

ADDENDUM #1

To: All Bidders

Project Name: New Construction of:
West Whiteland Public Works Facility
121 Valley Creek Blvd.
Exton, PA 19341

Prepared for: West Whiteland Township
101 Commerce Drive
Exton, PA 19341

Date: August 14, 2023

Notice to all Contractors bidding the West Whiteland Public Works Facility. This Addendum is to amend or clarify the Contract documents as follows:

GENERAL:

- A. This Addendum constitutes part of the Project Manual and Contract. Should conflict occur between the Project Manual and items in this Addendum or between Drawings and this Addendum, the Addendum shall govern.
- B. Work described in this Addendum shall be in accordance with Specifications for like items in remainder of building and complete with all labor and materials required.
- C. Bidders are requested to attach a copy of this Addendum to the Project Manual in their possession.
- D. Work affected by items in this Addendum shall be appropriately adjusted to accommodate these changes.
- E. Acknowledge receipt of this Addendum by inserting its number and date in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.
- F. Bids shall only be based on the products specified. No pre-bid substitutions shall be considered. Products that meet or exceed the product

specifications will be considered for use during the Shop Drawing Submittal Phase.

- G. STANDARD OF QUALITY: The various materials and products specified in the specifications by name or description are given to establish a standard of quality and of cost for bid purposes. **In general**, it is not the intent to limit the bidder, the bid or the evaluation of the bid to any one material or product specified but rather to describe the minimum standard, **except where listed without the following clause**. When proprietary names are used, they shall generally be followed by the words "or alternatives of the quality necessary to meet the specifications". Where proprietary names are used and are not followed by a clause similar to that listed above, the contractor is limited to providing that specified product to keep a standard product already established by West Whiteland Township. A bid containing an alternative which does not meet the specifications may not be accepted, but, if an award is made to the bidder, the bidder will be required to replace any alternatives which do not meet the specifications at no additional cost. The intent of the bid documents is based on this STANDARD OF QUALITY and not to be proprietary in nature in any way.
- H. In general, minor changes to Specifications will be listed below under section 1. These changes will be included in Conformed Specifications after bidding. When revised specifications files are included with this Addendum, changes marked in **bold** indicate additions and items ~~struck through~~ indicate deletions.
- I. There will be a Site Staging and Logistics Plan issued in the next Addendum that provides job and storage trailer locations as well as responsibility for creating and removing staging areas.
- J. Questions received after Wednesday, August 9th, will be answered in Addendum 2.

SPECIFICATIONS

- 1.01 Table of Contents – **ADD** Section 310000 – Earthwork under Division 31.
- 1.02 Specification Section 011100 – Summary of Work; **REVISED** as follows: Section 1.3, **REPLACE** Construction Manager with General Contractor. Section 1.3, B&C, **REPLACE** The Construction Manager with All Prime Contractors. Section 1.7, D. and E., **REPLACE** General Contractor with Civil Contractor. **CHANGE** Section 1.10 to 1.8 and Section 1.11 to 1.9. Section 1.6, **ADD**:

B. Definition of Contracts:

1. Contract 1: General Construction shall be referred throughout the contract documents as General Contractor, GC, G.C., General Trades Contractor, Lead Contractor, Prime General Contractor and "Contractor" as listed under General Trades Construction Specifications.
2. Contract 2: Civil Construction shall be referred throughout the contract documents as Civil Contractor, Site Contractor, Sitework Contractor, Excavation Contractor, Excavator, Earthwork Contractor, S.C. and "Contractor" as listed under Earthwork Construction Specifications.
3. Contract 3: Plumbing Construction shall be referred throughout the contract documents as Plumbing Contractor, PC, P.C., and "Contractor" as listed under Plumbing Construction Specifications.
4. Contract 4: Mechanical Construction shall be referred throughout the contract documents as Mechanical Contractor, HVAC Contractor, MC, M.C. and "Contractor" as listed under Mechanical Construction Specifications.
5. Contract 5: Electrical Construction shall be referred throughout the contract documents as Electrical Contractor, EC, E.C. and "Contractor" as listed under Electrical Construction Specifications.
6. Contract 6: Fire Suppression Construction shall be referred throughout the contract documents as Fire Suppression Contractor, Fire Protection Contractor, Sprinkler Contractor, FP Contractor, FSC, S.C., F.P.C. and "Contractor" as listed under Fire Suppression Construction Specifications.

1.03 Specification Section 011200 – Multiple Contract Summary; **REVISED** as follows: Section 1.3, **REPLACE** Construction Manager with General Contractor and **ADD** "and Controlling Entity for Jobsite Safety" after Lead Contractor. **DELETE** items d. and e. from Section 2.5.9; Section 2.1, B.: **DELETE** Specification Sections listed under General Requirements: 099733 Concrete Floor Sealer and 113100 Residential Appliances; Section 2.4, D. 25: **DELETE** "furnish and"; Section 2.5, D. 21: **DELETE** "furnish and".

1.04 Specification Section 013200 – Construction Progress Documentation; **REVISED** as follows: Section 3.1,F., **DELETE** "Float is not for the exclusive use or benefit of either the Owner or any of the Prime Contractors." **ADD** "Float is for the exclusive benefit of the Owner." Section 3.3, **ADD** item C: "All Prime Contractors hereby agree that in the event of any disagreement by any Prime Contractor as to the duration provided for their work, or the sequencing of their work, that the final decision of duration and sequence will be made by Construction Manager. All Prime Contractors agree to abide by the Construction Managers final determination

which shall be final and binding upon all Prime Contractors. Prime Contractors agree they shall have no claims or disputes against the Owner , Architect or Construction Manager and shall not be entitled to any additional costs for said decisions. Should any Prime Contractor fail to provide the information required in Paragraph 3.2 within the 10 calendar days required, the Construction Manager shall assign the Prime Contractors activities and durations and the Prime Contractor agrees to abide by the Construction Managers decision." Section 3.6, E., **DELETE** paragraph, **ADD** "Float is for the exclusive use and benefit of the Owner".

- 1.05 Specification Section 013500 – Safety; **REVISED** as follows: **DELETE** the words "Construction Manager" throughout and **REPLACE** with "General Contractor". Section 3.1, A., **ADD** the words "Construction Manager/" in front of the words "Owner" where it occurs in the paragraph.
- 1.06 Specification Section 014500 – Quality Control; **REVISED** as follows: Section 1.3, A., **DELETE** 'bituminous paving compaction testing, masonry strength testing and inspections'.
- 1.07 Specification Section 081416 - Flush Wood Doors; **ADD** specification section in its entirety.
- 1.08 Specification Section 238129 – Variable Refrigerant Flow HVAC Systems; **ADD** "Samsung HVAC" to approved manufacturers in paragraph 2.1.
- 1.09 Specification Section 310000 - Earthwork; **ADD** specification section in its entirety.

DRAWINGS

All Disciplines:

- 2.01 None at this time.

BIDDERS QUESTIONS

- 3.01 **Question:** Can the responsible contractor ordinance be waived?
Response: *No it cannot.*
- 3.02 **Question:** May we have a range of cost - preferably per contract?
Response: *The Township prefers not to provide a cost and any published numbers have not been provided by the Township or Construction Manager*
- 3.03 **Question:** Can you supply budgets for the primes?
Response: *No budgets will be provided for prime contracts.*

- 3.04 **Question:** Who is responsible for permit costs?
Response: *See Specification Section 011100 Summary of Work, item 1.4, G.: The Owner will secure and will pay for the Building Permit. The Owner shall pay all utility tap-in and connection fees. All other fees and permits are the responsibility of the appropriate Prime Contractors. Specification Section 011200 Multiple Contract Summary, item C under each contract indicates that no building permits are included within this scope of work. The owner has waived all permitting fees for this project **AND** Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the Owner.*
- 3.05 **Question:** What is the dollar budget for bonding purposes for GC portion?
Response: *Bid Bond shall be 10% of Base Bid Sum, see 002100 Supplemental Instructions to Bidders, Section 7; AIA Document A310-2010 Bid Bond; and as listed on the Bid Form. Performance and Payment Bonds are to be in the amount of 100% of the Bid sum per 002100 Supplemental Instructions to Bidders, Section 8; and as listed on the Bid Form. Dollar budget will be based on each General Contractor's Bid amount.*
- 3.06 **Question:** Is there a responsible contractor certification ordinance required for this project?
Response: *Yes, RCO is provided in Volume 1 Specifications in the Appendix.*
- 3.07 **Question:** Is there security to be provided under the EC contract?
Response: *Security as listed under Division 28 shall be carried under the EC contract. Any other security systems will be provided by Owner during construction and coordination for rough-in is required per Specification Section 011100 Summary of Work, Section 1.7, F.*
- 3.08 **Question:** Will the security cameras be provided in the EC contract? Will the security cameras connect back to the existing system at the township office? If so, what is the existing system?
Response: *Security cameras are to be purchased and provided by the Owner. Rough in for cameras will be required under the EC contract. Devices and terminations by Township. No, security cameras will not connect back to an existing system.*
- 3.09 **Question:** Considering the site work is a prime contract, how long until the GC receives a working pad to start construction?
Response: *A baseline schedule will issued in a future addendum.*
- 3.010 **Question:** Is prebid mandatory?
Response: *No, the Pre-Bid Meeting is not mandatory.*

- 3.011 **Question:** Is the AIA Qualification form to be submitted WITH the bid as noted on the bid form, or UPON AWARD as noted in the Instructions to Bidders? If WITH the bid, please clarify if the form should be the AIA A305 1986 or AIA A305 2020 (specify which Exhibits are required)?
Response: *Instructions to Bidders Article 6, Item 6.1 notes: "unless such a Statement has been previously required and submitted for this Bid." Provide Qualification form as indicated on bid forms. Contractor's Qualification Statement should be submitted on AIA Document A305-2020 as provided in Volume 1 of the specifications. Include Exhibits A through D; and E as necessary.*
- 3.012 **Question:** There are Responsible Contractor requirements for this project, but no associated forms. What should be submitted with the bid (since this is not listed on the bid form)?
Response: *West Whiteland Township Responsible Contractors Ordinance requires selected contractors to complete form provided by the Township per Paragraph 65-3, item B. Form will be provided in a future addendum. Acknowledgement of RCO requirements is required on the PennBid platform under the BID FORM – QUESTIONS (RFI) TAB, item number 17.*
- 3.013 **Question:** In the Construction Forms section, there is a Sub List and Equipment Suppliers List that is not listed as a required document to be submitted with the bid on the bid form. Please confirm that these documents should be submitted upon award.
Response: *Provide Sub List and Equipment Suppliers List upon award of contract.*
- 3.014 **Question:** Will you break out the fire alarm package from the electrical package and accept the bid separately?
Response: *No, fire alarm package must be bid as part of the Electrical Construction contract.*
- 3.015 **Question:** Please verify the owner will pay for the electric utility company fees.
Response: *Owner will pay the PECO engineering and connection fees for the permanent electrical service. This will include PECO cost to pull any primary feed cables. The conduit pathway is by Electrical Contractor. All costs for the temporary electrical service, including any PECO fees including removal of service at conclusion of project, shall be by Electrical Contractor. The service shall be established in Electrical Contractors name. The monthly electrical usage costs of the temporary electric service for use by the Owner and all Primes shall be paid by the Electrical Contractor.*
- 3.016 **Question:** Reference spec section 011100-1.7-F: This states "the owner shall install telecommunications systems" and spec section 011200-2.5-D-9-g states "Telecommunications (rough-in and coordination only, provided by owner).

However, section 011200-2.5-D-10 states "it is the intent of the contract for the EC to provide a complete system for all systems above included wire, fiber optics, patch panels, connectors, terminations, patch controls, jacks, UTP cabling, etc." and section 011200-2.5-D-27 as well as 29 state "(27)-EC to provide and install telephone and data cables for connection to the fire alarm panel, security panel, ATC panels, etc." and "(29)-EC shall include in his bid and be responsible for all costs associated with the Telecommunication Systems." Please clarify the Electrical Contractor's responsibility for the Telecommunication System.

Response: *EC to rough in from street to structure to a panel within the building. EC would provide and label CAT 6 lines. Panels, rack, terminations and labeling panels by Owner.*

- 3.017 **Question:** Reference spec section 011200-2.5-B-Div 31 & 33 as well as section 011200-2.2-B-Div 31 & 33: this states "All underground conduit and wiring will be furnished and installed by the EC. Excavation and backfill for the EC will be addressed by the Civil Contractor. Spec section 011200-2.5-D-13 states: "EC to provide all cutting, patching, excavation, and backfill including work for new incoming service, etc." and section 011200-2.2-D-23 states "all site electrical work including site lighting is by EC." However, section 011200-2.5-D-30 states "EC shall provide all site electrical work. Civil Contractor responsible for trenching and backfill for underground electric, and concrete encasement. Please verify the EC is responsible for excavation, backfill, and concrete encasement of its own electrical duct banks

Response: *Electrical Contractor shall be responsible for excavation, backfill, compaction requirements, bedding, concrete encasement removal and disposal of spoils off site for all electrical work inside and outside of building.*

- 3.018 **Question:** Reference spec section 011200-2.5-D-9-d: this references an "integrated communications systems". There are no specs for this system. Please clarify.

Response: *System is not part of scope. Item d to be deleted, see revisions to Specification 011200 within this Addendum under item 1.02.*

- 3.019 **Question:** Reference spec section 011200-2.5-D-9-e: this references "System". What system is this referring to? Are there specs for it?

Response: *Item e to be deleted, see revisions to Specification 011200 within this Addendum under item 1.02.*

- 3.020 **Question:** Reference drawing 10 of 20 "Lighting Plan": There is an "A6" fixture shown mounted on the south side of Bldg A-3. Type "A6" is a pole mounted fixture. Is this a typo and should this be type "A7"?

