

SPECIFICATIONS

Covering the

Chester Township Police Station Renovations

In the

Township of Chester

For

**Township of Chester
1150 Engle Street, Chester, PA 19013**

March 2024

Prepared By

**MG Engineering Associates, LLC
334 W. Front Street
Media, PA 19063
Chester Township Engineer**

Set No. _____

Our File # UDT-2024-01A

NOTICE OF ADVERTISEMENT FOR BIDS:

Sealed bids will be received electronically via the PennBid (<https://pennbid.bonfirehub.com>) by the Township of Chester by April 2, 2024, until 4:00 PM prevailing time, for the following projects.

Jacks Park Concession Stand and Site Improvements – Scope of work includes a new concession stand, stormwater management piping, a rain garden, concrete sidewalk and parking lot improvements.

Chester Township Police Station Renovations – The scope of work includes interior and exterior improvements that will consist of painting, ceiling grid, block walls for evidence room, floor tiles, garage door improvements, concrete sidewalk, office furniture and other incidental improvements.

There is a non-mandatory pre-bid meeting for the Police Station Renovations on Tuesday, March 19, 2024. Interested Proposers will meet at the Chester Township Police Headquarters located at 1840 Harris Street, Chester PA 19013, at 9:00 A.M. All questions concerning this proposal should be submitted through the Pennbid Program. All questions and answers will be posted on the Pennbid.

Bidders are required to submit a surety in the form of a bond or equivalent meeting 10% of the overall bid price in compliance with the contract documents. Bid bonds will be returned to the non-awarded bidders upon the execution of the contract. The successful Bidder shall also be required to provide a Performance Bond in an amount of one hundred percent (100%) of the contract amount within ten (10) calendar days of receipt of written notice of acceptance of the Bid.

There is no physical public bid opening for this project, bids will be revealed via the PennBid website.

The Successful Bidder who is awarded the contract, will be required to pay “PennBid” a fee of 0.0033% (1/3 of 1 percent) up to \$5,000 of the contract award value.

All interested parties must submit questions via PennBid website (<https://pennbid.bonfirehub.com.com/login>) by the posted deadline. Bidders are not permitted to contact the Township Engineer or staff directly.

The bidders are made aware that the project is subject to PA Prevailing Wage Requirements.

The contract documents contain all pertinent regulations. The Township reserves the right to reject any or all bids or to accept any portion of any bid, and to award contracts as is deemed best for the Township.

Debra Zimmerman
Township Business Manager

Advertised in the Delaware County Daily Times:
Wednesday, March 13, 2024 & Monday, March 18, 2024

TABLE OF CONTENTS

Updated March 2024

Advertisement for Bids

Section I - Sample Bid and Contract Documents

1. Notice to Contractors
2. Non-collusion Affidavit
3. Form of Bid Bond
4. Instruction to Bidders
5. General Contract Conditions
6. (Omitted)
7. Bid Form (Lump Sum)
8. Subcontractor Declaration Form
9. Contract with Certifications
10. Form of Payment Bond
11. Form of Performance Bond
12. Form of Notice of Award
13. Form of Notice to Proceed (to Contractor)

Section II – Township Contract Provisions and Forms

14. Form of Contract Change Order
15. (Omitted)
16. Nondiscrimination Clause (for contract over \$10,000)
17. Conflict of Interest & Records and Audits
18. (Omitted)
19. (Omitted)
20. (Omitted)
21. Accepting Provisions of the Workmen's Compensation Act
22. (Omitted)
23. (Omitted)
24. PA Prevailing Wage Determination
25. (Omitted)
26. (Omitted)
27. Certification of Non-Segregated Facilities
28. (Omitted)
29. (Omitted)
30. Bidders Qualifications
31. Public Works Employment Verification Form

Note: Contractor must sign certifications contained in items # 2, 16, 17, 21, and 27 as part of the executed contract.

Note: The following items should be submitted with the Bid – Items # 2, 3, 6, 8, 16, 17, 21, 27 and 30.

SECTION I
SAMPLE BID AND CONTRACT
DOCUMENTS

NOTICE TO CONTRACTORS

Sealed proposals for the Chester Township Police Station Renovations will be received electronically via the PennBid Program(<https://pennbid.bonfirehub.com>) by Township of Chester until April 2, 2024 until 4:00 PM prevailing time, at which time said bids will be publicly opened with the results made available via PennBid.

