construction activities of contracts.
 - 1) Submit schedules for approval.
 - 2) Distribute copies of approved schedules to contractors.
 9. Provide photographic documentation.
 10. Provide quality-assurance and quality-control services specified in Division 01 Section "Quality Requirements."
 11. Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
 12. Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
 13. Locate existing permanent benchmarks, control points, and similar reference points, and establish permanent benchmarks on Project site.
 14. Provide field surveys of in-progress construction and site work.
 15. Provide progress cleaning of common areas and coordinate progress cleaning of areas or pieces of equipment where more than one contractor has worked.
 16. Coordinate cutting and patching.
 17. Coordinate protection of the Work.
 18. Coordinate firestopping.
 19. Coordinate completion of interrelated punch list items.
 20. Coordinate preparation of Project record documents if information from more than one contractor is to be integrated with information from other contractors to form one combined record.
 21. Print and submit record documents if installations by more than one contractor are indicated on the same contract drawing or shop drawing.
 22. Collect record Specification Sections from contractors, collate Sections into numeric order, and submit complete set.
 23. Coordinate preparation of operation and maintenance manuals if information from more than one contractor is to be integrated with information from other contractors to form one combined record.
- B. Responsibilities of Project coordinator for temporary facilities and controls include, but are not limited to, the following:
1. Provide common-use field office for use by all personnel engaged in construction activities.
 2. Provide telephone service and internet connection for common-use facilities.
- C. Mechanical/Electrical Coordinator: Coordination activities of mechanical/electrical coordinator include, but are not limited to, the following:
1. Schedule and sequence mechanical and electrical activities.
 2. Coordinate sharing access to workspaces by mechanical and electrical contractors.

3. Coordinate integration of mechanical and electrical work into limited spaces.
4. Coordinate protection of mechanical and electrical contractors' work.
5. Coordinate cutting and patching for mechanical and electrical work.
6. Prepare mechanical and electrical coordination drawings.
 - a. MPE Systems drawings as specified in SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION .
7. Coordinate tests and inspections for mechanical and electrical work.
8. Coordinate mechanical and electrical temporary services and facilities.

1.6 GENERAL REQUIREMENTS OF CONTRACTS

- A. Extent of Contract: Unless the Agreement contains a more specific description of the work, requirements indicated on Drawings and in Specification Sections determine which contract includes a specific element of Project.
1. Unless otherwise indicated, the work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
 2. Unless otherwise indicated, Trenches for the Work of each contract shall be provided by each contract for its own Work including erosion and sediment control measures required by authorities having jurisdiction. Each contractor is responsible for dewatering trenches for the Work of their contract.
 3. Unless otherwise indicated, Blocking, backing panels, sleeves, and metal fabrication supports for the work of each contract shall be the work of each contract for its own work.
 4. Unless otherwise indicated, Furnishing of access panels for the work of each contract shall be the work of each contract for its own work. Installation of access panels shall be the work of each contract for its own work.
 5. Unless otherwise indicated, Equipment pads for the work of each contract shall be the work of each contract for its own work.
 6. Unless otherwise indicated, Roof-mounted equipment curbs for the work of each contract shall be the work of each contract for its own work.
 7. Unless otherwise indicated, Painting for the work of each contract shall be the work of each contract for its own work.
 8. Unless otherwise indicated, Cutting and Patching: Provided under each contract for its own work.
 9. Unless otherwise indicated, Through-penetration firestopping for the work of each contract shall be provided by each contract for its own work.
 10. Contractors' Preliminary Construction Schedule: Within five working days after preliminary horizontal bar-chart-type construction schedule and preliminary network diagram submittal has been received from Project coordinator, submit a matching preliminary horizontal bar-chart schedule and preliminary network diagram showing construction operations sequenced and coordinated with overall construction.
 11. Project closeout requirements.
 12. Office administration personnel and field superintendents shall be capable of sending and receiving electronic communications in the office and on-site. Operating systems shall be capable with Microsoft Windows systems.
 13. Contractor shall have file of all submittals and approvals on-site.
- B. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the work.
1. Project coordinator shall coordinate substitutions.
- C. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 01 Section "Temporary Facilities and Controls," each contractor is responsible for the following:
1. Installation, operation, maintenance, and removal of each temporary facility necessary for its own normal construction activity, and costs and use charges associated with each facility, except as otherwise provided for in this Section.

2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 3. Its own field office, complete with necessary furniture, utilities, and telephone service.
 4. Its own storage and fabrication sheds.
 5. Temporary enclosures for its own construction activities.
 6. Staging and scaffolding for its own construction activities.
 7. General hoisting facilities for its own construction activities, up to **2 tons(2000 kg)**.
 8. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials.
 9. Progress cleaning of work areas affected by its operations on a daily basis.
 10. Secure lockup of its own tools, materials, and equipment.
 11. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
 12. Containerized bottled-water drinking water units for its staff, laborers, and subcontractors.
 13. Temporary wash facilities for its staff, laborers, and subcontractors.
 14. Two mobilizations/demobilizations of its own field offices and trailers.
- D. Temporary Heating, Cooling, and Ventilation: The General Construction Contract is responsible for temporary heating, cooling, and ventilation before permanent enclosure of building is complete and the permanent HVAC system is operational and the General Contractor is responsible for these use charges. The Mechanical Contractor is responsible for temporary heating, cooling, and ventilation after permanent enclosure of building is complete and the permanent HVAC system is operational and Owner will pay these utility-use charges.
1. Permanent HVAC system will be operational for use as temporary heating, cooling, and ventilation by milestone stated in Sequence of Construction on Phasing Drawings.
- E. Use Charges: Comply with the following:
1. ~~Electrical Power Service:~~
 - a. ~~E.C. shall install the specified temporary power to each contractor's trailer located in the staging area and to the general construction site. This temporary power is to be supplied from existing building electrical service. Extend required service from the existing "Water Heater" fused QMB switch. This is a 200 amp switch currently fused at 175 amps. E.C. shall provide transformer as required for 120/208 Volt service. E.C. shall be responsible for all costs associated with installing this temporary service.~~
 2. Water service:
 - a. Permanent water system is to be extended from Owner's existing on-site system. Temporary water system can be extended from the Owner's existing on-site system and Owner will be responsible for these usage costs. GC is responsible for any temporary water usage costs that can not be provided from the Owner's existing on-site system.