Response: *Provide building mounted lights per drawings E101.1 and E102. Provide site lighting per drawing SE101.*

- 3.021 **Question:** Reference drawing 10 of 20 "Lighting Plan": Building mounted fixtures A1, A2, A3, A5, and A7 are not shown on the electrical floor plans or site plans. Please provide circuiting for these fixtures.
Response: *Provide building mounted lights per drawings E101.1 and E102.*
- 3.022 **Question:** Is there an estimated start date?
Response: *See Specification Section 001113 Bid Advertisement for Start date.*
- 3.023 **Question:** We are having difficulty accessing the drawings due to the size of the PDF. Is it possible to re-issue the drawings reducing the size of the files?
Response: *Drawings will be broken out into separate pdfs for access. Please note the Civil Drawings have been posted on their original smaller sheet size to reduce file size.*
- 3.024 **Question:** I notice in the Multi-Contract Summary the following Sections are listed under the General contract how they are not listed in the TOC and no spec section has been found please provide if this is part of our scope. Section 099733 – Concrete Floor Sealer Section 113100 – Residential Appliances
Response: *These specifications sections are not part of the project. They will be deleted from the Multiple Contract Summary.*
- 3.025 **Question:** Please provide Specifications for Wood Doors.
Response: *See Specification Section 081416 Flush Wood Doors provided as an attachment to this Addendum.*
- 3.026 **Question:** Reference drawings E201 & E202: the HVAC units shown on these plans do not show disconnect switches/starters. Drawing M601, Mechanical schedule shows the HVAC units with a note stating "provide disconnect switch". Spec section 011200-2.4-D-25 states "starters/VFDs for HVAC equipment provided by HVAC contractor and disconnects provided by the EC." Spec section 011200-2.5-D-21 states "disconnects for HVAC equipment provided by the EC." Please clarify which contract provides the disconnect switches for the HVAC units?
Response: *Disconnects provided by H.C. as noted on drawing M601, wired by E.C unless otherwise noted on floor plans.*
- 3.027 **Question:** Reference drawings E201, E202, and M602: Do the EIH units require disconnect switches? If yes, who provides these?
Response: *E.C. shall provide lockable breakers for EIH units.*

ATTACHMENTS**General:**

Pre-bid Meeting Agenda

Pre-bid Sign-in Sheet

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None at this time

END OF ADDENDUM



Pre-Bid Meeting

Public Works Facility

Thursday, August 10, 2023

9 AM

- I. Welcome & Introductions
- II. Summary of the Job
- III. Q & A
- IV. Site Visit



SIGN-IN SHEET
Pre-Bid Conference – WWT New Public Works Garage
August 10th 2023

(Please Print) NAME	FIRM	E-MAIL ADDRESS & PHONE	Contract of Interest
Gary Moore	A.N. Lynch Co	610-469-6491 ner@anlynch.com	E.C.
Dan Sweigart	BSS Contractors	Bsmith@BSSContractors.com	G.C.
Bob Miller / Bill Daly	BSI Electric	Bob@bsielectric.com	EC
Jason Cary	IBEW 98	jcary@ibew98.org	EC
Brad Silich	GEM mechanical	Brad@Gemmsi.com	MC
KRIS LOMBARDI	L-A-BUILDING CNT.	JIM@LABUILDINGCONTRACTORS- com	G.C.
RYAN GRAYBILL	GARDEN SPOT ELECTRIC	RGRAYBILL@ GARDENSPOTELECTRIC.COM	E.C.
Marianne Harlow	Siemens	marianne.harlow@ Siemens.com	Fire/Security



SIGN-IN SHEET
Pre-Bid Conference – WWT New Public Works Garage
August 10th 2023

(Please Print) NAME	FIRM	E-MAIL ADDRESS & PHONE	Contract of Interest
Steve Bosna	Schipsi Electric	steve.bosna@schipsieletric.com 610 314 3349	Steve Bosna
Dave Schipsi	Schipsi Electric	Dave@Schipsieletric.com 610-996-9622	Dave Schipsi
Ossie Esker	Foresite Concepts.	Ossie@ForesiteConcepts.com (484)602-3232	Site
Mark Whitlow	WTG	whitlowthomsgroup@gmail.com	site

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ADDENDUM 1

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 - Bidding and Contract Requirements and Division 01 - General Requirements apply to this Section.

1.2 PROJECT DESCRIPTION

- A. The base bid for this project consists of the new construction of approximately 38,600 SF distributed among three buildings for a new Public Works Facility for West Whiteland Township. Building A will provide an Administrative Suite; a Mechanic's Bay for vehicle maintenance and repair; Tool Storage and Work Shop, with Mezzanine storage above both; a Garage Bay for the storage of fleet vehicles; and a Wash Bay. Building B is dedicated to Storage with overhead doors for vehicle access and an adjacent brine tank. Buildings A and B have been designed as a pre-engineered metal building systems with metal wall panels set on top of a cmu base and a standing seam metal roof.
Building C is an open concrete and steel structure with metal siding and roof utilized for the storage of various materials such as salt and stone.

1.3 SAFETY

The ~~Construction Manager~~ **General Contractor** shall be designated as the "Lead Contractor" with respect to jobsite safety. Responsibilities and authority of the Contractor shall be as follows:

- A. The Construction Manager will be responsible to inspect and maintain safe working conditions on the jobsite.
- B. ~~The Construction Manager~~ **All Prime Contractors** will maintain a "competent person" on site at all times designated to make safety inspections and to serve as the designated representative in charge of safety during inspection by OSHA employees.
- C. ~~The Construction Manager~~ **All Prime Contractors** shall make corrections in the event of a safety violation. Failure of Construction Manager to take prompt action (within 24 hours following written notice) to correct a safety violation shall empower the Owner to make the necessary corrections and to receive full compensation for such corrections directly from the offending contractor. The Architect and engineer will verify and provide documentation of time and material expended to make corrections.
- D. The Construction Manager's responsibilities and corresponding authority shall be as defined in the General Conditions of the Contract for Construction.
- E. The Construction Manager will maintain primary responsibility for the safety of their workers. The Construction Manager will endeavor to accomplish required

corrections through cooperation of other Subcontractors. In the event this effort is unsuccessful, the Construction Manager will take action as defined above.

- F. The Owner will support the decisions and action taken by the Construction Manager to maintain jobsite safety.
- G. The Construction Manager shall provide monthly (with Payment Application per payment terms) safety inspections and reports by an independent safety consultant. Periodic inspections and reports shall be performed at least once every three months.
- H. The Construction Manager shall provide a safety representative who is trained in first aid and CPR.

1.4 DESCRIPTION OF CONTRACT

- A. The work of this project shall be performed under six (6) Prime Construction Contracts as defined in this Section and Section 011200 - Multiple Contract Summary and the drawing documents, and shall include all labor, materials, equipment, and services necessary for the complete construction of the work shown on the drawings and specifications. All contractors are responsible for the Scope of Work as defined in the Multiple Contract Summary.
- B. The General Conditions and Division 1 - General Requirements shall apply to the Prime Contracts and Subcontracts for this Project. The Prime Contract Packages Description is to include all Work in accordance with the Contract Documents. This Contract includes all materials, labor, supervision, transportation, tools, equipment and services for the Project as shown or implied on the drawings and specified herein, or as may be required or necessary for a complete and satisfactory job.
- C. Each Contractor shall supervise his Work, using his best skills and attention. He shall be solely responsible for construction means, methods, techniques, sequences, dimensions and procedures and/or coordinating all portions of their Work, with all Work to be performed under separate contracts and/or other Bid Packages. Refer to the General Conditions Article 6 on work by Separate Contractors or by owner.
- D. All items of work listed under the Prime Contract(s) Package Descriptions shall be provided by the Prime Contractor unless specifically noted as furnished or installed only.
- E. The Prime Contractor shall maintain site conduct in accordance with the rules and procedures specified under the General Conditions.
- F. Contract Documents include all Drawings, Specifications, Contract Descriptions, etc. for the work of the NEW CONSTRUCTION OF WEST WHITELAND PUBLIC WORKS FACILITY. Each Prime Contractor shall review all Documents in their entirety.
- G. The Owner will secure and will pay for the Building Permit. The Owner shall pay

all utility tap-in and connection fees. All other fees and permits are the responsibility of the appropriate Prime Contractors.

- H. The Owner will provide building and code inspections. The Construction Manager will provide general testing. Prime Contractor will provide testing services for work under their contract as indicated in the technical specifications and in Section 014100, unless indicated otherwise.
- I. The Prime Contractor shall be responsible to return all laydown, storage and work areas to their original condition. Confirmation of completion of this requirement shall be necessary prior to release of final payment.
- J. This project is subject to the requirements of the Township's Responsible Contractors Ordinance. A copy of the RCO will be included in the appendix of Volume 1 specifications.

K. Definitions:

Coordinate: The term "coordinate" means "to cooperate with related trades to furnish and install all connections between the trades in correct sequence size and location to create a complete system ready for intended use."

Verify: The term "verify" means "to measure, investigate, review, test, check the accuracy or correctness of and prove by demonstration, evidence, or testimony the location, size, dimension and condition of an item."

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and similar operations."

Install: The term "install" is used to describe operations at the project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, performing, coordinating with other trades, protecting, cleaning, and similar activities".

Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

- L. Multiple trips to the site will be required by the Contractor to complete this project.
- M. The following items are to be included in each Prime Contractor's Scope of Work:
 - 1. Coordinate all work.
 - 2. Submit shop drawings, samples, schedules, data, manuals, as-built drawings, etc., required by the Contract Documents. Update, on a weekly basis, a record set of drawings in the field office. A final set of drawings of this Contractors work shall be submitted to the Architect upon the completion of the work.
 - 3. Observe and comply with at all times all Federal and State laws and regulations, and local bylaws, ordinances and regulations in any manner

affecting the conduct of the work or applying to employees on the project, as well as all safety precautions and orders or decrees which have been promulgated or enacted, or which may be promulgated or enacted, by legal bodies or tribunals having authority or jurisdiction over the work, materials, equipment, employees, such observance and compliance shall be solely and without qualification the responsibility of this Trades Contractor without reliance on superintendence or direction by the Owner or their Representative. The duty of enforcement of all of said laws, ordinances, regulations, orders or decrees lies with the body of agency promulgating them, not with the Owner or their Representatives.

4. Perform all work in accordance with the project schedule and update as the project progresses.
5. Provide protection of existing structure, finishes and landscaping from damage resulting from the work of this contract. Repair any damage promptly to the satisfaction of the Owner.
6. The Contractor shall provide all engineering and layout for his work. The Contractor shall provide general layout for site work including parking lots, roads, curbs, utilities, grading, site improvements and all other lay-out for his work.
7. Provide all scaffolding, hoisting, shoring, barricades, ramps, etc., as necessary to perform the work of this contract.
8. Provide safety and protection of persons and property per OSHA, local and state requirements. Provide maintenance of all safety precautions throughout the work of this Contract. Provide protection at floor and roof penetrations not shown on the drawings, but required for work of this Contract. Provide all safety signage required by OSHA for the work of this Contract. Furnish Company Safety Plan, Hazard Communication Plan, MSDS information and other OSHA required documents to the architect prior to the start of work.
9. If the applicable Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be tested, inspected, or approved by someone other than this Contractor, the Contractor will give the Owner and their Representative timely notice of readiness. The Contractor will then furnish the Owner the required certificates of inspection, testing or approval.
10. Inspection, tests, or approvals by the Owner or their Representative shall not relieve the Contractor from their obligation to obtain required inspections by AHJ and to perform the work in accordance with the requirements of the Contract Documents.
11. Provide all fees, Federal, State and Local taxes, special permits, inspections, etc. as required to perform the work of this Contract unless item is specifically identified as being provided by the Owner.
12. All submittals, shop drawings and product samples must be received no later than ninety (90) days following the date of Notice to Proceed. Those submittals for critical schedule activities must be submitted and approved in time to make required deliveries. Contractors are responsible to make material deliveries to accomplish phase completions.
13. No tobacco products, vaping, or alcoholic beverages will be allowed on the Township property.

14. The Owner and their Representatives will at all times have access to the work. In addition, authorized representatives and agents of any participating State of Pennsylvania, or local authority having jurisdiction representative(s) shall be permitted to inspect all work, materials, and other relevant data and records. This Contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.
15. Verify existing conditions prior to start of work and notify Architect/Engineer of any discrepancies.
16. The Contractors are responsible to clean Contractor's construction vehicle wheels in order to keep mud off paved surfaces.
17. The Prime Contractor is responsible for general clean-up and trash removal resulting from the work or employees of that contract. The Contractor shall provide construction dumpster(s) as required for the purpose of trash removal. Removal of demolition debris from site will be by the Contractor. Hazardous materials shall not be placed in the dumpster, but should be removed from site by the Contractor.
18. The Contractor is responsible to provide dust, toxic fume and noise control for their own work. Noise and vibration or any other construction related activities which create excessive disturbances must be coordinated with the ~~school district~~ **Township** in advance of scheduling these activities.
20. All other duties and requirements identified in the Contract Documents.

1.5 INVESTIGATION OF EXISTING SITE CONDITIONS

Each bidder shall carefully examine these specifications, visit the site, and become thoroughly acquainted with the conditions existing at the building and site, and satisfy himself concerning any and all existing conditions that will affect progress and construction as described in the Contract Documents or otherwise necessary to complete the work before submitting bid proposal. These conditions include, without limitation:

- (1) The location, condition, layout and nature of the Project site and surrounding areas.
- (2) Generally prevailing climatic conditions.
- (3) Anticipated labor supply and costs.
- (4) Availability and costs of materials, tools and equipment.
- (5) Other similar issues.

Submission of the proposal shall be considered as evidence that a visit to the site was conducted. The Contractor shall not be entitled to an adjustment in contract sum, contract time or any milestone date in connection with its failure to comply with the requirements of this paragraph.

1.6 DESCRIPTION OF CONTRACTS

- A. The project is specified to be made up of one prime construction contract and shall include all labor, materials, equipment and services necessary for the complete work shown on the drawings and the specifications. The Prime Construction Contract includes:

Contract 1	General Construction
Contract 2	Civil Construction
Contract 3	Plumbing Construction
Contract 4	Mechanical Construction
Contract 5	Electrical Construction
Contract 6	Fire Suppression Construction

B. Definition of Contracts:

- 1. Contract 1: General Construction shall be referred throughout the contract documents as General Contractor, GC, G.C., General Trades Contractor, Lead Contractor, Prime General Contractor and "Contractor" as listed under General Trades Construction Specifications.**
- 2. Contract 2: Civil Construction shall be referred throughout the contract documents as Civil Contractor, Site Contractor, Sitework Contractor, Excavation Contractor, Excavator, Earthwork Contractor, S.C. and "Contractor" as listed under Earthwork Construction Specifications.**
- 3. Contract 3: Plumbing Construction shall be referred throughout the contract documents as Plumbing Contractor, PC, P.C., and "Contractor" as listed under Plumbing Construction Specifications.**
- 4. Contract 4: Mechanical Construction shall be referred throughout the contract documents as Mechanical Contractor, HVAC Contractor, MC, M.C. and "Contractor" as listed under Mechanical Construction Specifications.**
- 5. Contract 5: Electrical Construction shall be referred throughout the contract documents as Electrical Contractor, EC, E.C. and "Contractor" as listed under Electrical Construction Specifications.**
- 6. Contract 6: Fire Suppression Construction shall be referred throughout the contract documents as Fire Suppression Contractor, Fire Protection Contractor, Sprinkler Contractor, FP Contractor, FSC, S.C., F.P.C. and "Contractor" as listed under Fire Suppression Construction Specifications.**

1.7 WORK PROVIDED BY OWNER

- A. The Owner may provide services not specified herein. It will be referenced as; Not in Contract (N. I. C.), furnished by Owner or by others.
- B. In no event shall Owner have control over, charge of or any responsibility for construction means, methods, techniques, sequences or procedures, or for safety protection, and programs in connection with the Work notwithstanding any of the rights and authority granted to the Owner in the Contract Documents.