There is no physical public bid opening for this project, bids will be revealed via the PennBid website (<https://pennbid.bonfirehub.com>).

The Successful Bidder who is awarded the contract, will be required to pay "PennBid" a fee of 0.0033% (1/3 of 1 percent) up to \$5,000 of the contract award value.

All interested parties must submit questions via PennBid website (<https://pennbid.bonfirehub.com.com/login>) by the posted deadline. Bidders are not permitted to contact the Township Engineer or staff directly.

Each bid must be accompanied by either a bid bond in an amount of ten (10%) of the bid amount from a surety satisfactory to the Township or by certified check or letter of credit upon a solvent bank in the amount of ten (10%) of the bid amount in favor of the Township. Bid Bonds shall be accompanied by Proof of Authority of the official or agent signing the bond.

Attention of bidders is called to all of the requirements contained in this bid packet, particularly to the application of the PA Prevailing Wage Requirements, various insurance requirements, various equal opportunity provisions, and the requirement of a payment bond and performance bond for 100% of the contract price.

All prospective bidders are required to present proof of an acceptable disposal method approved by the Pennsylvania Department of Environmental Resources or counterpart Agency in another State. The proof may consist of a copy of a State Solid Waste Disposal Permit to the prospective bidder or a Letter of Approval for the use of a proposed or existing disposal facility which has a permit or is under review for a permit.

Attention is called to the fact that the Contractor must ensure that employees and applicants for employment are not discriminated against because of their race because of their race, color, religion, sex, handicap, familial status, or national origin. Hearing impaired individuals may contact the Township through the AT&T Relay Center at 1-800-654-5984.

No bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof. Chester Township reserves the right to waive any informalities or to reject any or all bids.

NONCOLLUSION AFFIDAVIT

State of

BID Identification: Chester Township Police Station Renovations

CONTRACTOR _____, being first duly sworn, deposes and says that he is (sole owner, a partner, president, secretary, etc.) of the party making the foregoing BID; that such BID is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such BID is genuine and not collusive or sham; that said BIDDER has not directly or indirectly induced or solicited any other BIDDER to put in a false or sham BID, and has not directly or indirectly colluded, conspired, connived, or agreed with any BIDDER or any one else to put in a sham BID, or that any one shall refrain from bidding; that said BIDDER has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the BID price of said BIDDER or of any other BIDDER, or to fix any overhead, profit, or cost element of such BID price, or of that of any other BIDDER, or to secure any advantage against the OWNER awarding the contract or anyone interested in the proposed contract; that all statements contained in such BID are true; and, further, that said BIDDER has not, directly or indirectly, submitted his BID price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, BID depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said BIDDER in his general business.

Signed:

Subscribed and sworn to before me this ____ day of _____, 20__.

Seal of Notary

INSTRUCTIONS TO BIDDERS

1. **RECEIPT AND OPENING OF BIDS:** Township of Chester (herein called the "Owner"), invites bidders to submit sealed bids that will be received online via the PennBid Program(<https://pennbid.bonfirehub.com>) by the Township of Chester by April 2, 2024 4:00 PM prevailing time. There is no physical bid opening for this project, bids will be revealed via the PennBid website.

There is no physical public bid opening for this project, bids will be revealed via the PennBid website.

The Successful Bidder who is awarded the contract, will be required to pay "PennBid" a fee of 0.0033% ($\frac{1}{3}$ of 1 percent) up to \$5,000 of the contract award value.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within thirty (30) days after the actual date of the opening thereof.

2. **PREPARATION OF BID:** Each bid must be submitted electronically via PennBid, on the prescribed form and accompanied by a Bid Bond, Certified Check, or Letter of Credit, the Non-collusion Affidavit, and Subcontractor Declaration Form. All blank spaces for bid prices must be completed, in ink or typewritten, in both words and figures, and the foregoing Certifications must be fully completed and executed when submitted. In case of discrepancies of written words and figures, the prices written in words shall govern.

All bids will be received through the PennBid Program and bidder shall adhere to requirements detailed on the Bid located on the website.