1.7 GENERAL CONSTRUCTION CONTRACT

- A. Work in the General Construction Contract includes, but is not limited to, the following:
1. Remaining work not identified as work under other contracts.
 2. Construction work indicated on drawings.
 3. Site preparation, including clearing, building demolition and relocations, and earthwork.
 4. Site improvements, including roadways, parking lots, pedestrian paving, site development furnishings and equipment, and landscaping.
 5. All Site work outside a limit of five feet outside the perimeter of all new buildings including but not limited to the following:
 - a. Work does not include items specifically indicated to be provided by other Contractors in this section or in Contract Documents.
 - b. Site storm sewer water system.
 - c. ~~Site fuel distribution.~~
 - d. Site special plumbing systems.
 - e. Site water supply and distribution. Extension for temporary service is ~~indicated on site drawings.~~

- f. Site sanitary sewer.
 6. Selective demolition.
 7. Foundations, including footings, foundation walls.
 8. Slabs-on-grade, including earthwork, subdrainage systems, and insulation.
 9. Below-grade building construction, including excavation, backfill, and thermal and moisture protection.
 10. Superstructure, including floor and roof construction, sprayed fire-resistive materials, and board fire protection.
 11. Exterior closure, including walls, parapets, doors, windows, and louvers.
 12. Roofing, including coverings, flashings roof specialties and glazed openings.
 13. Interior construction, including partitions, doors, interior glazed openings, and fittings.
 14. Fire-protection specialties.
 15. Stairs, including railings and finishes.
 16. Interior finishes finish carpentry architectural woodwork and built-in casework.
 17. Conveying systems, including modifications to elevators and wheelchair lifts.
 18. ~~Equipment, including the following:~~
 - a. ~~Stage equipment.~~
 - b. ~~Projection screens.~~
 19. Furnishings, including casework, window treatments, floor grilles and mats.
- B. Temporary facilities and controls in the General Construction Contract include, but are not limited to, the following:
1. Temporary facilities and controls that are not otherwise specifically assigned to the Plumbing Contract, HVAC Contract, Electrical Contract, and Bore Field Contract.
 2. Soil and erosion control measures indicated on drawings and as required by authorities.
 3. Unpiped sewers and drainage, including drainage ditches, dry wells, stabilization ponds, and containers.
 4. Stormwater control.
 5. Unpiped temporary toilet fixtures, wash facilities, and drinking water facilities, including disposable supplies.
 6. Temporary enclosure for building exterior, except as indicated.
 7. Temporary roads and paved areas.
 8. Dewatering facilities and drains.
 9. Excavation support and protection, unless required solely for the Work of another contract.
 10. Project identification and temporary signs.
 11. General waste disposal facilities.
 12. Pest control.
 13. Temporary stairs.
 14. Temporary fire-protection facilities.
 15. Barricades, warning signs, and lights.
 16. Site enclosure fence.
 17. Covered walkways.
 18. Security enclosure and lockup.
 19. Environmental protection.
 20. Restoration of Owner's existing facilities used as temporary facilities.
 21. ~~Field office that includes a room of not less than 200 S.F. that can house a meeting of 20 people including conference table and chairs for all fourteen people. Include a minimum of (2) 8' tackboards.~~
 22. Temporary Heat and humidity control before the building is enclosed (as required) and the new HVAC system is operational.
 23. Snow removal outside and inside perimeter of building including construction staging areas, access to all field offices, and areas of the site with construction activities.
 24. Temporary traffic control signs and pavement striping.
 25. Temporary water service until permanent system is operational.

1.8 PLUMBING CONTRACT

- A. Work in the Plumbing Contract includes, but is not limited to, the following:

1. Plumbing work described on drawings.
2. Plumbing fixtures.
3. Domestic water distribution.
4. Sanitary waste and stormwater drainage system.
5. Excavation and backfill of the following systems inside a limit of five feet beyond the perimeter of all new buildings including but not limited to the following:
 - a. Sanitary waste.
 - b. ~~Stormwater drainage.~~
 - c. Water supply and distribution.
6. Special plumbing systems, including the following:
 - a. Liquid propane – complete system.
7. Plumbing connections to equipment furnished by the General Construction Contract, Plumbing Contract, Electrical Contract.
8. Final connections to the stormwater, sanitary, and water utilities at the 5' demarcation line beyond the building perimeter.
9. Starting and commissioning of plumbing systems and equipment.
10. Incorporating plumbing system controls (pumps, automatic valves, etc) into existing Niagara Building automation system. To be coordinated with owners preferred controls contractor.

B. Temporary facilities and controls in the Plumbing Contract include, but are not limited to, the following:

1. Piped sewerage and drainage inside a limit of five feet beyond the perimeter of all new buildings.
2. Piped liquid propane service.
3. Plumbing connections to existing systems and temporary facilities and controls furnished by the General Construction Contract, Plumbing Contract, Electrical Contract, owner.
4. Temporary fire hoses and signs.

1.9 HVAC CONTRACT

A. Work in the HVAC Contract includes, but is not limited to, the following:

1. Energy supply, ~~including loop water supply systems.~~
2. HVAC systems and equipment.
3. HVAC instrumentation and controls.
4. HVAC testing, adjusting, and balancing – ~~Preliminary~~ to within 10% of design values.
5. ~~Building automation system.~~ Incorporating controls into existing Niagara Building automation system. To be coordinated with owners preferred controls contractor.
6. HVAC connections to equipment furnished by the General Construction Contract, Plumbing Contract, Mechanical Contract, Electrical Contract, and owner. Work includes but is not limited to controls, piping and sheet metal.
7. HVAC work described in Division 15 of Mechanical sheets.
8. ~~Building Security System specified in Section 230950 INTEGRATED SECURITY SYSTEM.~~
9. Earthwork associated with HVAC work inside a limit of 5 feet beyond the perimeter of all new buildings.
10. Starting and commissioning of HVAC systems and equipment.

B. Temporary facilities and controls in the HVAC Contract include, but are not limited to, the following:

1. Temporary Heat using the permanent HVAC system once the building is enclosed and the new HVAC system is operational.
2. Temporary controls of the permanent HVAC system once the building is enclosed and the new HVAC system is operational.