- C. The rights granted to Owner under the Contract Documents are cumulative and are not in limitation of any rights of the Owner (1) granted in the Contract Documents, (2) at law or (3) in equity.
- D. The Owner has installed initial construction entrance, pipeline bridge and access road. ~~General~~ **Civil** Contractor to maintain each through duration of project.
- E. The Owner has delivered an unspecified amount of cubic yards of clean fill for use by the ~~General~~ **Civil** Contractor during site earthworks. ~~General~~ **Civil** Contractor shall take ownership of stockpile and return area to existing condition pre-development.
- F. The Owner shall install telecommunications and security systems concurrently during construction of the facility. All Contractors shall coordinate with the Owner for these installations.

1.8 WORK SEQUENCE

All work shall be completed in the time specified in the Agreement between Owner and Contractor.

1.9 CONTRACTOR USE OF PREMISES

- A. General: during the construction period the Contractor shall have use of the area identified as "contract limit line" for operations, including use of the site. The Contractors' use of the premises is limited only by the Owners' right to perform construction operations with its own forces or to employ separate contractors on portions of the project.
- B. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed nor occupied or egressed through without permission from the District.
- C. The Contractor shall verify all measurements of the building and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the measurements indicated on the Drawings; any difference which may be found should be submitted to the Architect for consideration before proceeding with the work.
- D. Prime Contractor is responsible for all testing required to ensure that their respective systems are installed and working properly.

PART 2 - EXECUTION (NOT APPLICABLE)

END OF SECTION 011100

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SECTION 011200 - MULTIPLE CONTRACT SUMMARY

ADDENDUM 1

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Description of Contracts.
- B. General Coordination and distribution of work between prime contracts.
- C. Refer to other Sections and Drawings for further descriptions of work and coordination.

1.2 RELATED SECTIONS

- A. Section 011100 - SUMMARY OF WORK
- B. Section 013200 – CONSTRUCTION PROGRESS DOCUMENTATION
- C. Section 015100 - TEMPORARY UTILITIES AND FACILITIES

1.3 SAFETY - LEAD CONTRACTOR DESIGNATION

The ~~Construction Manager~~ **General Contractor** shall be designated as the “Lead Contractor **and Controlling Entity for Jobsite Safety**” with respect to jobsite safety. Responsibilities and authority of the Contractor shall be as follows:

- A. Where the work of one (1) Contractor places another contractor’s workers in jeopardy, the “Lead Contractor” shall direct and coordinate the effort of the Contractors to ensure that jobsite safety is maintained. The lead Contractor will be responsible to inspect and maintain safe working conditions on the jobsite.
- B. The lead contractor will maintain a “competent person” on site at all times designated to make safety inspections and to serve as the designated representative in charge of safety during inspection by OSHA employees.
- C. The lead Contractor may direct another Contractor to make corrections in the event of a safety violation. Failure of another Contractor to take prompt action (within 24 hours following written notice) to correct a safety violation shall empower the lead Contractor to make the necessary corrections and to receive full compensation for such corrections directly from the Owner. The Architect and engineer will verify and provide documentation of time and material expended to make corrections. The Owner in turn will recover the amount of the expense from the offending Contractor through deduct Change Order.
- D. The lead Contractor’s responsibilities and corresponding authority shall be as defined in the General Conditions of the Contract for Construction.
- E. The individual Prime Contractors will maintain primary responsibility for the safety of their workers. The “Lead Contractor” will serve to identify areas of concern

and will endeavor to accomplish required corrections through cooperation of other Prime Contractors. In the event this effort is unsuccessful, the "Lead Contractor" will take action as defined above.

- F. The Owner will support the decisions and action taken by the "Lead Contractor" to maintain jobsite safety. The Owner will promptly make payment to the "Lead Contractor" when corrective action has been taken on behalf of an offending Contractor, and the "Lead Contractor" has provided appropriate documentation.
- G. Lead Safety Contractor shall provide monthly (with Payment Application per payment terms) safety inspections and reports by an independent safety consultant. Periodic inspections and reports shall be performed at least once every three months.
- H. Each contractor shall provide a safety representative who is trained in first aid and CPR.

1.4 DESCRIPTION OF CONTRACTS

- A. The work of this project shall be performed under 6 Prime Contracts as defined in this Section.
- B. The following is a list of the Prime Contracts to be bid for this project:
- C.
 - Contract 1 General Construction
 - Contract 2 Civil Construction
 - Contract 3 Plumbing Construction
 - Contract 4 Mechanical Construction
 - Contract 5 Electrical Construction
 - Contract 6..... Fire Suppression Construction
- D. The General Conditions and Division 1 - General Requirements shall apply to all Prime Contracts and Subcontracts for this Project. Each Prime Contract Package Description is to include all Work in accordance with the Contract Documents, except Work covered by other Prime Contract Package Descriptions. Collectively, these Prime Construction Contracts include all materials, labor, supervision, transportation, tools, equipment and services for the Project as shown or implied on the drawings and specified herein, or as may be required or necessary for a complete and satisfactory job.
- E. If there is a conflict on a specific item with regards to assignment of work to a specific contractor between the Contract Documents and the Prime Contract Package Description as stated herein, the Prime Contract Package Description will govern; however, if an item is covered in the Contract Documents, but not reiterated in the Prime Contract Package Description, the Bidder will be responsible for that item of work.

If an item is covered in two or more contract package descriptions, each Contractor shall include the item at the time of bid. After Contract award, a credit will be solicited for work in question.

- F. Each Contractor shall supervise his Work, using his best skills and attention. He shall be solely responsible for construction means, methods, techniques, sequences, dimensions and procedures and/or coordinating all portions of their Work, with all Work to be performed under separate contracts and/or other Bid Packages. Refer to the General Conditions Article 6 on work by Separate Contractors or by owner.
- G. All items of work listed under the Prime Contract Package Descriptions shall be provided by the Prime Contractor unless specifically noted as furnished or installed only.
- H. All Prime Contractors shall maintain site conduct in accordance with the rules and procedures specified under the General Conditions.
- I. All Prime Contractors shall maintain, contribute to and coordinate the schedule as outlined in Specification Section 013200.
- J. Contract Documents include all Drawings, Specifications, Contract Descriptions, etc. for the work of NEW CONSTRUCTION PROJECT FOR WEST WHITELAND PUBLIC WORKS FACILITY. Each Prime Contractor shall review all Documents in their entirety.
- K. The Architect will secure and the Owner will pay for the Building Permit. All other fees and permits are the responsibility of the appropriate Prime Contractors.
- L. The Installing Prime Contractors will provide testing services all work as indicated in the technical specifications. The Owner will provide quality assurance testing as part of Section 014100, unless indicated otherwise.
- M. Each Prime Contractor shall be responsible to return all laydown, storage and work areas to their original condition except areas designated on the site utilization plan, which shall be the responsibility of the General Contractor. Confirmation of completion of this requirement shall be necessary prior to release of final payment.
- N. Definitions:

Coordinate: The term "coordinate" means "to cooperate with related trades to furnish and install all connections between the trades in correct sequence size and location to create a complete system ready for intended use."

Verify: The term "verify" means "to measure, investigate, review, test, check the accuracy or correctness of and prove by demonstration, evidence, or testimony the location, size, dimension and condition of an item."

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and

similar operations."

Install: The term "install" is used to describe operations at the project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, performing, coordinating with other trades, protecting, cleaning, and similar activities".

Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

O. The following items are to be included in each Prime Contractor's Scope of Work:

1. Coordinate all work with other Prime Contractors.
2. Submit shop drawings, samples, schedules, data, manuals, as-built drawings, etc., required by the Contract Documents. Update, on a weekly basis, a record set of drawings in the field office. A final set of drawings of this Contractors work shall be submitted to the Architect upon the completion of the work.
3. Observe and comply with at all times all Federal and State laws and regulations, and local bylaws, ordinances and regulations in any manner affecting the conduct of the work or applying to employees on the project, as well as all safety precautions and orders or decrees which have been promulgated or enacted, or which may be promulgated or enacted, by legal bodies or tribunals having authority or jurisdiction over the work, materials, equipment, employees, such observance and compliance shall be solely and without qualification the responsibility of this Trades Contractor without reliance on superintendence or direction by the Owner or their Representative. The duty of enforcement of all of said laws, ordinances, regulations, orders or decrees lies with the body of agency promulgating them, not with the Owner or their Representatives.
4. Perform all work in accordance with the project schedule and update as the project progresses.
5. Provide protection of new roofing system, equipment, structure, finishes and landscaping from damage resulting from the work of this contract. Repair any damage promptly to the satisfaction of the Owner.
6. The General Contractor shall provide all engineering and layout for his work. In addition, the General Contractor shall provide and maintain throughout the project all building corners and column centerlines. The General Contractor shall provide floor control lines for the floor consisting of at least two perpendicular control lines per area and finish floor elevations. The General Contractor will provide layout for all walls and partitions. The General Contractor shall provide general layout for site work utilities and all other lay-out for his work. Other Contractors shall coordinate with General Contractor. Each Trade Contractor shall be responsible for all other survey, engineering, layout, etc. required to execute their work. Each Trades Contractor, at his own expense is to provide all stakes, templates and labor required in laying out their work and is responsible for proper execution of the work to the lines and

- grades shown on the drawings or as indicated by the Architect/Engineer.
7. Provide all dewatering required to perform the work of their contract.
 8. Provide safety and protection of persons and property per OSHA, local and state requirements. Provide maintenance of all safety precautions throughout the work of this Contract. Provide protection at floor, wall, and roof penetrations not shown on the drawings, but required for work of this Contract. Provide all safety signage required by OSHA for the work of this Contract. Furnish Company Safety Plan, Hazard Communication Plan, MSDS information and other OSHA required documents to the "Lead Contractor" prior to the start of work.
 9. Promptly address the recommendations made by the "Lead Contractor" for jobsite safety.
 10. If the applicable Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be tested, inspected, or approved by someone other than this Trades Contractor, the Contractor will give the Owner and their Representative timely notice of readiness. The Contractor will then furnish the Owner the required certificates of inspection, testing or approval.
 11. Inspection, tests, or approvals by the Owner or their Representative shall not relieve the Trades Contractors from their obligation to perform the work in accordance with the requirements of the Contract Documents.
 12. Provide all fees, Federal, State and Local taxes, special permits, inspections, etc. as required to perform the work of this Contract unless item is specifically identified as being provided by the Owner.
 13. All submittals, shop drawings and product samples must be received no later than ninety (90) days following the date of Notice to Proceed. Those submittals for critical schedule activities must be submitted and approved in time to make required deliveries. Contractors are responsible to make material deliveries to accomplish phase completions. All project submittals, RFI's, and daily field reports will be completed via Procore. Each Prime Contractor must manage their open/required submittals, RFI's, etc. to achieve dates as established in the approved project schedule.
 14. No guns, illegal drugs, tobacco products or alcoholic beverages will be allowed on this project.
 15. The Owner and their Representatives will at all times have access to the work. In addition, authorized representatives and agents of any participating State of Pennsylvania, or local authority having jurisdiction representative(s) shall be permitted to inspect all work, materials, and other relevant data and records. This Trades Contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.
 16. Verify existing conditions prior to start of work and notify Architect/Engineer of any discrepancies.
 17. The General Contractor shall provide for all temporary enclosures of building openings as required to maintain the schedule of the project. Should any Contractor have materials pertinent to the enclosure of the building, that are delayed on the project, which in turn delays the work of other Contractors, or delays the enclosure of the building, that Contractor

- shall be required to provide and/or maintain the temporary enclosures, or materials required to enclose the missing portions of that Contractor's Work.
18. Each Contractor shall provide holes in structural steel as required for the installation of their work with the approval of the Architect and Engineer. The structural reinforcing must be in accordance with the requirements of Specification Section 051200.
 19. Each Contractor shall provide sealants in accordance with Specification Section 079200 in any and all conditions where materials installed by the Contractor abut dissimilar materials (vertical and horizontal joints). Each contractor is also responsible for sealing penetrations required for the scope of that trade.
 20. All Contractors are responsible to clean Contractor's construction vehicle wheels in order to keep mud off paved surfaces.
 21. Each Prime Contractor is responsible for general clean-up and trash removal resulting from the work or employees of that contract. The Construction Manager shall provide construction dumpster(s) as required for the purpose of trash removal for all Prime Contractors. Removal of demolition debris from site will be by the Contractor performing the demolition. Hazardous materials shall not be placed in the dumpster, but should be removed from site by Prime Contractor responsible for material. Those Contractors on site shall provide labor to assist in this cleanup.
 22. All Contractors are responsible to provide dust, toxic fume and noise control for their own work. Noise and vibration or any other construction related activities which create excessive disturbances must be coordinated with the OwnerC in advance of scheduling these activities.
 23. Cutting and Patching:
 - a. Exposed finished materials, structural elements, watertight assemblies, HVAC and electrical equipment and systems.
 - i. Newly Installed Materials: A Contractor, requiring the cutting of openings in new work shall have such openings cut and patched by the trade which installed the work and such cutting and patching shall be at the expense of the Contractor, requiring the opening, unless specified otherwise.
 - ii. Approval to do such cutting and patching shall be received from the architect prior to proceeding with the work and shall include installation of such reinforcement of the work as the Architect may Direct.
 - b. Other locations: Cutting and sealing of penetrations in other locations including fire-stopping shall be by the Contractor requiring the cutting of such openings.
 - c. All blocking, bracing, reinforcement or structural enhancement required due to cutting and patching shall be provided at no additional cost to the owner. All patching work shall match adjacent existing work unless otherwise noted.
 24. Provide Steel and Aluminum product certifications as required under the Steel Products Procurement and Trade Practice Acts otherwise known collectively as the "Buy American" requirements of all Public Works

- Construction Contracts funded in part by the State of Pennsylvania.
25. Building Coordination Drawings: Coordination drawings among the HVAC, Electrical, Plumbing, Fire Suppression & General Contractors are required with the lead role in the coordination drawing process assigned to the Mechanical Contractor. The Mechanical Contractor shall prepare ¼" scale reproducible drawings with new ductwork & piping layout for review by the other Trade Contractors. The other Trade Contractors shall then prepare and provide reproducible additions/modifications representing their work to the Mechanical Contractor, who will then prepare final layout and coordination drawings illustrating work by all Trades on one set of coordination drawings for the project as a part of his Contract price. The Mechanical Contractor shall conduct coordination meetings with all Trade Contractors to discuss and resolve interference problems. Once each Trade Contractor has initialed with approval the coordination drawings, the Mechanical Contractor shall submit the coordination drawings to the Architect and Engineer for review. The other Trade Contractors should finalize their shop drawings in accordance with the coordination drawings and submit to the Architect and Engineer. Schedule: The Mechanical Contractor shall prepare and distribute ductwork, diffuser and piping drawings within 15 days after start of construction. The other Trade Contractors shall then prepare and distribute to the General Contractor their CADD input within 15 days. Final coordination drawings to be completed and distributed by the Mechanical Contractor within 30 days after start of construction. Investigate existing hidden structural conditions and MEP system locations above ceilings as part of coordination. Verify through field observations that proposed coordination drawings can be implemented as planned without the need to have another prime contractor modify existing conditions.
26. Site Coordination Drawings: Coordination drawings among the Civil Contractor and the General Trades, HVAC, Plumbing, Fire Suppression and Electrical Contractors are required with the lead role assigned to the Civil Contractor. The Civil Contractor shall prepare 1" = 20' scale reproducible drawings with the underground piping layout, with elevations, for review by other Trade Contractors. Drawings shall indicate both horizontal and vertical locations. The other Trade Contractors shall then prepare and provide reproducible additions/modifications representing their work to the Civil Contractor, who will then prepare final layout and coordination drawings illustrating work by all Trades on one set of coordination drawings for the project as a part of his Contract Price. The Civil Contractor shall conduct coordination meetings with all Trade Contractors to discuss and resolve interference problems. Once each Trade Contractor has initialed with approval the coordination drawings, the Civil Contractor shall submit the coordination drawings to the Architect and Engineer for review. The other Trade Contractors should finalize their shop drawings in accordance with the coordination drawings, and submit to the Architect and Engineer. Note: Prime Contractors shall coordinate with Construction Manager to incorporate Owner installed facilities including telecommunications and security.