3. **MODIFICATION OF BIDS:** Any bidder may modify his/her bid within PennBid at any time prior to the due date and time listed in the invitation to bid.
4. **METHOD OF BIDDING:** The Owner invites unit price/lump sum price bids as indicated in the Bid Form.

If the lowest total responsive bid received exceeds the amount of funds available to finance the contract, the Owner may:

- a. Reject all bids;
 - b. Augment the funds available in an amount sufficient to enable award to the lowest responsive bidder or bidders;
 - c. Take the base bid less the alternative deductible (if any) as listed on the proposal form as to produce a net amount which is within available funds.
5. **QUALIFICATIONS OF BIDDER:** The Owner may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.
 6. **BID SECURITY:** Each bid must be accompanied by cash, certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a

surety company approved by the Owner. Such cash, checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining cash, checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within thirty (30) days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

7. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT: The successful bidder, upon his/her failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he/she has received notice of the acceptance of his/her bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.
8. CONDITIONS OF WORK: Each bidder must inform himself/herself fully to the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible, the contractor in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.
9. OBLIGATION OF BIDDER: At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his/her bid.
10. EXAMINATION OF SITE: Each bidder shall, and is hereby directed to inspect the entire site of the proposed work and judge for himself/herself as to all the circumstances affecting the cost and progress of the work and shall assume all patent and latent risks in connection therewith.
11. SOIL CONDITIONS: Subject to the convenience of the Owners, prospective bidders will be permitted to explore the site by making borings or digging test pits. In such event, the work shall be done at the sole expense and risk of the bidder, and he shall maintain and restore the site to original condition.

The Owner does not guarantee the accuracy of any information or samples which it may have obtained from test borings or otherwise as to the kind or condition of the soil that may be encountered in the prosecution of the proposed work, neither does the Owner represent that the plans and specifications drawn are based upon any data so obtained. The Owner does not make any representation as to the soil which may be encountered or of soil or water which underlies the work or is adjacent thereto, including any difficulties that may be due to quicksand, or other unfavorable conditions that may be encountered in the work, whether apparent upon surface inspection or disclosed in the process of carrying forward the work.

12. WORKING FACILITIES: The plans show, in the general manner, the existing structures and the land available for construction purposes. The bidders must satisfy themselves of the conditions and difficulties that may be encountered in the execution of the work at this site.
13. ADDENDA AND INTERPRETATIONS: No official interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing and will be submitted via the "Clarifications" feature within PennBid, and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be distributed to all prospective bidders, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted.

All addenda so issued shall become part of the contract documents.

14. WATER SUPPLY: All water for construction purposed, as well as the expense of having water conveyed about the work, must be provided by the Contractor and the cost of this work shall be included in the unit prices stipulated for the various items of the work to be done under this contract.

The source, quality and quantity of water furnished shall at all times be satisfactory to the Engineer.

15. SIGNATURE OF BIDDERS: The firm, corporate or individual name of the bidder must be signed in ink in the space provided for the signatures on the proposed blanks. In the case of a corporation, the title of the officer signing must be stated and such officer must be thereunto duly authorized and the seal of said corporation duly affixed. In the case of a partnership, the signature of at least one of the partners must follow the firm name, using the term "member of the firm". In the case of an individual, use the terms "doing business as", or "sole owner". The bidder shall further state in his proposal the name and address of each person or corporation interested therein.

16. NOTICE OF SPECIAL CONDITIONS: Attention of the bidder is particularly called to those parts of the General Contract Conditions and other contract documents and specifications which deal with the following:

- a. Insurance requirements
- b. Provisions, Pennsylvania Prevailing Wage Act
- c. Requirement for a payment bond and performance bond for 100% of contract price
- d. Requirement that all subcontractors be approved by the Owner
- e. Time-for-completion and liquidated damages requirements
- f. Safety standards
- g. Contractor's responsibility to obtain permits
- h. Affirmative Action and Equal Opportunity provisions
- i. Nondiscrimination/Sexual Harassment Clause

17. ADDITIONAL OBLIGATIONS UPON CONTRACT AWARD: Upon award of the contract but prior to issuance of the notice to proceed, the contractor shall submit all of the following documents, completed as required:

- (a) Acceptance of Notice of Award
- (b) Contract
- (c) Insurance certificate(s) and/or policy(ies)
- (d) Performance & Payment bonds
- (e) Subcontractor declaration form
- (f) (If over \$10,000:) Certification of Bidder Regarding Equal Employment Opportunity
- (g) (If over \$10,000:) Certification(s) by (all) Proposed Subcontractors Regarding Equal Employment Opportunity
- (h) Segregated Facilities
- (i) (Omitted)
- (j) (Omitted)
- (k) (Omitted)
- (l) (All) Subcontractor's Certification(s) Concerning Labor Standards and Prevailing Wage Requirements

GENERAL CONTRACT CONDITIONS

ARTICLE 1 - CONTRACT AND CONTRACT DOCUMENTS

- A. All applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.
- B. The Plans, Specifications and Addenda, hereinafter enumerated in Paragraph 1 of the Supplemental General Conditions shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

ARTICLE 2 - PERFORMANCE AND PAYMENT BONDS

Simultaneously with his/her delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner. The bond shall be for 100 percent of the contract price. A Payment Bond and Performance Bond are required. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney. Under certain conditions, and within the limits of State and local laws and regulations, the Owner may waive the requirement that the Payment and Performance Bond be underwritten by a surety company and may authorize in lieu thereof, a personal bond backed by a letter of credit from a local lending institution for the full value of the Contract.

ARTICLE 3 - WAGE RATES

In the event that the rate of wages paid for any trade or occupant in the locality where such work is being performed are under current collective agreements or understandings between bona fide organizations of labor and employer, then the wages to be paid shall be not less than such agreed wage rates, nor less than the minimum rates compiled by the Commonwealth of Pennsylvania. A copy of these prevailing rates of wages has been included in these specifications.

Every Contractor and Subcontractor who is subject to this contract shall, as soon as he/she begins performance under his/her contract with the Owner, supply the Owner a schedule of the dates on which he/she is required to pay wages to employees. After construction begins he/she shall also deliver to the prevailing wage coordinator a weekly, a certified copy of his/her payroll which shall exhibit for each employee paid any wages, name, current address, identification number, number of hours worked each day of the pay period and the total for each week, hourly rate of pay, job classification, fringe payments, and deductions from wages. The certification of each payroll shall be executed by the Contractor, Subcontractor, or duly appointed agent thereof and shall recite that the payroll is correct and complete and that the wage rate shown is not less than those required by the contract.

ARTICLE 4 - OMITTED

ARTICLE 5 - INSURANCE

- A. The contractor shall not commence work under this contract until he/she has obtained all the insurance required hereunder and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his/her subcontract until similar insurance required of

the Subcontractor has been so obtained and approved. Approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

B. The Contractor shall file with the Owner all Certificate(s) of Insurance as are necessary to document the insurance coverage required hereunder, subject to the approval of the Owner and receipt of any additional forms/documentation requested, prior to final execution of Agreement Contract and issuance of the Notice to Proceed.

C. Worker's Compensation.

All contractors and subcontractors shall acquire and maintain, during the term of the contract, Worker's Compensation insurance in full compliance with the laws of the State of Pennsylvania. The contractor shall at all times indemnify and save harmless the Owner from all claims for worker's compensation which may be made by any of the employees of any subcontractor to whom the Contract may have let the performance of any part of the work embraced in this contract, and the Contractor will appear for and defend the Owner against any and all such claims.

D. Contractor's Liability Insurance.

(i) The Contractor shall acquire and maintain during the term of the Contract Bodily Injury and Property Damage Liability Insurance under a standard Comprehensive General/Automobile Liability Policy which shall provide and include coverage on all Contractor's Operations, Contractor's Protective (Sublet) Liability, Contractual Liability, Completed Operations Liability, Owned Automobiles and Non-owned and Hired Automobiles.

(ii) Property Damage Liability Insurance shall be provided on any demolition, blasting, excavating, shoring or similar operation on an "if any" basis.

(iii) Bodily Injury Liability limits shall be for an amount of no less the Five Hundred Thousand (\$500,000) Dollars for injuries, including wrongful death to any one person and subject to the same limit for each person, in amount of not less than One Million (\$1,000,000) Dollars on the account of any one occurrence.