1.10 ELECTRICAL CONTRACT

A. Work in the Electrical Contract includes, but is not limited to, the following:

1. Site electrical distribution.
2. ~~Site lighting.~~

3. Site communications.
 4. Electrical service and distribution.
 5. Exterior and interior lighting and associated controls.
 6. Communication systems rough-in.
 7. ~~Special electrical systems, including the following:~~
 - a. ~~Packaged engine generator systems.~~
 8. Coordination and interface with owner provided BMS system to include lighting controls and electrical service sub metering
 9. Electrical connections to equipment furnished by the General Construction Contract, Plumbing Contract, ~~Electrical~~ HVAC Contract, and owner.
 10. ~~Electrical/Communications work described in Division 26.~~
- B. Temporary facilities and controls in the Electrical Contract include, but are not limited to, the following:
1. Electric power service and ~~distribution including 220 volt service required by not limited to terrazzo grinders/polishers.~~
 2. ~~Lighting, including site lighting.~~
 3. Electrical connections to existing systems and temporary facilities and controls furnished to equipment furnished by the General Construction Contract, Plumbing Contract, ~~Electrical~~ HVAC Contract, and owner.
 4. ~~Connections for illuminated signs.~~
 5. ~~Temporary electric service for storage trailers and field offices of all Prime Contractors including owner's field office for Construction Representative.~~
 6. ~~Temporary internet service to staging area for use by all contractors. Extend service from telephone utility to demark location that is acceptable to telephone utility company. Prime Contractors will extend their own internet service line from demark location to their construction trailers.~~
 7. Temporary lighting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 12 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Sections:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF GENERAL CONSTRUCTION UNIT PRICES

- A. Unit Price No. 1 - Remove existing duct insulation, seal and re-insulate.

1. Description: Where existing ductwork does not meet the duct pressure testing requirement, remove existing duct insulation, seal and re-insulate ductwork in accordance with specifications. The unit price shall include all costs associated with removing insulation, sealing and re-insulation of existing ductwork
2. Unit of Measurement: Square feet.
3. Price per Unit of Measurement: \$15.00

B. Unit Price No. 2 - Earth Excavation Offsite:

1. Description: Earth excavation - machine and disposal offsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$30.00

C. Unit Price No. 1 – Remove existing duct insulation, seal and re-insulate.

1. Description: Where existing ductwork does not meet the duct pressure testing requirement, remove existing duct insulation, seal and re-insulate ductwork in accordance with specifications. The unit price shall include all costs associated with removing insulation, sealing and re-insulation of existing ductwork.
2. Unit of Measurement: Square feet.
3. Price per Unit of Measurement: \$15.00.

D. Unit Price No. 2 - Earth Excavation Offsite:

4. Description: Earth excavation - machine and disposal offsite
5. Unit of Measurement: Cubic yard
6. Price per Unit of Measurement: \$30.00

E. Unit Price No. 3 - Earth Excavation Onsite:

1. Description: Earth excavation - hand and disposal onsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$90.00

F. Unit Price No. 4 - Trench Excavation Onsite:

1. Description: Trench excavation and soil disposal onsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$15.00

G. Unit Price No. 5 - Contaminated Soil:

1. Description: Excavate and legally dispose offsite petroleum contaminated soil
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$275.00

H. Unit Price No. 6 - MSHA #2 or #57 Stone at Trench Areas:

1. Description: Undercut, dispose onsite, refill with MSHA #2 or #57 stone and compact per specified requirements at trench areas only
 2. Unit of Measurement: Cubic yard
 3. Price per Unit of Measurement: \$60.00
- Unit Price No. 7 - CR-6 or CR-1 at Trench Areas:**

1. Description: Undercut, dispose onsite, refill with CR-6 or CR-1 and compact per specified requirements at trench areas only
2. Unit of Measurement: Cubic yard

3. Price per Unit of Measurement: \$50.00

I. Unit Price No. 8 - MSHA #2 or #57 Stone in Open Areas:

1. Description: Undercut, dispose offsite, refill with MSHA #2 or #57 stone and compact per specified requirements in open areas only

2. Unit of Measurement: Cubic yard

3. Price per Unit of Measurement: \$55.00

J. Unit Price No. 9 - Imported Screened Topsoil:

1. Description: Imported screened topsoil and fine graded in place - no material larger than $\frac{3}{4}$ " in mix

2. Unit of Measurement: Cubic yard

3. Price per Unit of Measurement: \$40.00

K. Unit Price No. 10 - Sodding:

1. Description: Sodding

2. Unit of Measurement: Square yard

3. Price per Unit of Measurement: \$4.25

L. Unit Price No. 11 - Permanent Seeding and Mulch:

1. Description: Permanent seeding and mulch

2. Unit of Measurement: Square yard

3. Price per Unit of Measurement: \$1.50

M. Unit Price No. 12 - Temporary Seeding and Straw:

1. Description: Temporary seeding and straw

2. Unit of Measurement: Square yard

3. Price per Unit of Measurement: \$0.75

N. Unit Price No. 13 - Super Silt Fence:

1. Description: Furnish, install, maintain, and remove super silt fence and grade/restabilize

2. Unit of Measurement: Linear Foot

3. Price per Unit of Measurement: \$12.00

O. Unit Price No. 14 - Silt Fence:

1. Description: Furnish, install, maintain, and remove silt fence and grade/restabilize

2. Unit of Measurement: Linear Foot

3. Price per Unit of Measurement: \$5.50

P. Unit Price No. 15 - Trench Rock:

1. Description: Remove trench rock haul and dispose of legally offsite

2. Unit of Measurement: Cubic Yard

3. Price per Unit of Measurement: \$225.00 Unit Price No. 16 - Open Rock:

1. Description: Remove open rock, haul and dispose of legally offsite

2. Unit of Measurement: Cubic Yard
3. Price per Unit of Measurement: \$125.00

Q. Unit Price No. 17 - Damaged Paving:

1. Description: Saw, cut and remove damaged paving, dispose of legally offsite, replace with 4" base course and 1-1/2" surface course.
2. Unit of Measurement: Square Yard
3. Price per Unit of Measurement: \$55.00

R. Unit Price No. 18 - Concrete Curb and Gutter:

1. Description: Concrete curb and gutter
2. Unit of Measurement: Linear Foot
3. Price per Unit of Measurement: \$18.00

S. Unit Price No. 19 – Firestopping Method I:

1. Description: Includes the complete cost per void to fill large voids per specs and drawings. This includes 2-inch thick mineral wool batts at 6" to 8" openings.
2. Unit: Each
3. Price: \$40.00

T. Unit Price #20: Firestopping Method II (up to 5 Sq. Ft.):

1. Description: Includes the complete cost per void to fill large voids per specs and drawings. This includes rated drywall construction for openings greater than 8".
2. Unit: Each
3. Price: \$50.00

U. Unit Price #21: Firestopping Method III (over 5 Sq. Ft.):

1. Description: Includes the complete cost per void to fill large voids per specs and drawings. This includes rated drywall construction for openings greater than 8".
2. Unit: Sq. Ft.
3. Price: \$10.00

V. Unit Price #22: Heating Supply and Return Piping:

1. Description: Fully insulated piping and fittings as specified.
2. Unit: LF
3. Price:
 - a. 3/4" - \$20.00
 - b. 1" - \$22.00
 - c. 1-1/4" - \$25.00
 - d. 1-1/2" - \$27.00
 - e. 2" - \$31.00
 - f. 2-1/2" - \$42.00
 - g. 3" - \$48.00
 - h. 4" - \$61.00
 - i. 5" - \$74.00

W. Unit Price #23: Isolation Valves:

1. Description: Includes the complete cost per valve for providing isolation valves on heating water piping. The valve sizes shall be: 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6". Valve types shall be as specified.