Schedule: The General Contractor shall prepare and distribute underground piping drawings within 25 days after start of construction. The other Trade Contractors shall then prepare and distribute to the Civil Contractor their input within 15 days. Final coordination drawings to be completed and distributed by the Civil Contractor within 55 days after start of construction.

27. Each contractor shall provide temporary railings and protection at all floor openings, stairs, elevated floor perimeters, roof openings, roof perimeters, etc., as required by OSHA for protection of their work. Protection for excavations shall become the sole responsibility of the Trade Contractor conducting the excavation.
28. Each prime contractor shall provide water-tight thru-wall sleeves to ensure proper seal at penetrations through foundation wall systems associated with their work.
29. Each prime contractor is responsible to ensure that all necessary inspection requirements have been performed and completed by authorities having jurisdiction in order to achieve Substantial Completion.
30. Each week Prime Contractors are to provide to the Owner's Designated Project representative a Daily Log that states the number of employees on site each day, work performed each day completed and distributed electronically in submittal exchange; subcontractors, number of employees and work performed each day; any issues; any resolutions to issues; including any temperature and weather conditions.
31. NO Asbestos-containing materials shall be used in this project. Each prime contractor shall submit a certified letter to the Owner at the end of the project indicating no asbestos-containing building materials were used in the construction of the project.
32. All other duties and requirements identified in the Contract Documents.

PART 2 - SEPARATE CONTRACT DESCRIPTIONS

2.1 CONTRACT No. 1 - GENERAL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording "General Contractor" shall mean the same as the "General Construction Contractor".
- B. Furnish and install all general construction scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS

All Sections

DIVISION 03 – CONCRETE

- 031000 – Concrete Forming and Accessories
- 032000 – Concrete Reinforcing
- 033000 – Cast-In-Place Concrete
- 033050 – Cast-In-Place Slabs

DIVISION 04 – MASONRY

- 042200 – Unit Masonry

DIVISION 05 – METALS

- 051200 – Structural Steel
- 055000 – Metal Fabrications
- 055213 – Pipe and Tube Railings

DIVISION 06– WOOD, PLASTICS, COMPOSITES

- 061000 – Rough Carpentry
- 061053 – Miscellaneous Rough Carpentry
- 061760 – Metal-Plate Connected Wood Trusses
- 066000 – PVC Wall Panels
- 066510 – Solid Surface Fabrications

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

- 071113 - Bituminous Dampproofing
- 072100 - Thermal Insulation
- 072500 - Moisture Barriers
- 075433 - Thermoplastic Polyolefin (TPO) Roofing
- 076200 - Sheet Metal Flashing and Trim
- 077100 - Roof Specialties
- 079200 - Joint Sealants

DIVISION 08 – OPENINGS

- 081113 - Hollow Metal Doors and Frames
- 081613 - FRP Flush Doors
- 083113 - Access Doors and Frames
- 083310 - Overhead Coiling Doors
- 083613 - Sectional Overhead Doors
- 084113 - Aluminum-Framed Storefronts
- 084523 - Translucent Fiberglass Panel Unit Wall System
- 085200 - Aluminum Windows
- 087100 - Door Hardware
- 088000 – Glazing

DIVISION 09 – FINISHES

- 092900 – Gypsum Board
- 095113 – Acoustical Panel Ceilings

- 096513 – Resilient Base and Accessories
- 096813 – Tile Carpeting
- 099113 – Exterior Painting
- 099123 – Interior Painting
- ~~099733 – Concrete Floor Sealer~~

DIVISION 10 – SPECIALTIES

- 101100 – Visual Display Units
- 101400 – Interior Signage
- 101419 – Dimensional Letter Signage
- 102800 – Toilet and Bath Accessories
- 104413 – Fire Protection Cabinets
- 104416 – Fire Extinguishers
- 105000 – Metal Lockers

~~DIVISION 11 – Equipment~~

- ~~113100 – Residential Appliances~~

DIVISION 12 – Furnishings

- 123216 – Manufactured Plastic-Laminate-Faced Casework

DIVISION 13 – Special Construction

- 133419 – Metal Building Systems

C. Provide Flagpole, flag, and base indicated on Civil drawings.

D. Coordination with all parties: electrical construction, fire-suppression, plumbing construction, HVAC construction, and civil construction.

DIVISION 31 – EARTHWORK

All Sections

DIVISION 32 – EXTERIOR IMPROVEMENTS

All Sections

DIVISION 33 – UTILITIES

All Sections

DIVISIONS 20-34

All Sections (Coordinate and/or provide where applicable)

E. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are

- included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
 6. Provide all winter construction costs necessary to perform your scope of work.
 7. Layout is the responsibility of each contract and is included within this scope of work.
- F. Narrative Description of Contract No. 1 - GENERAL CONSTRUCTION. The work of this Contract includes, but shall not be limited to the following items:
1. Provide all fees, Federal, State and Local taxes and inspections, as required to perform the work of this contract. This does not include the building permit, which will be provided by the Owner.
 2. Provide temporary railings and protection at all floor openings, stairs, elevated floor perimeters, roof openings, roof perimeters, etc., as required by OSHA. Protection for excavations shall become the sole responsibility of the Trade Contractor conducting the excavation.
 3. Provide temporary toilet facilities as per Specification Section 015100.
 4. General Trades Contractor shall be responsible to remove snow from roof surfaces and roof deck in order to facilitate installation of roofing system.
 5. Perform all final cleaning for the project except cleaning work specified to be by another trade.
 6. Provide construction identification sign per Specification Section 015100, and as indicated in the drawings.
 7. Provide all quality control testing as required by the Contract Documents for the work of this Contractor, exclude testing specifically indicated to be provided by the Owner.
 8. General contractor shall provide downspouts, boots and all underground piping related to downspouts. Civil contractor to provide site storm water work as indicated on all drawings including all inlets, headwalls, endwalls, rip-rap and geotextile fabrics required. Plumbing Contractor shall provide all storm water piping within the building to 5' outside the building. Final connection to building pipe shall be by the Plumbing Contractor.
 9. Provide all building related concrete work including footings, foundation walls, slabs on grade, formed slabs, pads, walls, stairs and miscellaneous concrete. Provide all formwork, reinforcing, expansion control, fine grading, stone base, vapor barrier, rigid insulation, finishing, curing, accessories, etc. necessary for this work.
 10. Make provisions for and/or install all items embedded in concrete supplied by other Prime Contractors.
 11. Provide all housekeeping and equipment pads shown on Architectural, and Structural drawings. Confirm and coordinate sizes prior to installation. All housekeeping and equipment pads required but not shown and dimensions on architectural, and structural drawings shall be by the contractor requiring the same.
 12. Provide all masonry construction including CMU, mortar, grout, flashings, cavity wall insulation, reinforcing and accessories.

13. Provide concrete floor slab, concrete for stairs and landings. Slope concrete floor slab to floor and trench drain locations.
14. Provide all masonry including all accessories.
15. Provide all masonry anchors and structural anchor straps including field welding to structural steel if required.
16. Provide temporary enclosures, winter protection and heat as required to install work of this contract in conformance with the project schedule.
17. Provide dowels, embeds, concrete lintels etc. Install anchor bolts, embeds, loose steel lintels, etc., as furnished under other Prime Contracts, and installed in masonry.
18. Provide grouting of structural members into masonry.
19. Provide grouting of hollow metal frames in masonry.
20. Install any access panels in masonry furnished by other Prime Contractors. Coordinate location and openings with Prime Contractors.
21. Provide all structural steel, metal bar joist, metal deck and miscellaneous metals indicated on the architectural, civil or structural drawings as part of manufactured metal building construction.
22. The General Trades Contractor is to provide all reinforcing steel. The General Trades Contractor is to provide all shop drawings and submittals associated with the reinforcing steel. The General Trades Contractor shall provide and maintain safety caps on all rebar dowels.
23. With respect to OSHA requirements for steel erection, the General Contractor shall be the "controlling contractor" responsible to provide written notification for work of their contract, to the steel erector. Please reference OSHA regulations sections 1926.750 thru 1926.752, etc.
24. Provide openings and framing in all roof decks for other trades with any dimension larger than 12". Contractor requiring opening shall provide layout to General Contractor for openings. Openings with both dimensions smaller than 12" shall be provided by the contractor requiring the opening.
25. Provide all loose metal lintels as noted and for openings shown on Architectural or Structural drawings and/or as may be required to install the work of this trade. All loose lintels required, but not clearly shown, scheduled or dimensioned on either Architectural or Structural Drawings shall be furnished by the trade requiring the opening. GC to install loose steel lintels furnished by other trades. The prime contractor requiring the opening shall provide lay out for lintel installations to General Contractor in a timely manner.
26. Provide all miscellaneous metal, metal railings, and cold formed metal fabrications.
27. Provide all expansion joints and covers not specifically noted to be provided by other prime contracts.
28. Provide all light gage metal framing.
29. Provide all rough carpentry including, but not limited to, interior wood blocking - shown or required, wood blocking at windows and roof blocking.
30. Provide all finish carpentry including, but not limited to, custom millwork, and casework.
31. Provide all under slab and foundation insulation per Section 072100.

32. Provide all roofing systems including roofing membrane, metal panels, roof insulation, metal flashing, roof edge, coping, gravel stop, fascia, soffit, gutters, downspouts, scuppers, and roof accessories as part of manufactured metal building construction.
33. Install roof drains furnished by the Plumbing Contractor. Final connection to piping shall be by the Plumbing Contractor.
34. Mechanical Contractor shall furnish curbs as required for all roof-mounted equipment to General Contractor for installation. Wood blocking at roof openings to be provided by the General Contractor. Coordinate blocking locations and requirements with Mechanical Contractor.
35. Provide all joint sealants not specifically assigned to another Prime Contractor.
36. Provide all hollow metal frames and doors.
37. Provide all access doors as shown on Architectural drawings. All other access panels required, but not shown shall be furnished by the contractor requiring the same and installed by the GC.
38. Provide finish hardware for all doors provided as part of this contract.
39. Provide all drywall, metal studs, insulation, and acoustical ceilings and acoustic treatments.
40. Provide all floor base, wall and ceiling finishes including VCT, ceramic tile, and painting.
41. Should floor moisture emissions exceed manufacturers recommended levels for standard adhesive, Contractor shall provide, at no additional cost, appropriate special adhesives or sealers that will allow floors to be installed without adversely affecting the project schedule in accordance with the manufacturer's recommendations.
42. Provide floor and/or wall preparation prior to installation of the materials of this contract, to include normal flash patching, final scraping and sweeping.
43. Clean and polish floors upon completion of installation.
44. Provide for protection of all finished installations under this contractor until acceptance by the owner.
45. Provide painting of exposed HVAC, plumbing, fire protection and electrical systems and equipment in finished spaces (except factory-finished equipment).
46. Provide all Specialties indicated in Division 10 – Specialties.
47. Provide all equipment in Division 11 - Equipment.
48. Provide all furnishings in Division 12 – Furnishings.
49. Provide all conveying systems in Division 14- Conveying Systems.
50. Plumbing Contractor to provide all sinks, fixtures, traps, etc. in Plastic Laminate Faced Casework. Plumbing Contractor to provide all installation and final connections of sinks, faucets, and fittings. Coordinate this work with the Plumbing Contractor, as provided in the contract documents.
51. Electrical Contractor shall provide devices, wiring within casework and final connections for Casework as provided for in the Contract Documents.
52. Review temporary utilities specification for General Contractor's included work.
53. All other duties and requirements identified in the Contract Documents.

2.2 CONTRACT No. 2 - CIVIL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording "Civil Contractor" shall mean the same as the "Civil Construction Contractor".
- B. Furnish and install all civil scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 – SITE WORK
All items noted on Civil Drawings

Civil plan scope: including but not limited to:

- Clearing and Grubbing
- E&S control
- Temporary controls
- Rock construction entrance maintenance
- Rough grading
- Excavation and backfill for all buildings
- Unit pricing for import/export of suitable soil
- Underground utilities
- Coordination with Williams (transcontinental gas line company)
 - Rough-in and installation as reviewed and approved by Williams
- Stone grading for exterior housekeeping pads, curbs, sidewalk, and paving
- Paving
- Site signage
- Pavement markings
- Landscaping
- Finish Grading

DIVISION 31 – EARTHWORK
▪ 312316 Trenching

- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.
- All underground utilities: plumbing, sanitary, water, etc., will be furnished and installed by the civil contractor. All fire-suppression and plumbing rough-in will be furnished and installed from 5' outside of all building and into the buildings by the fire-suppression and plumbing contractors. All utilities from 5' outside of all buildings will be furnished, installed, excavated and backfilled by the civil contractor.

DIVISION 33 – UTILITIES

- 337119 Underground Ducts
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

Coordination with all parties: general construction, electrical construction, fire suppression, plumbing construction, and HVAC construction

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No. 2 - CIVIL CONSTRUCTION. The work of this Contract includes, but shall not be limited to the following items:

1. Provide all engineering and layout required to perform the work of this contract. Utilize a professional licensed surveyor to lay out all building corners, to provide a proper benchmark elevation (or elevations) for new building location and to establish finished slab on grade elevations from those benchmarks. Benchmark(s) will be protected until after all slab on grade work, sidewalks and concrete curb work is completed.
2. Provide incidental erosion and sedimentation control as required for the work of this Trade Contractor's work. The General Trades Contractor will be responsible for installing and maintaining the erosion and sedimentation

control. The General Trades Contactor is responsible to maintain the erosion and sedimentation control measures. The General Trades Contractor is responsible to schedule his work to satisfy D.E.P./County Conservation District and will be responsible for any violations, fine, etc., issued by D.E.P./County Conservation District or other agencies as a result of the work not being installed, completed or maintained.

3. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the Contractors. The Civil Contractor and the HVAC Contractor will be named co-permittee holders.
4. Provide general snow removal through-out the project in order to facilitate construction. General Trades Contractor shall be responsible to remove snow from roof surfaces and roof deck in order to facilitate installation of roofing system. Remove snow as required for Site Construction.
5. The Owner has provided temporary construction access drive, parking and staging areas. Civil Contractor to provide and maintain stoned areas for field offices, laydown areas and temporary construction or access roads and restore to final design condition at completion of the project.
6. Provide all sitework including site demolition, clearing, grubbing, stripping, earthwork, excavation and backfill, site water, fire, sanitary & storm, site concrete, paving, landscaping, seeding, mulch and various site improvements and furnishings.
7. Maintain, and remove construction entrances.
8. Provide for sweeping and cleaning all parking lots and roadways during the entire project. Provide for removal off site of all waste or excess materials generated by this work.
9. Provide site storm water work as indicated on all drawings including all inlets, headwalls, endwalls, rip-rap and geotextile fabrics required. Plumbing Contractor shall provide all storm water piping within the building to 5' outside the building. Final connection to building pipe shall be by the Plumbing Contractor.
10. Provide site sanitary sewer and manholes as indicated on all drawings to a termination within 5' of the building line including sanitary force mains and gravity lines. Final connection to building pipe shall be by the Plumbing Contractor.
11. Provide complete storm water detention system.
12. Provide all general and select demolition except that specifically indicated to be provided by other contractors.
13. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the General Contractor. The General Trades Contractor will be responsible to maintain the erosion and sedimentation control. Schedule this work to satisfy D.E.P./County Conservation District. The General Trades Contractor shall be responsible for any violations, fines, etc., issued by D.E.P./County Conservation District or other agencies as a result of the work not being installed, completed or maintained.
14. Verify all underground utilities prior to excavation. Furnish Architect and Engineer with confirmation. The utility lines shown on the drawings were located by field surveys or from utility companies' maps. These lines are not guaranteed or represented as being accurate by the Owner or their representative, or to be in the position indicated on the drawings. There is no

guarantee or representation that all existing lines and facilities are shown on the Drawings. The contractor shall take whatever measures necessary to provide bracing and shoring to protect all existing utilities from damage. No additional payment will be made for protecting utilities, or for providing bracing and shoring. This work will be considered incidental to the work being performed. If the contractor damages existing utilities, he shall immediately notify the Architect and Engineer, the Owner and said utility company and take such measures as are necessary to insure the safety of the workmen, the public, and the project area. He shall arrange to repair immediately all such damages to restore service and the expense incurred will be the responsibility of the contractor.

15. It shall be the contractor's responsibility to comply with all applicable requirements of Act 287, or as amended, in order to contact all utilities within the project site and to have facilities field located and referenced prior to excavation.
16. Provide all site related concrete. Provide all formwork, reinforcing, expansion control, fine grading, stone base, vapor barrier, rigid insulation, finishing, curing, accessories, etc. necessary for this work.
17. Provide bituminous paving, line striping, handicap markings, concrete bumper blocks, road and parking accessories and signs, lawn and grasses as shown or specified.
18. Provide all temporary signage and traffic control measures required by the work of this Contract.
19. Provide all site fences and gates. Provide temporary protection of trees and shrubs. Provide restoration of disturbed lawn areas at the completion of the project. Provide all landscaping, including trees, shrubs, ground covers, plantings, seed, sod, mulch and edging.
20. Provide all excavation cuts and fills, including imports and exports of spoils as necessary to achieve final grades for all areas. General Contractor to accept spoils created as a result of other trades' excavation. The other trades will stockpile excess spoils at a central location on site as determined by the Construction Manager. The General Contractor shall dispose of these spoils on or off site as site conditions dictate and/or permit.
21. Provide all rock excavation as required for the work of this contract. Contractor assumes all risk associated with potential for rock during excavation. Rock will not be considered an unforeseen condition.
22. Provide site water and fire service lines, water meter pit, tap-in, new fire hydrants and fire hydrant relocations with accessories as required. Provide water line to a termination within 5' of the building line. Final connection to building pipe shall be by the Plumbing Contractor.
23. All site electrical work including site lighting is by Electrical Contractor.
24. The General Trades Contractor shall remove all excess materials resulting from the excavations for his work to an offsite location.
25. Provide all site concrete curbs, paving, sidewalks, ramps, steps, stoops and frost walls including reinforcing steel.
26. Clean binder paving and provide tack coat on temporary lots as required for construction phasing. Schedule for placement of binder and topcoat is to be determined by Owner's designated project representative. Provide temporary line painting of parking lots to be used during construction by the Owner or

public prior to top coat finish paving.

2.3.1 CONTRACT No. 3 – PLUMBING CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes
- B. Furnish and install all plumbing scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS

All Sections

DIVISION 01 - GENERAL REQUIREMENTS

All Sections

DIVISION 02 THROUGH DIVISION 14

All Sections (Coordinate as applicable)

DIVISIONS 21 and 23

All Sections (Coordinate)

DIVISION 22 – PLUMBING

- 220100 – General Provisions
- 220502 – Excavation, Backfill & Compaction for Utility Trenches
 - Plumbing scope accounts for all interior scope from inside all buildings to 5' outside of all building footprints. Civil contractor will be responsible for all excavation and piping 5' and beyond the exterior foot print of the exterior of the buildings.
- 220516 – Expansion Fittings and Loops for Plumbing Piping
- 220519 – Meters and Gages for Plumbing Piping
- 220548 – Vibration Isolation & Seismic Mountings
- 220553 – Identification for Plumbing Piping and Equipment
- 220719 – Plumbing Piping Insulation
- 221005 – Plumbing Piping
- 221006 – Plumbing Piping Specialties
- 221500 – Compressed Air Systems
- 223000 – Plumbing Equipment
- 223300 – Electric Water Heaters
- 224000 – Plumbing Fixtures

DIVISIONS 26-34
All Sections (Coordinate)

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative description of CONTRACT No. 3 – PLUMBING CONSTRUCTION: The work of this contract includes, but shall not be limited to the following items:

1. Participate in the coordination drawing process as defined in this specification section.
2. Provide Operation and Maintenance manuals and instructions to Owner as specified.
3. See Architectural & Civil drawings for additional plumbing related notes.
4. Provide layout for the General Contractor indicating all openings in the new floor, roof decks, and exterior walls that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Plumbing Contractor, who shall also provide support steel at these openings as required. All other framing, lintels, miscellaneous supports, etc., required but not specifically shown on the Architectural or Structural drawings shall be by this Contractor.
5. Verify existing services prior to start of work in existing facility and notify the Architect and Engineer of any discrepancies.
6. General Contractor to provide all structural steel, miscellaneous metal, including loose lintels, required for the existing building and new building additions as shown or specified on the architectural or structural Drawings. If not indicated on Architectural or Structural Drawings, the Plumbing Contractor will furnish to the General Contractor for installation.
7. Provide all plumbing work including sanitary sewer and vent piping, waste system, domestic water piping and equipment, gas piping, pipe insulation, roof and floor drains, plumbing fixtures, trim, accessories, supports unless shown or specified by others, anchorage, etc., as shown and/or specified.
8. Provide a complete storm water, sanitary system and gas system as

- shown on Plumbing & Civil Drawings, to 5' outside of building. Provide final tie-in (of storm sewer and sanitary). Coordinate with General Contractor.
9. Provide a complete domestic water and sanitary system as shown on Plumbing & Civil Drawings to 5' outside of building. Provide final tie-in (of domestic water and sanitary system). Coordinate work with General Contractor.
 10. Plumbing Contractor to provide oil interceptor and associated piping.
 11. Plumbing Contractor is responsible for all gas piping for the entire project.
 12. Provide color-coding and identification of valves and lines as indicated.
 13. Provide cleaning, disinfecting and testing of lines and equipment, and final inspection.
 14. Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of fixtures and equipment.
 15. Provide insulation required for the scope of this Contract.
 16. Provide all excavation, bedding and backfill, etc. as necessary to install the work of this Contract within footprint of structures and extend to 5'-0" outside footprint of those structures.
 17. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract.
 18. Furnish any embeds required to be cast in concrete or masonry to the appropriate Prime Contractor.
 19. Provide concrete at all services crossing under or near foundations that require excavated area to be filled with concrete.
 20. Coordinate with the General Contractor installation of piping installed inside masonry units, include providing any temporary supports that are necessary.
 21. Furnish any access panels, which are required for access to the work by this Contract. Coordinate opening requirements with the General Contractor for installation by GC.
 22. Provide final plumbing connection of Owner Furnished Equipment, as shown and/or specified.
 23. Provide final cleaning of all fixtures.
 24. Plumbing Contractor to provide all sinks, fixtures, traps, etc. in Plastic Laminate Faced Casework. Plumbing Contractor to provide all installation and final connections of sinks, faucets, and fittings. Coordinate this work with the General Contractor, as provided in the contract documents.
 25. Furnish roof drains, turn over to the General Contractor for installation. Final connection to the roof drain is to be by the Plumbing Contractor.
 26. Electrical starters for Plumbing Equipment shall be furnished under the Plumbing Contract and installed and final connected by Electrical Contractor.
 27. Provide temporary water service for construction purposes.
 28. Work must be complete and tested to meet the requirements of PA L&I and local code inspections.
 29. All other duties and requirements identified in the Contract Documents.

2.4 CONTRACT No. 4 – HVAC CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording "HVAC Contractor" or "Heating Contractor" shall mean the same as the "Mechanical Contractor".
- B. Coordination with all parties: General construction, Electrical construction, Plumbing construction, Fire Suppression construction and Civil construction.

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 THROUGH DIVISION 14
All Sections (Coordinate as applicable)

DIVISIONS 23 – HEATING, VENTILATING & AIR CONDITIONING (HVAC)

- 230501 – HVAC General Requirements
- 230510 – Common Motor Requirements for HVAC Equipment
- 230549 - Vibration Isolation
- 230593 – Testing, Adjusting and Balancing for HVAC
- 230714 – HVAC Duct Insulation
- 230923 – Direct Digital Control (DDC) System
- 230993 – HVAC Control Sequence
- 232300 – Refrigerant Piping
- 233100 – HVAC Ducts and Casings
- 233300 – Air Duct Accessories
- 233416 – HVAC Fans
- 233700 – Air Outlets and Inlets
- 233750 – Wall Louvers
- 238101 – Terminal Heat Transfer Units
- 238129 – Variable Refrigerant Flow HVAC Systems

DIVISION 21,22, 26-34
All Sections (Coordinate)

- C. Clarifications, Qualifications, and Exclusions:
1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
 2. Sales and use tax are included within this scope of work.
 3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.

4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No. 4 - HVAC Construction: The work of this Contract includes, but shall not be limited to the following items:

1. HVAC Contractor shall be the Lead in the coordination drawing process as defined in this specification section.
2. Provide Operation and Maintenance instruction manuals and specified training to the Owner.
3. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the Contractors. The General Trades Contractor and the HVAC Contractor will be named co-permittee holders.
4. Provide layout for the General Contractor indicating all openings in the new floor, roof decks and exterior walls that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Mechanical Contractor, who shall also provide support steel at these openings as required. All other framing, lintels, miscellaneous supports, etc., required but not specifically shown on the Architectural or Structural drawings shall be by this Contractor.
5. Provide protection of structure, finishes and landscaping from damage resulting from the work of this Contract. Repair any damage promptly to the satisfaction of the Owner.
6. The General Contractor is to provide all miscellaneous metal, including loose lintels, required for openings as shown or specified on the Architectural or Structural Drawings. The trade requiring a lintel, which is not clearly indicated on either the Architectural or Structural drawings, will provide those lintels required to install his work.
7. Provide painting for "touch up" required to restore "factory finished" equipment and material to its original condition.
8. Provide all Heating, Ventilation, Air Conditioning (HVAC) work as shown or specified including but not limited to vibration isolation, HVAC equipment, ductwork, duct insulation, pipe, piping systems, pipe insulation, air distribution outlets and inlets; instrumentation; test and balance of systems; valving and coil connections; air handlers; fan coil units; fire and smoke dampers; inspections; identification; roof ventilators; curbs; fans; unit and cabinet heaters; terminal equipment; pumps; hangers; blocking; support pipe anchors; supports unless designated specifically by the General Contractor, wall sleeves and flashing, etc. as shown and/or specified.

9. HVAC Contractor to provide pumps (including power wiring/conduits to pumps) at locations where condensate lines cannot be gravity drained. The Mechanical Contractor is to provide the condensate drain lines.
10. Install ductwork in accordance with the latest recommendations of ASHRAE and SMACNA for low and medium pressure ductwork.
11. Provide testing and cleaning of distribution systems and equipment and final inspection for each project phase.
12. Coordinate connections of equipment, dampers etc. as required to the fire alarm system with the Electrical Contractor.
13. Provide identification of equipment, valves, piping and ductwork as required.
14. Provide all excavation, bedding, backfill, etc., as necessary to install the work of this Contract.
15. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract, but not shown or dimensioned on Architectural, Civil, and Structural Drawings. General Contractor is to provide all housekeeping and equipment pads shown and dimensioned on Architectural, Civil, and Structural drawings.
16. Furnish any embeds required to be cast in concrete or masonry to the appropriate Prime Contractor.
17. Provide for miscellaneous structural framing and decking as required as result of this Contract, but not clearly shown on Architectural or Structural Drawings.
18. HVAC Contractor shall furnish curbs as required for all roof-mounted equipment to General Contractor. Wood blocking at roof openings to be by General Contractor. Coordinate blocking locations and requirements with General Contractor.
19. Provide all insulation required for the scope of this Contract.
20. Furnish any access panels, which are required for, access to the work by this Contract for installation by the GC.
21. Furnish and install all exterior louvers and vents.
22. Provide final HVAC connections of Owner Furnished Equipment, as shown or specified. Provide relocation of existing equipment as shown or specified.
23. Provide final HVAC connection of Casework and equipment.
24. Coordinate tie-in of ventilation control system to fire alarm system with Electrical Contractor.
25. Motor starters VFD's for HVAC equipment shall be furnished by the HVAC Contractor for installation and final connection by the Electrical Contractor. Disconnects ~~furnish and~~ installed by Electrical Contractor.
26. Install duct smoke detectors furnished by the Electrical Contractor.
27. See section 015000 – Temporary Facilities and Utilities section for temporary heating, air conditioning and humidity requirements.
28. HVAC Contractor shall provide temporary air conditioning or dehumidification for installation of materials requiring conditioned spaces if permanent system is not operational at the time air conditioning or dehumidification is required for installation of millwork, wood flooring, casework, countertops, ceiling tile, etc.