(iv) Property Damage Liability Insurance shall be in an amount of not less than Five Hundred Thousand (\$500,000) Dollars per occurrence. General Liability shall be extended to provide "Broad Form Property Damage Liability," and in an amount of not less the One Million (\$1,000,000) dollars aggregate for damage on account of all occurrences.

- (v) Any combination of underlying Comprehensive General/Automobile Liability coverage with Umbrella/Excess Liability coverage which provides no less than One Million (\$1,000,000) Dollars Single Limit Bodily Injury & Property Damage Liability Insurance for the Contractor will also be acceptable.
- (vi) The owner may adjust the liability limits to coincide with local government procurement policies and practice within the limits of state and local law.

E. Builder's Risk Insurance.

Each Contractor shall maintain insurance to protect himself and the Owner, jointly, from loss incurred by fire, lightning, extended coverage hazards, vandalism, theft, explosion and malicious mischief in the full amount of the Contract and such insurance shall cover all labor and materials connected with the work, including materials delivered to the site but not yet installed.

F. Installation Floater Insurance.

When a Contractor is involved solely in the installation of materials and not in the construction of a building, an Installation Floater is required in lieu of a Builder's Risk Policy with the same general conditions applying as set forth in paragraph E.

G. The Policies as listed above shall all contain the following special provisions:

- (i) "The Company agrees that thirty (30) days prior to cancellation or reduction of the insurance afforded by this policy with respect to the Contract involved, written notice will be mailed to Township of Chester."
- (ii) The maintaining of such insurance as outlined herein shall in no way constitute a waiver of legal liability for damage to any adjoining buildings or their contents or the work and property of others on the site beyond the limits of insurance thus maintained. The Contractor shall hold the Owner free and harmless from any injury and damage resulting from the negligent or faulty performance of the Contract by the Contractor or by his/or her Subcontractors.

H. Additional Insured: Township of Chester and MG Engineering Associates, LLC

ARTICLE 6 - PENNSYLVANIA STEEL PRODUCTS PROCUREMENT ACT (NO. 1978-3)

If any steel products are to be used or supplied in the performance of the contract, only steel products produced in the United States shall be used or supplied in the performance of the contract or any subcontracts thereunder. This provision shall not apply in any case where the head of the public agency, in writing, determines that the type of steel products necessary to the performance of the contract are not produced in the United States in sufficient quantities to meet the requirements of the contract.

- (iii) Each Contractor shall hold the Owner harmless from all payments for patents, either as royalty or otherwise, in the use of materials, methods, appliances, etc., that he may be in any way involved in or connected with any part of his work or the work of his Subcontractors.
- (iv) Prior to commencement of any work under Contract, the Contractor shall furnish one (1) copy of Declaration of Insurance as evidence of coverage.

ARTICLE 7 - SAFETY

- A. The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. He/She will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- B. The Contractor will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety protection. He/She will notify owners of adjacent utilities when prosecution of the work may affect them.
- C. The Contractor shall comply with the safety standards provisions of applicable laws, building and construction codes and the manual of Accident Prevention in Construction published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register" Volume 36, No. 75, Saturday, April 17, 1971.
- D. The Contractor shall maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured at the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.
- E. Lights, signs and barricades shall be used to maintain traffic and safety for vehicular and pedestrian traffic during the course of this contract in accordance with the specifications.

ARTICLE 8 - PERMITS

The Contractor is responsible for obtaining and paying for all other necessary permits and Licenses from the proper authorities. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he/she shall promptly notify the Owner in writing.

ARTICLE 9 - SUPERVISION

- A. The Contractor will supervise and direct the work. He/She will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The Supervisor shall have full authority to act on behalf of the Contractor and communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present and on the site at all times as required to perform adequate supervision and coordination of the work.
- B. The Owner and its representatives will at all times have access to the work. In addition, authorized representatives and agents of any participating federal or County agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.