2. Unit: Each

3. Price:

a. 3/4" - \$75.00

b. 1" - \$90.00

c. 1-1/4" - \$130.00

d. 1-1/2" - \$170.00

e. 2" - \$200.00

f. 2-1/2" - \$800.00

g. 3" - \$1,100.00

h. 4" - \$1,250.00

i. 5" - \$1,950.00

X. Unit Price #24: Ductwork Insulation:

1. Description: 1-1/2 flexible blanket type, 1.0 PCF minimum density and reinforced foil-scrim-kraft vapor barrier facing.

2. Unit: Sq. Ft.

3. Price: \$3.75

Y. Unit Price #25: Manual Dampers (Rigid Frame):

1. Description: Opposed blade action locking quadrant operator.

2. Unit: Sq. Ft.

3. Price: \$60.00

Z. Unit Price #26: Vinyl Composition Tile (VCT) Replacement:

1. Description: Includes the complete cost per sq. ft. of replacing existing VCT with new VCT. New VCT shall match specified product.

2. Unit: Sq. Ft.

3. Price: \$1.90

AA. Unit Price #27: Ceiling Grid and Acoustical Tile Replacement:

1. Description: Replace 2' x 4' ceiling grid and acoustical tile to match existing.

2. Unit: Sq. Ft.

3. Price: \$3.75

BB. Unit Price #28: Fiber Reinforced Wallboard and Metal Stud Partition:

1. Description: Includes complete cost per sq. ft. for providing fiber reinforced wallboard on metal stud framing with taping and finishing of wallboard ready to paint.

2. Unit: Sq. Ft.

3. Price: \$3.00

CC. Unit Price #29: Vinyl Wall Base:

1. Description: Includes complete cost of complete installation of new 6 inch vinyl base on new or existing walls.

2. Unit: LF

3. Price: \$2.50

DD. Unit Price #30: Painting Wallboard:

1. Description: Includes complete cost per sq. ft. of painting finished wallboard as specified.
2. Unit: Sq. Ft.
3. Price: \$0.45

EE. Unit Price #31: Painting CMU:

1. Description: Includes complete cost per sq. ft. of painting CMU walls as specified, including block filler.
2. Unit: Sq. Ft.
3. Price: \$0.50

FF. Unit Price #32: Demolish Slab On-Grade:

1. Description: Includes removal of demo material.
2. Unit: Sq. Ft.
3. Price: \$25.00

GG. Unit Price #33: Patch and Repair Damage or Opening in Slab On-Grade:

1. Description: Includes steel reinforcement where applicable.
2. Unit: Sq. Ft.
3. Price: \$6.00

HH. Unit Price #34: Structural Steel:

1. Description: Fabricate and install structural steel.
2. Unit: Ton
3. Price: \$3,500.00

II. Unit Price #35: Install New Opening through Elevated Concrete Slab (Applies to Openings 1'-0" x 1'-0" and Larger):

1. Description: Includes all required steel support framing.
2. Unit: Each
3. Price: \$750.00

JJ. Unit Price #36: Infill Opening in Elevated Concrete Slab:

1. Description: Includes all required steel support framing.
2. Unit: Each
3. Price: \$500.00

KK. Unit Price #37: Existing Structural Members:

1. Description: Reinforce existing structural members.
2. Unit: Ton
3. Price: \$5,000.00

LL. Unit Price #38: Install Opening through Masonry Wall:

1. Description: Applies to openings with a width of 12 inches or greater, includes masonry lintel and removal of demo material.
2. Unit: Each
3. Price: \$500.00

MM. Unit Price #39: Infill Opening in Masonry Wall:

1. Description: Infill opening in masonry wall.
2. Unit: Sq. Ft.
3. Price: \$15.00

NN. Unit Price #40: Receptacle:

1. Description: NEMA 5-20R receptacle complete with 50 feet of 2 #12 and 1 #12G in 3/4-inch EMT.
2. Unit: Unit
3. Price: \$300.00

OO. Unit Price #41: Telephone Drop:

1. Description: Cat 5E telephone jack complete with testing and termination. Include 150 feet of Cat 5E plenum cable.
2. Unit: Unit
3. Price: \$200.00

PP. Unit Price #42: Data Drop:

1. Description: Cat 5E data jack complete with testing and termination. Include 150 feet of Cat 5E plenum cable.
2. Unit: Unit
3. Price: \$200.00

QQ. Unit Price #43: Video Drop:

4. Description: Video jack. Include 100 feet of coaxial cable.
5. Unit: Unit
6. Price: \$150.00

RR. Unit Price #44: Fire Alarm Strobe:

1. Description: 100 cd wall mounted fire alarm strobe complete with 50 feet of fire alarm wiring in 3/4-inch EMT conduit. Include all testing and programming of device.
2. Unit: Unit
3. Price: \$400.00

SS. Unit Price #45: Fire Alarm/Horn Strobe:

1. Description: 100 cd wall mounted fire alarm strobe and horn complete with 50 feet of fire alarm wiring in 3/4-inch EMT conduit. Include all testing and programming of device.
2. Unit: Unit
3. Price: \$450.00

TT. Unit Price #46: Emergency LED Exit Sign:

1. Description: Single face, complete with 50 feet of 2 #12 and 1 #12G in 3/4-inch EMT conduit.
2. Unit: Unit
3. Price: \$450.00

END OF SECTION 01 22 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections:
 - 1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Electric Power Service:
 - 1. Construction area: ~~Owner will pay electric power service use charges for electricity extended from the owner's existing electrical service that is used by all entities for construction operations.~~ Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
 - 2. Construction Staging/Trailer Area: ~~Owner will pay electric power service use charges for electricity extended from the owner's existing electrical service that is used by all entities for construction operations.~~ Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
 - 1. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.