29. Systems must be complete, operational and tested to meet the requirements of PA L&I and Local codes.
30. Provide identification of valves and lines as indicated.
31. Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of sprinkler system fixtures and equipment.
32. All other duties and requirements identified in the Contract Documents.

2.5 CONTRACT NO. 5 - ELECTRICAL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes.
- B. Electrical scope will account for electrical terminations and power requirements for: Division 21 Fire Suppression, Division 21 Plumbing, Division 23 HVAC. Furnish and install all electrical scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS All Sections

DIVISION 01 - GENERAL REQUIREMENTS All Sections

DIVISION 02 THROUGH DIVISION 14 All Sections (Coordinate)

DIVISIONS 21-23 All Sections (Coordinate and install where applicable)

DIVISION 26 ELECTRICAL

- 260100 General Requirements
- 260513 Medium Voltage Cable
- 260519 Low Voltage Electrical Power Conductors and Cable
- 260526 Grounding and Bonding for Electrical Systems
- 260529 Hangers and Supports for Electrical Systems
- 260534 Conduit
- 260537 Boxes
- 260533 Identification for Electrical Systems
- 260573 Power System Studies
- 260914 Electrical Power Monitoring
- 260923 Lighting Control Devices
- 262100 Low Voltage Electrical Service Entrance

- 262200 Low Voltage Transformers
- 262413 Switchboards
- 262416 Panelboards
- 262717 Equipment Wiring
- 262726 Wiring Devices
- 262813 Fuses
- 262818 Enclosed Switches
- 263213 Engine Generator (Alternate)
- 263213 Engine Generator
- 263600 Transfer Switches
- 264300 Surge Protective Devices
- 265100 Interior Lighting

DIVISION 27 – COMMUNICATIONS

- 271005 Structured Cabling for Voice and Data
- 275319 Emergency Responder Radio Communication System

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

- 284600 Fire Detection and Alarm
- 285500 RF Survey for Emergency Responder Radio Antenna

DIVISION 31 – EARTHWORK

- 312316 Trenching (for electrical scope only as well as coordination of electrical scope)
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

DIVISION 33 – UTILITIES

- 337119 Underground Ducts
- Division 33 applies to the electrical scope only
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of

work.

7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No.5 - Electrical Construction: The working of this Contract includes, but shall not be limited to the following items:

1. Participate in the coordination drawing process as defined in this specification section.
2. Provide Operation and Maintenance instruction manuals and specified training to the Owner.
3. Provide layout for the General Contractor indicating all openings in the new floor and roof decks that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Electrical Contractor, who shall also provide support steel at these openings as required.
4. Provide start up and training as required by the Contract Documents.
5. Review temporary facilities and controls and electrical specifications for temporary electric requirements. Temporary electric shall be provided and installed by the Electrical Contractor including site and service electric if applicable.
6. Provide painting for "touch up" required to restore "factory finished" equipment and material to its original condition.
7. Provide temporary power and lighting as indicated in specification section 015100 Temporary Utilities and Facilities.
8. Provide all electrical work including testing, conduit, wiring and cable, boxes, wiring devices, enclosures, equipment final connections, support devices, identification, switchboards, disconnect switches, primary and secondary grounding, panel boards, motor controls, lighting fixtures, emergency power and lighting, fire alarm and smoke detection, final HVAC electrical, fire protection electrical and plumbing electrical connections, hangers, supports unless specifically designated by the General Contractor, blocking, wall sleeves, flashing, etc. as shown and/or specified.
9. Provide equipment and all necessary wiring for installation of the following systems. (Interface and coordinate with security systems work)
 - a. Fire Alarm System
 - b. Lighting Controls And Devices
 - c. Generator systems
 - d. ~~Integrated communication systems~~
 - e. ~~System~~
 - f. Switchboards / Panel boards
 - g. Telecommunications (rough-in and coordination only, provided by Owner)
 - h. Security systems (rough-in and coordination only, provided by Owner).
10. It is the intent of the Contract for the Electrical Contractor to provide a

- complete system for all systems above including conduit, boxes, surfaces, raceway wire, fiber optics, patch panels, connectors, terminations, patch controls, jacks, UTP cabling, testing, equipment, brackets, hardware, layout, check out, training, etc.
11. Provide equipment and all necessary wiring for interfacing of the following systems:
 - a. HVAC Equipment
 - b. Fire Protection Equipment
 - c. Electrically operated overhead Coiling Doors and grilles
 - d. Door operators
 12. Provide identification of equipment as required.
 13. Provide all cutting, patching, excavation, and backfill, including work for new incoming service, etc. as necessary to install the work of this Contract.
 14. Provide cast-in-place or precast vaults, manholes, handholes, etc. required for electrical and telecom services. Include manhole cable racks, manhole covers, ladders, grounding, sump pit, and gratings for both electric and communication systems. Provide all associated excavation stone bases, tamping and backfill including any shoring that may be required.
 15. Provide fire rated backboards for electrical and telephone equipment as shown or specified. If backboards are to be painted, provide confirmation with delivery receipt included in Operation and Maintenance Manuals.
 16. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract.
 17. Provide concrete for encasement of conduit, foundation/base for site lighting, etc. as required for work by this contract. Provide warning tape as required. Provide rebar reinforcement as shown on Contract Documents.
 18. Provide fire-safing and fire-stopping at all locations that are required to maintain a fire rating at floor and wall penetrations made as a result of the work of this Contract.
 19. Furnish any access panels, which are required for access to the work of this Contract for installation by GC. Provide under floor boxes as shown or specified.
 20. Provide power wiring to all HVAC, electrical, and plumbing, etc., as required or shown.
 21. Wire loose motor starters furnished by HVAC, Plumbing Contractors, as part of the General Contract and miscellaneous equipment. The Electrical Contractor shall ~~furnish and~~ install the conduit, wire and disconnects for all systems using 120 Volts A.C. and above.
 22. Provide testing and documentation of test results for electrical and telecommunications systems as per the Contract Documents. Provide copies of testing and inspections to Owner and Architect and Engineer.
 23. Provide patching of existing roads and lawn areas as a direct result of new underground conduit.
 24. Furnish and wire duct smoke detectors, installation shall be by Mechanical Contractor.
 25. Electrical Contractor shall provide conduit and back boxes, surface metal

- raceway, pull strings, sleeves to communication closets, and device boxes as required for installation of all communication systems as per the Contract Documents.
26. Electrical Contractor shall provide fire alarm wiring to fire sprinkler flow and tamper switches as required.
 27. Electrical Contractor to provide and install telephone and data cables for connection to the fire alarm panel, security panel, ATC panels, etc. As per the Contract Documents.
 28. Coordinate with Mechanical Contractor for electrical hook-up of mechanical equipment.
 29. Electrical Contractor shall include in his bid and be responsible for all cost associated with the Telecommunication Systems.
 30. Electrical Contractor shall provide all site electrical work. Civil Contractor responsible for trenching and backfill for underground electric, and concrete encasement.
 31. All other duties and requirements identified in the Contract Documents.

2.6 CONTRACT No. 6 – FIRE SUPPRESSION CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording “FP Contractor” or “Fire Protection Contractor” shall mean the same as the “Fire Suppression Contractor”.
- B. Coordination with all parties: General construction, Electrical construction, Plumbing construction, Mechanical construction and Civil construction. Furnish and install all fire-suppression scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 THROUGH DIVISION 14
All Sections (Coordinate as applicable)

DIVISION 21 – FIRE SUPPRESSION

- 210100 – General Provisions
- 210500 – Common Work Results for Fire Suppression

- 210553 – Identification for Fire Suppression Piping & Equipment
- 211300 – Fire-Suppression Sprinkler Systems

Fire Suppression scope accounts for all interior scope from inside all buildings to 5' outside of all building footprints. Civil contractor will be responsible for all excavation and piping 5' and beyond the exterior footprint of the exterior of all buildings.

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No.6 – Fire Suppression Construction: The working of this Contract includes, but shall not be limited to the following items:

1. Provide all sprinkler work including sprinkler piping, heads, flow and tamper switches, trim, accessories, supports unless shown or specified by others, anchorage, etc, as shown and/or specified in order to have 100% sprinkler coverage where indicated in the contract drawings.
2. Provide fire pump and jockey pump, final size as required per fire protection criteria indicated on drawings. Coordinate final electrical requirements with Electrical Contractor.
3. Provide all hydraulic calculations to size fire protection piping system. All pipe areas shown on plans, including combined water service to building, are approximate. Actual size shall be determined by this contractor.
4. Perform fire hydrant flow and pressure test.
5. Provide cleaning, disinfecting and testing of lines and equipment and final inspection at each project phase as may be necessary to obtain partial occupancies. Provide testing of underground fire protection lines per NFPA 13 requirements.
6. Provide final sprinkler connection to Owner Furnished Equipment, as shown and/or specified.
7. Coordinate tie in of sprinkler system to fire alarm system with Electrical

- Contractor. Provide flow and tamper switches for connection to fire alarm system.
8. Provide all underground sprinkler fire service piping to 5"-0" outside of building, include excavation, backfill and miscellaneous concrete work. Perform final connection to sprinkler service.
 9. Prefabrication of any sprinkler pipe is done at the sole risk of the contractor. Any modifications to prefabricated sprinkler pipe that needs to be done in the field in order to accommodate actual conditions or coordination issues shall be done at the expense of the contractor.
 10. Systems must be complete, operational and tested to meet the requirements of PA L&I and local code.
 11. Provide all control wiring required for the local system controls with power wiring to be provided by the Electrical Contractor.
 12. Loose motor starters and drives for Fire Protection equipment shall be furnished by the Fire Protection Contractor and wired by Electrical Contractor. Disconnect switches and fuses shown on electrical drawings will be furnish and installed by Electrical Contractor.

NOTE: The above descriptions of the scope of these Contractors' work are not complete descriptions of the Contractors' obligations for this project. The Contractors are reminded to review and familiarize themselves with all relevant Contract Documents.

END OF SECTION 011200

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

ADDENDUM 1

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Pre-bid Schedule
- B. Procedures for preparation, development and updating of CPM CONSTRUCTION SCHEDULE.

1.2 RELATED REQUIREMENTS

- A. Section 011200 - MULTIPLE CONTRACT SUMMARY
- B. Section 013300 - SUBMITTAL PROCEDURES

PART 2 – PROJECT SCHEDULE

2.1 GENERAL

- A. Upon Notice to Proceed the overall Project CPM Schedule will be prepared by the Construction Manager in accordance with the following.

PART 3 - CPM CONSTRUCTION SCHEDULING

3.1 GENERAL

- A. The CPM Schedule network plan including any appropriate milestone dates and the computer-produced reports shall be part of the Owner/Contractor agreement as stipulated herein.
- B. The Prime Contractors shall provide all information required by the Construction Manager for development of a network plan and schedule for this in accordance with the requirements of this section of the General Requirements.
- C. The purpose of the plan and schedule will be to assure adequate planning and execution of the work of the Prime Contractors, and to assist the Architect in monitoring the progress of the work and evaluating proposed changes to the contract and schedule.
- D. The project management tool commonly called the Critical Path Method (CPM) shall be employed for the planning, scheduling and reporting of all work to be performed under the contract.
- E. Changes to the construction schedule affecting start and completion dates of activities or durations shall not automatically mean that an extension of the

Contract Completion Date is warranted or due the Contractor. A Contract Modification or delay may not affect existing critical activities or may cause non-critical activities to become critical, resulting only in absorbing a part of the available total float that may exist within an activity chain on the Network and no change to the interim milestone dates or the Contract Completion Date.

- F. Total float is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each and every activity in the schedule. ~~Float is not for the exclusive use or benefit of either the Owner or any of the Prime Contractors.~~ **Float is for the exclusive benefit of the Owner.** Extensions of time to interim milestone dates or the Contract Completion Date under the Contract will be granted only to the extent that equitable time adjustment to the activity or activities affected by the Contract Modification or delay exceeds the total float of the affected or subsequent paths and extends any interim milestone date or the Contract Completion Date.
- G. In no event shall any progress report or updated schedule constitute an extension or change of the Contract Time, a milestone date or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to a change order.

3.2 INITIAL SUBMITTAL AND NETWORK PREPARATION

- A. To the extent necessary for the Construction Manager to reflect in a computerized CPM Schedule network diagram the Prime Contractor's proposed plan for completion of their work, the Prime Contractors shall be prepared to meet with and assist the Construction Manager, and furnish information subsequent to award of the contract.
- B. Following the Contract Award, the Construction Manager will meet with the other Prime Contractors and conduct a review meeting to assure their understanding of said schedule and contractual milestone dates.
- C. Within ten (10) calendar days after the meeting to review the Project Schedule, the Prime Contractors will provide their proposed plans of operation to the Construction Manager. The Contractor's plan of operations shall consist of, but not limited to, the following:
 - 1. List of proposed Construction Activities.
 - 2. List of Proposed Duration's for Construction Activities (in work days).
 - 3. List of proposed Duration's for major procurement items (in work days).
 - 4. Proposed Sequencing of Construction Activities.
- D. The Construction Manager and other Prime Contractors will then meet and jointly develop the CPM project schedule, based on all of the Prime Contractor's proposed plans and sequences of operation. Any areas of such plans which conflict with timely completion of the project will be subject to revision unless adequate justification for these plans, duration's and logic.

- E. The Prime Contractors will be responsible for assuring that any and all subcontractor work, as well as his own work, is included and that the diagram shows a coordinated plan of work.
- F. Proposed durations assigned to each activity shall reflect the Prime Contractor's best estimate of time required to complete activity considering the scope and resources planned for activity.
- H. Failure by the Prime Contractors to include the element of work required for performance of the contract shall not excuse any of the Prime Contractors from completing all their work within the Contract Completion Date. If the Construction Manager questions any of the Prime Contractor's proposed durations, said Prime Contractor shall within five (5) calendar days provide estimates of his labor and intended crew and/or equipment sizes required for the activity which support the proposed duration.
- I. Seasonal weather conditions will be considered in the planning and scheduling of all work influenced by high or low ambient temperatures to insure the completion of all contract work within the allotted contract time milestone completion dates.