- C. Dust-Control and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-control and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of the work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Other dust-control measures.
 - 4. Waste management plan.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum **2-inch(50-mm)**, **0.148-inch-(3.8-mm-)** thick, galvanized steel, chain-link fabric fencing; minimum **6 feet(1.8 m)** high with galvanized steel pipe posts; minimum **2-3/8-inch-(60-mm-)** OD line posts and **2-7/8-inch-(73-mm-)** OD corner and pull posts, with **1-5/8-inch-(42-mm-)** OD top and bottom rails. Provide galvanized steel bases for supporting posts.
- B. Polyethylene Sheet: Reinforced, fire-resistive sheet, **10 mils(0.25 mm)** minimum thickness, with flame-spread rating of 15 or less per ASTM E 84.
- C. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flamespread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

- A. **Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading. Owner will allocate space for contractor's field office, if they wish to provide their own field office. The Southeast edge of the parking lot can tentatively be used for field offices, though final location will be determined at Pre-Construction meeting.**
- B. ~~Common Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:~~
 - 1. ~~Furniture required for Project site documents including file cabinets, plan tables, plan racks, and bookcases.~~

2. ~~Conference room of sufficient size to accommodate meetings of 16 individuals. Provide electrical power service and 120 V ac duplex receptacles, with not less than 1 receptacle on each wall. Furnish room with conference table, chairs, and 4-foot (1.2-m) square tack and marker boards.~~
3. ~~Drinking water.~~
4. ~~Coffee machine and supplies.~~
5. ~~Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F (20 to 22 deg C).~~
6. ~~Lighting fixtures capable of maintaining average illumination of 20 fc (215 lx) at desk height.~~

C. ~~Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.~~

1. ~~Store combustible materials apart from building.~~

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Until permanent HVAC system is operational, provide vented, self-contained, liquid-propane gas or fuel-oil heaters with individual space thermostatic control.
 1. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 2. Permanent HVAC System: Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction and clean HVAC system as required in Division 01 Section "Closeout Procedures".

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating and Humidity Control: Provide temporary heating and humidity control required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed in accordance with approved coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust containment devices.
 - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
 - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- H. Electric Power Service-Construction site: Connect to Owner's existing electric power service for construction activities adjacent to the existing building. ~~Maintain equipment in a condition acceptable to Owner.~~ Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Connect temporary service to Owner's existing power source, ~~as directed by Owner~~ as required.
- I. Electric Power Service-Contractor's Construction staging/trailer area: Owner is allowing Contractors to tie into the existing power source, either at the grandstands or at the existing Jr. High Activities Building, for temporary power to Contractor's provided trailers, if needed. Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Install electric power service overhead, underground, or protected on grade.
- J. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - 2. ~~Install lighting for Project identification sign.~~
 - 3. ~~Provide temporary lighting that provides security and protection of the construction trailers and lay down areas for the project.~~
- K. ~~Electronic Communication Service: Provide temporary electronic communication service, including electronic mail, in common use facilities.~~

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. ~~Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.~~
2. ~~Maintain support facilities until Architect schedules Substantial Completion inspection.~~ Remove support facilities before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Division 31 Section "Earth Moving."
3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 32 Section "Asphalt Paving."

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants. E. Parking: Provide temporary parking areas for construction personnel.

F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification sign; **size 4' x 6' and information on sign to be determined at a later time.**
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
3. Maintain and touchup signs so they are legible at all times.
4. GC is responsible to furnish and install Project Identification Sign ~~as indicated on attached drawing 015000-4~~

- H. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Contractors are encouraged to recycle as much as practical. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- I. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Division 01 Section "Summary."
 - 2. Owner will coordinate with Contractors time periods of "low noise" required for educational needs inside the existing facility.
- B. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Division 31 Section "Site Clearing."
- C. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Comply with requirements specified in Division 01 Section "Temporary Tree and Plant Protection."
- E. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
- F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As indicated on Drawings.
 - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- J. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

- K. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 3. Insulate partitions to control noise transmission to occupied areas.
 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 5. Protect air-handling equipment.
 6. Provide walk-off mats at each entrance through temporary partition.
- L. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.

2. Use permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage. C. Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.
- D. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- E. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 01 50 00

DATE:	12/20/19	DRAWING NO:	E2
SCALE:	AS NOTED		
DRAWN BY:			
CHECKED BY:			
DESIGNED BY:			
PROJECT NUMBER:			
FLOOR NUMBER:			

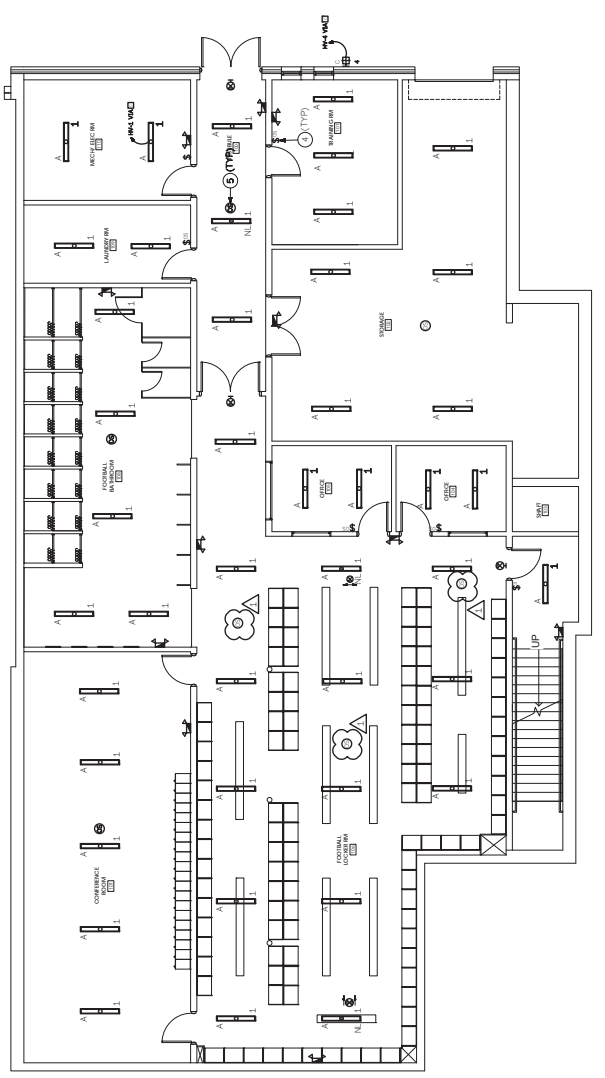
FOR
SOLANCO HIGH SCHOOL ACTIVITIES BUILDING ADDITION
 RECONSTRUCTION
BASEMENT AND NOTES
 LIGHTING PLAN

SOLANCO SCHOOL DISTRICT
 121 South Hess Street, Quarryville, PA 17566

REV#	DATE	DESCRIPTION
1	02/07/19	Addressed #1

DRAWING NOTES

1. CONTRACTOR SHALL CONNECT ALL EMERGENCY EXIT LIGHTS TO UNSWITCHED PORTION OF LIGHTING CIRCUIT SERVING AREA.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LIGHT FIXTURE LOCATION AND EXACT LOCATION OF LIGHT FIXTURES.
3. THE CONTRACTOR SHALL NOTE BRANCH CIRCUIT WIRING IS NOT SHOWN; HOWEVER, CIRCUIT NUMBERS ARE SHOWN ADJACENT TO FIXTURES IN SUBSCRIPTS. CONTROL FIXTURE WITHIN SPACE SHOWN OR AS DESIGNATED WITH SUBSCRIPTS. PROVIDE BRANCH CIRCUIT WIRING TO EACH LIGHT FIXTURE AND PROVIDE BOTH BRANCH CIRCUIT CONFIGURATION AND SWITCHING SCHEME AS INDICATED.
4. PROVIDE WALL BOX MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR FOR CONTROL OF LIGHTING FIXTURES WITHIN AREA. CONTRACTOR SHALL PROVIDE FULLY FUNCTIONAL SYSTEM TO EACH LIGHT FIXTURE TO INSTALL A FULLY FUNCTIONAL SYSTEM TO PROVIDE FULL LEVEL OF AREA SERVED.
5. PROVIDE CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR FOR CONTROL OF LIGHTING FIXTURES WITHIN AREA. CONTRACTOR SHALL PROVIDE FULLY FUNCTIONAL SYSTEM TO EACH LIGHT FIXTURE TO INSTALL A FULLY FUNCTIONAL SYSTEM TO PROVIDE FULL LEVEL OF AREA SERVED.

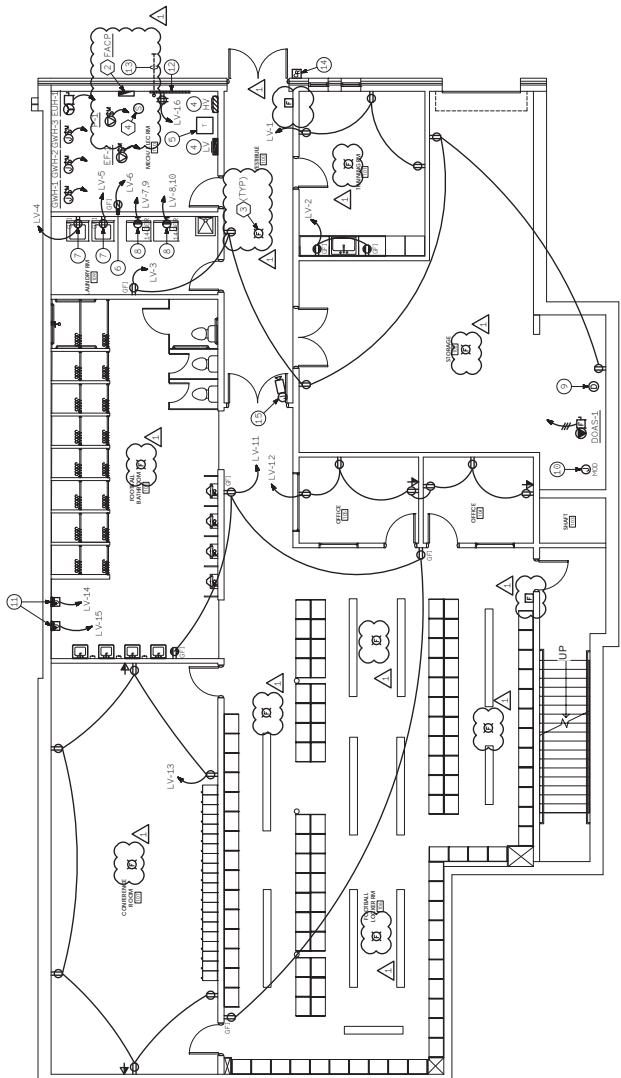


○○○ LIGHTING PLAN - BASEMENT
 SCALE: 3/16"=1'-0"



DRAWING NOTES

- COORDINATE EXACT DEVICE LOCATIONS, HEIGHTS, AND MOUNTING WITH OWNER REPRESENTATIVE IN THE FIELD.
- PROVIDE CONNECTIONS TO ALL MECHANICAL EQUIPMENT AS INDICATED IN MECHANICAL INFORMATION. COORDINATE EXACT MOUNTING LOCATION WITH MECHANICAL CONTRACTOR IN THE FIELD.
- ALL DEVICES SHALL BE FLUSH MOUNTED WITHIN CONCRETE BLOCK WALLS. NO DEVICES, CONDUIT, OR WIRING SHALL BE MOUNTED IN TEAR ROOM AREAS.
- PROPOSED LOCATION OF NEW PANELBOARD, REFER TO POWER RISER AND PANEL SCHEDULE, SHEET E6 FOR ADDITIONAL INFORMATION.
- PROPOSED LOCATION OF NEW FLOOR MOUNTED POWER RISER, REFER TO POWER RISER, SHEET E6 FOR ADDITIONAL INFORMATION.
- PROVIDE GFI PROTECTED DUPLEX RECEPTACLE FOR SCHOOL PROVIDED ICE MACHINE. COORDINATE EXACT MOUNTING LOCATION WITH SCHOOL REPRESENTATIVE PRIOR TO START OF WORK.
- PROVIDE GFI PROTECTED DUPLEX RECEPTACLE FOR MACHINE. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD.
- PROVIDE NEMA 14-50R RECEPTACLE FOR CONNECTION TO SCHOOL PROVIDED ICE MACHINE. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD. PROVIDE WIRING AS INDICATED.
- PROVIDE 120V ELECTRICAL CONNECTION TO DUCT MOUNTED SMOKE DETECTOR. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL DRAWINGS IN THE FIELD. CIRCUIT #LV-55.
- PROVIDE 120V CONNECTION TO MOTOR OPERATED DAMPER (M.O.D.) PROVIDED AND INSTALLED BY CONTRACTOR. COORDINATE EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS IN THE FIELD. CIRCUIT #LV-55.
- PROVIDE 120V ELECTRICAL CONNECTION TO PROPOSED SMOKE DETECTOR. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL DRAWINGS IN THE FIELD. CIRCUIT #LV-55.
- CONTRACTOR SHALL PROVIDE 4" x 8" x 3/4" THICK FIRE TREATED PLYWOOD BACKGROUND FOR TELEPHONE AND DATA CABLES. COORDINATE EXACT HEIGHT AND LOCATION WITH ARCHITECTURAL DRAWINGS IN THE FIELD.
- EXTEND TWO (2) 7" CONDUITS BELOW FLOOR SLAB TO AND/OR 1/1" SERVICE CABLING BY OTHERS. REFER TO ARCHITECTURAL DRAWINGS FOR CONNECTION TO EXISTING MAIN BUILDING FOR CONNECTION TO OWNER'S SECURITY DISTRIBUTION SYSTEM.
- PROPOSED EXTERIOR CARD READER AND ASSOCIATED EQUIPMENT TO BE SUPPLIED BY OWNER'S SECURITY VENDOR. CONTRACTOR SHALL PROVIDE ROUGH-INS FOR BACK TO TELEPHONE SERVICE BACKGROUND. REFER TO ARCHITECTURAL DRAWINGS FOR CONNECTION TO EXISTING MAIN BUILDING FOR CONNECTION TO OWNER'S SECURITY DISTRIBUTION SYSTEM.
- PROVIDE JUNCTION BOX AND CONDUIT BACK TO SECURITY CAMERA DEVICE AND CAMERA EQUIPMENT AND FINAL WIRING TO BE INSTALLED BY OWNER'S SECURITY VENDOR. COORDINATE EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS WITH OWNER'S SECURITY VENDOR PRIOR TO START OF WORK.