3.3. REVIEW AND APPROVAL

- A. Within ten (10) calendar days after receipt of the CPM Schedule and reports provided by the Construction Manager, each Prime Contractor shall meet with the Construction Manager, if required, for joint review, correction, or adjustment of the proposed plan and schedule. After these joint meetings, the CPM Schedule and reports will be revised in accordance with agreements reached during the joint reviews. Two (2) copies each of the CPM Schedule and reports will be provided to the Prime Contractors and the Architect. The Construction Manager shall provide, on usb, an electronic version of the schedule in the native software format to the Architect for verification of conformance with the contract documents. The revised CPM Schedule will be reviewed by the Prime Contractors, and if found to be as previously agreed upon, will be accepted within three (3) working days.
- B. Upon establishment of an agreed upon schedule, the Prime Contractor will sign the CPM Schedule network drawings and computer produced reports, which will then indicate the acceptance and approval of the project schedule, sequence of activities and times for completion. Receipt of the approved project schedule by the Prime Contractor and the Architect will be a condition precedent to the making of any partial payments under the Contract.
- C. **All Prime Contractors hereby agree that in the event of any disagreement by any Prime Contractor as to the duration provided for their work, or the sequencing of their work, that the final decision of duration and sequence will be made by Construction Manager. All Prime Contractors agree to abide by the Construction Managers final determination which shall be final and binding upon all Prime Contractors. Prime Contractors agree they shall have no claims or disputes against the Owner , Architect or Construction Manager and shall not be entitled to any additional costs for said decisions. Should**

any Prime Contractor fail to provide the information required in Paragraph 3.2 within the 10 calendar days required, the Construction Manager shall assign the Prime Contractors activities and durations and the Prime Contractor agrees to abide by the Construction Managers decision.

3.4 SCHEDULING UPDATING AND REVISIONS

- A. The Approved Project Schedule will be updated by the Construction Manager on a monthly basis for the purpose of recording and monitoring the progress of work. The other Prime Contractors shall meet with the Construction Manager monthly at a minimum upon request to review actual progress made to date, dates of activities started and completed, and the percentage of work completed to date on each activity started by not completed.
- B. Upon completion of the joint reviews, the Construction Manager will revise the schedule to reflect progress of the work to date and provide a copy to the other Prime Contractors.
- C. Based on the result of the progress update, when the approved project schedule no longer represents the actual prosecution and progress of the work, a revision to the schedule logic sequence and the precedence diagram may be required by the Architect or requested by the Prime Contractors.
- D. The Prime Contractors may also request revisions to the logic sequence and precedence diagram in the event his planning for the project is revised. If the Prime Contractor desires to make changes in the Approved Project Schedule to reflect revisions in this method of operating and scheduling, he shall notify the Construction Manager in writing two weeks prior to the next schedule update, stating the reasons for the proposed revision.
- E. The Construction Manager will give consideration to reasonable requests for changes to the schedule logic sequence.
- F. The Construction Manager will prepare a revised construction schedule incorporating the necessary or agreed to changes to the logic sequence and distribute it to all Prime Contractors.
- G. The Construction Manager shall complete updates & submit updated schedule in paper and electronic format in the native software format to the Architect by the 25th of each month. Failure to submit can be grounds for withholding payment. Prime Contractor not providing updated information to the Construction Manager in a timely manner may have payment withheld.
- H. Updating the schedule to reflect actual progress made up to the date of an update shall not be considered revisions to logic sequence and schedule.
- I. If the Prime Contractor does not record any exceptions to the published Project Schedule update or the revised construction schedule within five (5) calendar days of its receipt, he will be deemed to have accepted and approved it.

3.5 RESPONSIBILITY FOR COMPLETION

- A. The Prime Contractor shall furnish sufficient forces, plan and equipment, and shall work such hours including night shift and overtime operations, as necessary to ensure the prosecution of the work in accordance with the most current update of the Project Schedule. If, in the opinion of the Architect, the Prime Contractor falls behind in meeting the schedule as presented in the most current update, the Prime Contractor shall take steps as may be necessary to improve his progress, and the Architect and/or Owner's designated project representative may require him to increase the hours of work, the number of shifts, overtime operations and/or the amount of construction plant and equipment without additional cost to the Owner. All additional expenses incurred by the Owner due to such work will be deducted from the amount due the Prime Contractor. The provisions of this section shall not be construed as prohibiting work on Saturdays, Sundays, and holidays if the Prime Contractor so elects and if approved by the Architect or the Owner's designated project representative.
- B. Failure of the Prime Contractor to comply with the requirements of this subsection shall be a basis for determination by the Owner that the Prime Contractor is not prosecuting the work with such diligence as will ensure completion within the time stipulated. Upon such determination, the Owner may terminate the Prime Contractor's right to proceed with the Work or any separable part thereof, in accordance with the provisions of Article 14.2 of the General Conditions, or may take such other actions as may be deemed appropriate.
- C. Failure of the prime contractor to comply with the requirements of this subsection shall be a basis for determination by the owner that the prime contractor is not prosecuting the work with such diligence as will ensure completion within the time stipulated. Upon such determination, the owner may terminate the prime contractor's right to proceed with the work or any separable part thereof, in accordance with the provisions of the General Conditions, or may take such other actions as may be deemed appropriate.

3.6 STIPULATIONS

- A. Each prime contractor shall be responsible for understanding the scheduling terminology employed.
- B. The value of creating and maintaining the schedule shall be included in the schedule of values.
- C. Acceptance of the approved baseline construction schedule by each prime contractor shall be a condition precedent to the making of any progress payments under the contract.
- D. The schedule may be used in evaluating proposed changes to the contract and/or to the schedule itself.

- E. ~~Float is not for the exclusive use or benefit of either the owner or any of the prime contractors.~~ **Float is for the exclusive use and benefit of the Owner.**
- F. Extensions of time to interim milestone dates or the contract completion date under the contract will be granted only to the extent that equitable time adjustment to the activity or activities affected by the contract modification or delay exceeds the total float of the affected or subsequent paths and extends any interim milestone date or the contract completion date.
- G. Changes to the schedule affecting start and completion dates of activities or durations shall not automatically mean that an extension of the Contract Completion Date is warranted or due the contractor. A Contract Modification or delay may not affect existing critical activities or may cause non-critical activities to become critical, resulting only in absorbing a part of the available total float that may exist within an activity chain on the network and no change to the interim milestone dates or the Contract Completion Date.
- H. In no event shall any progress report or updated schedule constitute an extension or change of the Contract Time, a milestone date or the Contract Sum unless any such adjustment is agreed to by the owner and authorized pursuant to a change order.
- I. Updating the schedule to reflect actual progress made up to the date of an update shall not be considered revisions to logic sequence and schedule.
- J. If any prime contractor does not record any exceptions to the published project schedule update or the revised construction schedule within five work days of its receipt, he will be deemed to have accepted and approved it.

3.7 SCHEDULING TOOLS AND PROCESSES

- A. The project management tool commonly known as the critical path method (CPM) will be employed for the planning, scheduling and reporting of all work to be performed under the contract.
- B. The scheduling work will be performed within the principles and practices described in The Practice Standard for Scheduling and ANSI/PMI 99-001-2004, cited at the end of this specification section. Other reference books cited there will provide additional clarification and instruction.
- D. Each time the schedule is updated it will be saved and copied. The copy will be used for the next update. Each schedule update will be assigned a unique project ID to differentiate it from other updates in the series.
- E. The primary printed schedule presentation will be in the form of a Gantt Chart (bar chart). The activities will be organized by phases and work areas, according to the configuration of the specific project. In the column section the displayed data will include activity description, original duration, remaining duration (on an

updated schedule, but not a baseline), (early) start and (early) finish dates, and total float. The title block will include the unique project ID.

3.8 REFERENCE DOCUMENTS

- A. The Practice Standard for Scheduling. Published by the Project Management Institute, Newtown Square PA, ISBN 13: 978-1-930699-84-7, ISBN 10: 1-930699-84-0.
- B. A Guide to the Project Management Body of Knowledge, ANSI/PMI 99-001-2004, Section III, Chapter 6, Project Time Management. Published by the Project Management Institute, Newtown Square PA,
- C. CPM in Construction Management, 5th Edition. Written by James J. O'Brien and Fredric L. Plotnick, published by McGraw-Hill, ISBN 0071344403.
- D. Project Management: A Systems Approach to Planning, Scheduling and Controlling, 8th Edition. Written by Harold Kerzner, published by John Wiley & Sons, ISBN 0471225770.

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SECTION 013500 – SAFETY

ADDENDUM 1

PART 1 - GENERAL

1.1 SUMMARY

- A. It is recognized that the safety of all personnel is the responsibility of all participants involved directly in the construction of this Project. It is the contractual obligation of the Contractor to adhere to all requirements of the Occupational Health and Safety Act (OSHA), as well as Local and State safety rules and regulations. The Contractor shall assure the safety of his personnel by providing all protection and safety devices, covers, etc. as they relate to the safe conduct of his work in accordance with all Local, State and Federal regulations. The Contractor is responsible for any safety requirements that are contractually those of any Contractor.
- B. The ~~Construction Manager~~ **General Contractor** shall be designated as the “Lead Contractor” with respect to jobsite safety. Responsibilities and authority of the ~~Construction Manager~~ **General Contractor** shall be as follows:
1. This ~~Construction Manager~~ **General Contractor** will be responsible to inspect and maintain safe working conditions on the jobsite.
 2. Where the work of one (1) Contractor places another contractor’s workers in jeopardy, the “Lead Contractor” shall direct and coordinate the effort of the Contractor to ensure that jobsite safety is maintained.
 3. This ~~Construction Manager~~ **General Contractor** will maintain an OSHA Certified “competent person” on site at all times designated to make safety inspections and to serve as the designated representative in charge of safety during the inspection by OSHA employees.
 4. This ~~Construction Manager~~ **General Contractor** may direct another Subcontractor to make corrections in the event of a safety violation. Failure of another Subcontractor to take prompt action (within 24 hours following written notice) to correct a safety violation will empower this Contractor to make the necessary corrections and to receive full compensation for such corrections directly from the Subcontractor.
 5. This ~~Construction Manager~~ **General Contractor** responsibilities and corresponding authority will be as defined in the General Conditions of the Contract for Construction.
 6. The Prime Contractor will maintain primary responsibility for the safety of their workers. The “Lead Contractor” will serve to identify areas of concern and will endeavor to accomplish required corrections through cooperation of other Prime Contractor. In the event this effort is unsuccessful, the “Lead Contractor” will take action as defined above.
 7. The Owner will support the decisions and action taken by the “Lead Contractor” to maintain jobsite safety. The Owner will promptly make payment to the “Lead Contractor” when corrective action has been take

on behalf of an offending Contractor, and the "Lead Contractor" has provided appropriate documentation.

8. Lead Safety Contractor shall provide regular and periodic safety inspections and reports by an independent safety professional. Inspections and reports shall be performed at least once each month.
9. The ~~Construction Manager~~ **General Contractor** shall provide a safety representative who is trained in First Aid and CPR.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

3.1 ACCIDENTS

- A. The ~~Construction Manager~~ **General Contractor** shall notify the **Construction Manager/Owner** of any personal injury that could require medical treatment of any Contractor or his subcontractor's employees at the project site. Also, any damage to property arising in connection with the Contractor's performance should be told to the **Construction Manager/Owner** as promptly as possible after the occurrence of such injury or damage but at the maximum 24 hours. Within 48 hours of such occurrence, the ~~Construction Manager~~ **General Contractor** shall furnish to the **Construction Manager/Owner** a complete written report of such injury or damage. Accident Reports shall include specific actions taken by Contractor to preclude recurrence of similar incidents.

3.2 EMERGENCY DATA

- A. The ~~Construction Manager~~ **General Contractor** shall provide the Owner with the following emergency data prior to beginning work at the project site:
 1. Emergency care facility to be utilized, address and telephone number.
 2. Insurance Company and local agent/name, address and telephone number.
 3. Detailed description of overall corporation or company safety program.
 4. Employees qualified in any type of first aid, list employee and associated skill.
 5. Detailed description of specifically tailored job site safety program.
 6. Identify corporate and job site safety officer.
 7. Submit weekly TOOL BOX SAFETY TALK program/meeting minutes including;
 - a. Day of week.
 - b. Time of day.
 - c. Location.
 - d. Attendance record.
 - e. Agenda.
 - f. Unsafe items previously discussed, date of correction.

- g. Identify on site personnel with FIRST AID training.
- 8. All applicable MSDS Program sheets. (Include numbered pages and table of Contents.)
- 9. Submit completed hazardous substance survey form.
- 10. Review project "Emergency Response Plan" with ~~Construction Manager~~
General Contractor.

3.3 SAFETY AGREEMENT

- A. Contractor shall review and comply with the following Safety Agreement before beginning work: (This will be issued as a separate document with a signatory line)

As a Contractor under this Contract, you have, by accepting this Contract, obligated yourself to conduct all your operations within this Safety Agreement

The Contractor agrees that the prevention of accidents to employees engaged in the Work under this Agreement is the responsibility of the Contractor.

The Contractor agrees to comply with all laws, regulations and codes concerning safety as shall be applicable to the Work and to the safety standards established during the progress of the Work. When so ordered, the Contractor agrees to stop any part of the Work which the "Lead Contractor" or any other applicable agency may deem unsafe until corrective measures satisfactory to the Owner and in accordance with the applicable Federal and/or State regulations have been taken and further agrees to make no claim for damages growing out of such stoppages. Should the Contractor neglect to adopt such corrective measures, the Owner, may elect to hire an entity, perform the corrections and deduct the cost from payments due or to become due the Contractor. Failure on the part of the Owner to stop unsafe practices shall in no way relieve the Contractor of his responsibility.

The Contractor realizes that an effective accident prevention program is to the mutual benefit of all Contractor through improved employee and public relations and through increased efficiency and production. Further, no accident prevention activity can be truly effective without the sincere cooperation of the Contractor performing on the site. Your attention is directed, but not limited to the following items:

Signature: _____

Date: _____

3.4 HOUSEKEEPING

- A. Indiscriminate accumulations of debris, waste or scrap in work areas will not be permitted. (Areas will be designated for storage or disposal.) All materials, tools and equipment must be stored in an orderly manner in designated areas.

- B. Daily clean-up is expected with a weekly inspection by the Owners Designated Project Representative.

3.5 PERSONAL PROTECTION EQUIPMENT

- A. Contractor must furnish their employees with the proper type of personal protective equipment as required by the operations being performed, including, but not necessarily limited to the following:
 - 1. Hard Hats must be furnished to employees and worn at ALL times when on this project, whether or not an overhead hazard exists or what state the project may be in.
 - 2. The Owner requires that appropriate attire be worn at all times while employees are working on-site. Appropriate attire shall be as deemed necessary by the Owner and in accordance with all applicable OSHA regulations.

3.6 SAFETY MEETINGS

- A. The ~~Construction Manager~~ **General Contractor** is required to conduct and all employees are required to attend a "Tool Box" type safety meeting at the beginning of each week. The meetings may either be presided over by Contractor's foreman or another competent representative designated by the Contractor.

3.7 FIRE PROTECTION

- A. When necessary, the ~~Construction Manager~~ **General Contractor** must supply approved type fire extinguisher for emergency use within his own immediate area of operation, including the Contractor's office, tool and storage enclosures.

3.8 TREATMENT OF INJURIES

- A. The ~~Construction Manager~~ **General Contractor** shall require that all employees injured (no matter how slight) while working on this project, report immediately for First Aid Treatment. The Contractor shall maintain adequate First Aid Facilities in the field.