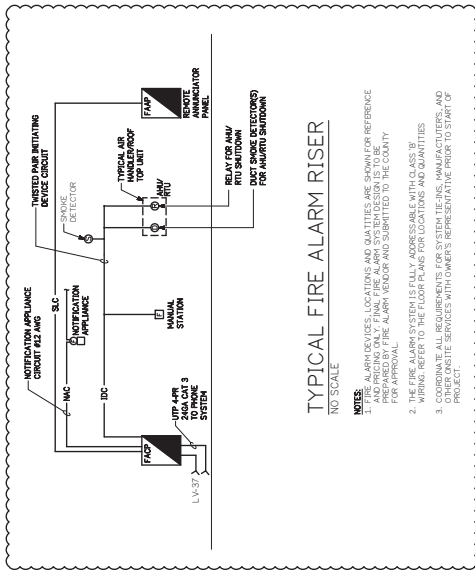


5-0-0-0 POWER PLAN - BASEMENT

SCALE: 3/16"=1'-0"

FIRE ALARM NOTES

- FIRE ALARM DESIGN IS SHOWN FOR PERFORMANCE SPECIFICATION ONLY. FINAL FIRE ALARM DESIGN TO BE PROVIDED AND CERTIFIED BY THE FIRE ALARM VENDOR. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE DESIGN MEETS ALL LOCAL CODES AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE ALARM DESIGN AND/OR LOCAL CODES. REFER TO FIRE ALARM SYSTEM RISER, THIS SHEET FOR ADDITIONAL INFORMATION.
- PROPOSED LOCATION OF FIRE ALARM CONTROL PANEL (FACP), EQUIPMENT AND WIRING TO BE PROVIDED AND CERTIFIED BY THE FIRE ALARM VENDOR. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE DESIGN MEETS ALL LOCAL CODES AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE ALARM DESIGN AND/OR LOCAL CODES. REFER TO FIRE ALARM SYSTEM RISER, THIS SHEET FOR ADDITIONAL INFORMATION.
- PROVIDE FIRE ALARM DEVICE AS INDICATED. CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL FIRE ALARM SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL CONNECTION INFORMATION. REFER TO SHEET E-6 FOR ADDITIONAL MOUNTING LOCATION INFORMATION.
- PROVIDE CEILING MOUNTED SMOKE DETECTOR MOUNTED OVER MOUNTING LOCATION IN THE FIELD.



TYPICAL FIRE ALARM RISER

NO SCALE

- FIRE ALARM DEVICES, LOCATIONS AND QUANTITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE DESIGN MEETS ALL LOCAL CODES AND REQUIREMENTS FOR APPROVAL.
- THE FIRE ALARM SYSTEM IS FULLY ADDRESSABLE WITH CLASS B UTILITY APPROVAL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL CONNECTION INFORMATION. REFER TO SHEET E-6 FOR ADDITIONAL MOUNTING LOCATION INFORMATION.
- OTHER ON-SITE SERVICES WITH OWNER'S REPRESENTATIVE PRIOR TO START OF PROJECT.



SCALE: 3/16"=1'-0"



INTEGRATED DESIGN CONSULTANTS, LLC
 1374 W. 18th Ave., Suite 205
 Denver, CO 80202
 TEL: 303.733.1111
 WWW.IDCONSULTANTS.COM

MECHANICAL ELECTRICAL PLUMBING
 CONSULTING SERVICES

DATE: 12/20/19
 DRAWING NO: E4
 AS NOTED
 AS SHOWN
 REVISIONS
 CHECKED BY: [blank]
 DESIGNED BY: [blank]
 DC JOB NUMBER: 19-008

POWER PLAN

BASEMENT AND NOTES

RECONSTRUCTION

FOR
SOLANCO HIGH SCHOOL ACTIVITIES BUILDING ADDITION
 585 Solanco Rd., Quarryville, PA

SOLANCO SCHOOL DISTRICT
 121 South Hess Street, Quarryville, PA 17566



FREDRICK WARD ASSOCIATES, INC.
 ARCHITECTS
 ENGINEERS
 PLANNERS
 SURVEYORS
 410 829 7900
 www.fredrickward.com
 P.O. Box 1771 • South White Plains, PA 19381

REV#	DATE	DESCRIPTION
1	02/07/19	Addressed #1

RID DOCUMENTS:

TDI
 INTEGRATED DESIGN
 CONSULTANTS, LLC
 1717 N. 10TH AVE., SUITE 2100
 TEL: 481.742.0204
 WWW.TDICON.COM

MECHANICAL ELECTRICAL PLUMBING
 CONSULTING SERVICES

DATE: 12/20/19
 DRAWING NO: E5
 SCALE: AS NOTED
 DRAWN BY: MRS/BAL
 CHECKED BY: MRS/BAL
 PROJECT NUMBER: 19-098

POWER PLAN
 FIRST FLOOR AND NOTES
 RECONSTRUCTION
 FOR
 SOLANCO HIGH SCHOOL ACTIVITIES BUILDING ADDITION
 585 South 4th, Quarryville, PA

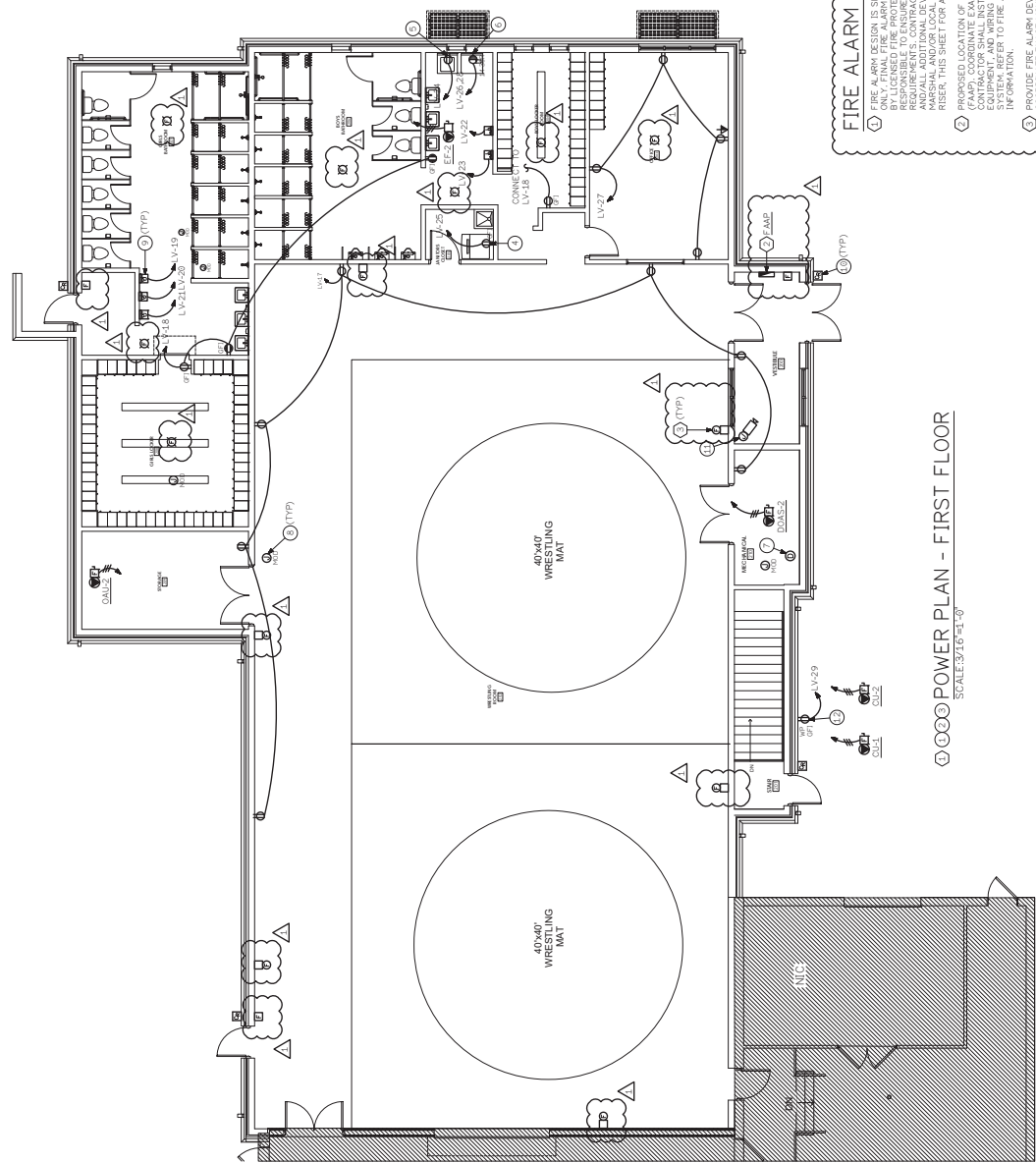
SOLANCO SCHOOL DISTRICT
 121 South Hess Street, Quarryville, PA 17566

FREDERICK WAARD ASSOCIATES
 ARCHITECTS
 PLANNERS
 SURVEYORS
 410 828 7900
 www.fwaarchitects.com

REV#	DATE	DESCRIPTION
1	02/07/19	Addressed #1

DRAWING NOTES

- COORDINATE EXACT DEVICE LOCATION, HEIGHTS, AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE IN THE FIELD.
- PROVIDE COMMENTS TO THE MECHANICAL EQUIPMENT SCHEDULE, SHEET E1 FOR BRANCH CIRCUITING LOCATION WITH MECHANICAL CONTRACTOR IN THE FIELD.
- ALL DEVICES SHALL BE FLUSH MOUNTED WITHIN OR WIRING SHALL BE SURFACE MOUNTED IN TEAM ROOM AREAS.
- PROVIDE GFI PROTECTED DUPLEX RECEPTACLE FOR MOUNTING LOCATION AND CONNECTION TO START OF WORK. SCHOOL REPRESENTATIVE PRIOR TO SCHOOL PROVIDED DRIVER EXTEND 3' AND GFI MOUNTING LOCATION IN THE FIELD. PROVIDE WIRING AS INDICATED.
- PROVIDE NEMA 14-30R RECEPTACLE FOR CONNECTION TO SCHOOL PROVIDED DRIVER EXTEND 3' AND GFI MOUNTING LOCATION IN THE FIELD. PROVIDE WIRING AS INDICATED.
- PROVIDE 120V EXTERIOR CARDS WITH IDENTICAL LOCATION AND CONNECTION REQUIREMENTS IN THE FIELD. COORDINATE EXACT HEIGHT AND MOUNTING LOCATION WITH ARCHITECTURAL DRAWINGS IN THE FIELD. COORDINATE EXACT HEIGHT AND MOUNTING LOCATION WITH ARCHITECTURAL DRAWINGS IN THE FIELD.
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- PROVIDE WEATHERPROOF GFI PROTECTED DUPLEX SERVICE. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD.



FIRE ALARM NOTES

- FIRE ALARM DESIGN IS SHOWN FOR INFORMATION AND COORDINATION ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR AND ALL ADDITIONAL DEVICES AS MAY BE REQUIRED BY THE FIRE DEPARTMENT. CONTRACTOR SHALL PROVIDE ALL FIRE ALARM RISER, THIS SHEET FOR ADDITIONAL INFORMATION.
- PROPOSED LOCATION OF FIRE ALARM ANNUNCIATOR PANEL (FACP). COORDINATE EXACT MOUNTING LOCATION IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT AND WIRING TO PROVIDE A FULLY FUNCTIONAL SYSTEM. REFER TO FIRE ALARM RISER, THIS SHEET FOR ADDITIONAL INFORMATION.
- PROPOSED FIRE ALARM DEVICES AS INDICATED. CONTRACTOR SHALL COORDINATE EXACT MOUNTING LOCATION OF ALL DEVICES IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL DEVICES AND WIRING TO PROVIDE A FULLY FUNCTIONAL SYSTEM. REFER TO FIRE ALARM RISER, THIS SHEET FOR ADDITIONAL INFORMATION.

POWER PLAN - FIRST FLOOR
 SCALE: 3/16"=1'-0"



SCALE: 3/16"=1'-0"