3.9 COOPERATION

- A. Any deviation from this course of action will be called to the attention of the ~~Construction Manager~~ **General Contractor** for immediate correction. Conversely, the Contractor should call attention to any unsafe conditions or unsafe practice by other Contractor at the site.

3.10 INSTALLED SAFETY APPARATUS

- A. The ~~Construction Manager~~ **General Contractor** is responsible for the reinstallation of safety apparatus installed by other Contractor if removed to facilitate the installation of their own contract work. The Contractor is to return the safety cables to an OSHA approved condition without slack.

3.11 WEAPONS POLICY

- A. PA State law requires that all persons are prohibited from carrying, possessing or storing a handgun firearm, or weapon of any kind while on the project, regardless of whether the person has registered the weapon or is licensed to carry a concealed weapon.
- B. Failure to abide all terms and conditions of the policy will result in discipline up to and including termination. Further, carrying any weapon onto the owner's property in violation of this policy will be considered an act of criminal trespass and possession of a weapon will be grounds for immediate removal of the person from the Project Site, and may result in prosecution.

3.13 SMOKING

- A. No smoking or vaping shall be allowed on jobsite.

END OF SECTION 013500

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SECTION 014500 - QUALITY CONTROL

ADDENDUM 1

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Provision of specified Testing Laboratory Services.
- B. All testing is to be provided by the appropriate Contractor as required for their work unless otherwise noted.

1.2 RELATED REQUIREMENTS

- A. GENERAL CONDITIONS of the CONTRACT: Inspections, testing, and approvals required by public authorities.
- B. INDIVIDUAL SPECIFICATION SECTIONS: Inspections and tests required, and standards for testing.

1.3 DESCRIPTION

- A. The Owner will coordinate and pay for concrete compressive strength testing, soils compaction testing, ~~bituminous paving compaction testing, masonry strength testing and inspections~~ and structural steel field inspections for the purpose of quality assurance. All other required testing shall be coordinated and paid for by the Prime Contractor requiring such testing to complete their work.
- B. Employment of testing laboratory shall in NO WAY RELIEVE Contractor of obligation to perform Work in accordance with requirements of Contract Documents and to perform necessary testing and inspections for purposes of quality control.

1.4 REFERENCE STANDARDS

- A. American National Standards Institute (ANSI)/American Society for Testing and Materials (ASTM).
 - 1. ANSI / ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as used in Engineering Design and Construction.
 - 2. ANSI / ASTM E329 - Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.
- B. 2018 International Building Code (IBC), Chapter 17 – Structural Tests and Special Inspections

- C. American Concrete Institute Building Code – ACI 318
- D. American Welding Society - AWS D1.1

1.5 QUALITY ASSURANCE

- A. Comply with requirements of ANSI / ASTM D3740 and ANSI/ASTM E329.
- B. Testing Laboratory Qualification: Shall have been inspected by a nationally recognized inspection agency, acceptable to Architect/Engineer. Evidence of such inspection and current status shall be provided to Architect/Engineer. In addition, the approved lab shall document participation in a nationally recognized soils and concrete reference testing program during the twelve (12) months preceding the start of work on this project. Results of reference testing shall indicate an average or above rating for the laboratory to be acceptable.
 - 1. Laboratory authorized to operate in State in which Project is located.
- C. Laboratory Representative: Laboratory shall maintain a full-time registered Engineer on staff to review services.
- D. Field Technicians shall be fully certified to perform the field tests and inspections to which they are assigned. At a minimum they shall possess the following certifications:
 - 1. Concrete – ACI Field Technician Level 1
 - 2. Welding – AWS Certification
 - 3. Nuclear Density Probe – Trained and Certified by an agency acceptable to the NRC or other governing body.
- E. Testing Equipment: Shall be calibrated at reasonable intervals with devices of accuracy, traceable to either NBS standards or accepted values of natural physical constants.

1.6 CONTRACTOR SUBMITTALS

- A. PRIOR TO START OF WORK, submit testing laboratory name, address, and telephone number, and names of full-time registered Engineer and responsible officer to Architect. Include qualification data to demonstrate their capabilities and experience.
- B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- C. Schedule all tests and inspections, except concrete compressive strength tests, soils compaction tests, bituminous paving compaction tests, and structural steel weld and bolt tests; prepare a schedule of tests, inspections and similar quality

control services required by the Contract Documents. Submit schedule within 30 days of Notice to Proceed.

1.7 LABORATORY RESPONSIBILITIES

- A. Test samples of mixes submitted by Contractor.
- B. Provide qualified personnel at site after due notice; cooperate with Architect/Engineer and Contractor in performance of services.
- C. Perform specified inspections, sampling, and testing of products in accordance with specified standards.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify the Architect and Contractor of observed irregularities or non-conformance of Work or products.
- F. Perform additional inspections and tests required by Architect/Engineer.
- G. Obtain samples at the Project Site or source of the materials to be tested.

1.8 LABORATORY REPORTS

- A. After each inspection and test, promptly submit one digital copy of laboratory reports to Architect and to Contractor. Report shall include:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and Specification section.
 - 6. Location of sample or test in the Project.
 - 7. Type of inspection or test. Date of test. Time of test.
 - 8. Results of tests and compliance with Contract Documents.
- B. Daily Field Reports shall be prepared at the close of each day and distributed to all parties within 24 hours via fax or e-mail.

1.9 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory MAY NOT release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Laboratory MAY NOT approve or accept any portion of the Work.
- C. Laboratory MAY NOT assume any duties of the Contractor.
- D. Laboratory HAS NO authority to stop Work.

1.10 CONTRACTOR RESPONSIBILITIES

- A. Notify testing agencies at least 24 hours in advance of time when work that requires testing or inspection will be performed.
- B. Cooperate with laboratory personnel, and provide access to Work, and to manufacturer's facilities.
- C. Provide incidental labor and facilities to:
 - 1. Provide access to Work to be tested.
 - 2. To facilitate inspections and tests.
 - 3. Provide for proper storage and curing of test samples in accordance with direction from testing agency.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 014500

SECTION 081416 - FLUSH WOOD DOORS

ADDENDUM 1

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory fitting flush wood doors to frames and factory machining for hardware.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of door indicated. Include details of core and edge construction, louvers, and trim for openings.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:
 - 1. Dimensions and locations of blocking.
 - 2. Dimensions and locations of mortises and holes for hardware.
 - 3. Dimensions and locations of cutouts.
 - 4. Undercuts.
 - 5. Requirements for veneer matching.
 - 6. Doors to be factory finished and finish requirements.
 - 7. Fire-protection ratings for fire-rated doors.
- C. Samples for Initial Selection: For factory-finished doors.
- D. Samples for Verification:
 - 1. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
 - a. Provide Samples for each species of veneer and solid lumber required.

- b. Finish veneer-faced door Samples with same materials proposed for factory-finished doors.
- 2. Frames for light openings, 6 inches long, for each material, type, and finish required.

1.5 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For special warranty.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in cardboard cartons and wrap bundles of doors in plastic sheeting.
- C. Mark each door on top or bottom rail with opening number used on Shop Drawings.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
 - 2. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B.
 - 1. Chappell Door Co.
 - 2. CraftMaster Interior Doors.
 - 3. Eggers Industries.
 - 4. Graham; an Assa Abloy Group company.
 - 5. Mainman Company (The).
 - 6. Masonite Architectural.
 - 7. Mohawk Flush Doors, Inc.; a Masonite company.
 - 8. VT Industries Inc.
- C. Source Limitations: Obtain flush wood doors from single manufacturer.

2.2 FLUSH WOOD DOORS, GENERAL

- A. WDMA I.S.1-A Performance Grade: Heavy Duty.
- B. Structural-Composite-Lumber-Core Doors:
 - 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf.
 - b. Screw Withdrawal, Edge: 400 lbf.
- C. Mineral-Core Doors:
 - 1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
 - a. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware.
 - 2. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEER-FACED DOORS FOR TRANSPARENT FINISH

- A. Interior Solid-Core Doors:
 - 1. Grade: Premium (Grade A faces).
 - 2. Species: Clear White Birch.
 - 3. Cut: Plain sliced (flat sliced).

4. Match between Veneer Leaves: Book match.
5. Assembly of Veneer Leaves on Door Faces: Running match.
6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
7. Room Match: Match door faces within each separate room or area of building. Corridor-door faces do not need to match where they are separated by 20 feet or more.
8. Exposed Vertical and Top Edges: Same species as faces or a compatible species - edge Type A.
9. Core: Structural composite lumber.
10. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit is abrasive planed before veneering.
11. Door Thickness: 1-3/4 inch.
12. WDMA I.S.1-A Performance Grade: Heavy Duty.

2.4 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
 1. Comply with requirements in NFPA 80 for fire-rated doors.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
 1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
 2. Metal Astragals: Factory machine astragals and formed-steel edges for hardware for pairs of fire-rated doors.
- C. Openings: Factory cut and trim openings through doors.
 1. Light Openings: Trim openings with moldings of material and profile indicated.
 2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Section 088000 "Glazing."

2.5 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Factory finish doors that are indicated to receive transparent finish.

C. Transparent Finish:

1. Grade: Custom.
2. Finish: AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" System 11, catalyzed polyurethane, or WDMA TR-6 catalyzed polyurethane.
3. Staining: As selected by Architect from manufacturer's full range.
4. Sheen: Satin unless indicated otherwise.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Section 087100 "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
1. Install fire-rated doors according to NFPA 80.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

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SECTION 310000- EARTHWORK

ADDENDUM 1

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Excavation, filling, compacting and grading operations both inside and outside building limits as required for below-grade improvements and to achieve grades and elevations indicated. Provide trenching and backfill for mechanical and electrical work and utilities.
- B. Subbase materials, drainage fill, common fill, and structural fill materials for slabs, pavements, and improvements.
- C. Suitable fill from off-site if on-site quantities are insufficient or unacceptable, and legal disposal of excess fill off-site.
- D. Rock excavation without blasting unless blasting is specifically authorized.

1.2 SUBMITTALS

- A. Submit to owner and appropriate Design Professional of Record (architect, civil engineer, geotechnical engineer or structural engineer of record)
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Shop Drawings for all utility work.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods.
- C. Test Reports: Submit for approval test reports, list of materials, proctors and gradations proposed for use.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 2 year experience installing similar products.

1.4 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section with Civil Engineer of Record, Geotechnical Engineer of Record, approving authorities (township, conservation district etc if applicable) and General Contractor.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing
SCHRADERGROUP architecture LLC
Philadelphia, Pennsylvania
SGA Project: 21.037

the brand name and manufacturer's identification until ready for installation.

- B. Handling: Handle materials to avoid damage.

1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.7 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
- B. Follow project Erosion and Sedimentation sequencing to ensure appropriate controls are in place.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Substitutions: Not permitted.
- B. Requests for substitutions will be considered in accordance where submitted to the Owner and Appropriate Design Professional of record (Civil Engineer, Geotechnical Engineer or Architect) for approval.

2.2 MATERIALS

- A. Earthwork:
 - 1. Subbase Material: AASHTO 2A or 3A stone meeting requirements of PennDOT PUB 408.
 - 2. Borrow Soil:
 - a. Imported soil required for structural fill shall be a SM or coarser with less than 30% passing the 200 sieve and a Plasticity Index less than 8. All material shall be within 2% of the optimum moisture content with no coarse fragments greater than 4".
 - b. On site soil is generally more fine grained than the imported fill requirements however much of it is suitable for re use on the site with strict moisture management. At the time of testing the material was generally free of saturation however it may be necessary to soil condition this site to bring it to within optimum moisture content and to properly compact said soils.
 - 3. Trench and Utility Backfill and pipe backfill shall be done with AASHTO 57 stone or AASHTO 2A aggregate in accordance with the

manufacturer's instructions. Where not required per civil plans or manufacturer's requirements backfill outside of the building or parking areas shall be completed using similar soils to the outsides of the trenches.

PART 3 EXECUTION

3.1 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. All areas to receive grading or other earthwork shall be cleared, grubbed and stripped of topsoil prior to any other earthwork starting (in accordance with E&S plan requirements and sequencing)
- C. All areas to receive structural fill shall be proofrolled with a minimum of a fully loaded triaxle at paved or building areas within 4 vertical feet of finished grade. All cut areas shall similarly be tested. Where access is restricted or finished grade is greater than 4 feet from the existing grade than a minimum ten ton vibratory roller may be utilized.

3.2 INSTALLATION

- A. Excavation is unclassified and includes excavation to subgrade regardless of materials encountered. Repair excavations beyond elevations and dimensions indicated as follows. Geotechnical Engineer of record shall oversee all backfill and compaction.:
 - 1. At Structure: Concrete or compacted structural fill.
 - 2. Elsewhere: Backfill and compact as directed.
- B. Maintain stability of excavations; coordinate shoring and bracing as required by authorities having jurisdiction. Prevent surface and subsurface water from accumulating in excavations. Stockpile satisfactory materials for reuse, allow for proper drainage and do not stockpile materials within drip line of trees to remain.
- C. Compact materials at the optimum moisture content as determined by ASTM D 1557 by aeration or wetting to the following percentages of maximum dry density:
 - 1. Structure, Pavement, Walkways: Subgrade and each fill layer to 95 percent of maximum dry density to suitable depth.
 - 2. Unpaved Areas: Top 6 inches of subgrade and each fill layer to 90 percent maximum dry density.
- D. Place acceptable materials in layers not more than 12 inches loose depth for materials compacted by heavy equipment and not more than 4 inches loose

depth for materials compacted by hand equipment to subgrades. Fill shall be installed in level lifts terracing back in to existing grade with a minimum of two foot by two foot benches. Finished slopes greater than 6:1 (h:v) shall be over filled a minimum of one foot past the proposed grade and cut back.

- E. All areas to be paved with concrete or asphalt shall be proofrolled prior to subbase installation. Soft or pumping areas with elastic deflection greater than 1/2" shall be remediated and area shall be re tested.
- F. Grading Tolerances Outside Building Lines:
 - 1. Lawns, unpaved areas, and walks, plus or minus 1 inch.
 - 2. Pavements, plus or minus 1/2 inch.
- G. Grading Tolerance for Fill Under Building Slabs: Plus or minus 1/2 inch measured with 10-foot straightedge.
- H. Protect newly graded areas from traffic and erosion. Recompact and regrade settled, disturbed and damaged areas as necessary to restore quality, appearance, and condition of work.
- I. Control erosion to prevent runoff into sewers or damage to sloped or surfaced areas.
- J. This project site is underlain by karst geology and is therefore susceptible to sinkhole development. During construction it is imperative that exposed soil surfaces shall be rolled tight at the completion of each working day and that all construction surfaces are graded to shed water to erosion and sedimentation runoff management areas.
- K. Control dust to prevent hazards to adjacent properties and vehicles. Immediately repair or remedy damage caused by dust including air filters in equipment and vehicles. Clean soiled surfaces.
- L. Dispose of waste and unsuitable materials off-site in a legal manner.

END OF SECTION 310000