- C. The Contractor shall submit a proposed program of operation, showing clearly how he/she proposed to conduct the work as to bring about the completion of his/her work within the time limit specified. This program shall outline the proposed sequence of operations, the rates of progress and the dates when his/her work will be sufficiently advanced to permit the installation of the work under other contracts, and the estimated progress payments due under the Contract. The work under this contract shall be so scheduled that as structures are completed, they can be placed into useful operation with a minimum of delay. The program shall be subject to the approval of the Owner.
- D. All construction as proposed along all City, Township, County, State and Federal roads including storage and stockpiling of materials, is to be conducted within the limits of the public right-of-way. Bracing, sheeting and shoring shall be used to keep all construction work within the construction limits unless work agreements are secured from the adjacent property Owners. It is the Contractor's responsibility to secure these work agreements, if deemed necessary. Copies of the work agreements shall be delivered to the Engineer and the Owner prior to any work beginning on the effected property.

ARTICLE 10 - CLAIMS AGAINST CONTRACTOR

The Contractor shall indemnify and save the Owner or the owner's agents harmless from all claims growing out of the lawful demands of Subcontractor's laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the Contractor fails to do so the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is fully finished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor, his Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Owner shall be considered as a payment made under the Contract Documents by the owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments in good faith.

ARTICLE 11 - SUBCONTRACTING

- A. Neither the Contractor nor the owner shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title, or interest therein, or his obligations thereunder.
- B. The Contractor shall not sublet, sell, transfer or assign any portion of the contract without consent of the Owner or his/her designated agent. No subcontract, or transfer of contract, shall in any way release the Contractor of his/her liability under the contract and bonds.
- C. The Contractor shall not award work to Subcontractor(s) not identified on the Subcontractors Declaration Form as submitted with bid, without
 - i) Prior approval of the Owner
 - ii) Verification by the Township of Chester of the Subcontractor's current eligibility status
 - iii) Submission of all certifications as required in the INSTRUCTIONS TO BIDDERS. The Contractor shall be fully responsible to the Owner for the acts and omissions of the subcontractor(s), and of persons, either directly or indirectly employed by them, as he/she is for the acts and omissions of persons directly employed by him/her.

ARTICLE 12 - CHANGE OF WORK

- A. The Owner reserves the right to make, at any time during the progress of the work, such increases or decreases in quantities and such alterations in details of work as may be deemed necessary or desirable. Such increases or decreases and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered, the same as if it had been a part of the original contract.
- B. Authorized alterations in plans or quantities of work involving work not covered by unit prices in the proposal shall be paid for as stipulated in the change order authorizing such work.
- C. No changes in work covered by the approved Contract shall be made without having prior written approval of the Township of Chester.

ARTICLE 13 - TIME

- A. The Date of beginning and the time for completion of the work are essential conditions of the Contract Documents and the work embraced shall be commenced on a date specified in the Notice to Proceed.
- B. The Contractor will proceed with the work at such rate of progress to ensure full completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- C. The Contract Time to fully complete the project shall be consecutive calendar days following the date of commencement of work to be specified in a written "Notice to Proceed".
- D. If the Contractor shall fail to complete the work within the Contract Time, or extension of time granted by the Owner, the Contractor will pay to the Owner for liquidated damages \$500.00 for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

ARTICLE 14 - COMPLETION OF WORK

- A. The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one year from the date of Substantial Completion of the improvement that it is free from all defects due to faulty materials or workmanship, and the Contractor shall promptly make corrections as may be necessary by reason of such defects. The owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make repairs, adjustments, or other work, which may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Contractor will be required to provide a Maintenance Bond for a period of 12 Months from project completion at 15% of the cost of improvements.
- B. When the work, including that performed by Subcontractors, is completed, the site shall be cleaned of all rubbish and debris caused by the construction. All sheds or other temporary structures, surplus materials, and equipment shall be removed and the project left in a neat and presentable condition.

ARTICLE 15 - TERMINATION

After ten (10) days from delivery of a Written Notice to the Contractor, the Owner may, without cause and without prejudice to any other right or remedy elects to terminate the Contract. In such case the Contractor shall be paid for all work executed and any expense sustained plus reasonable profit, unless such termination was due to the act or conduct of the Contractor.

ARTICLE 16 - PAYMENT

Payment to the Contractor shall be made by Township of Chester upon receiving invoice from contractor and inspection of work completed. The Owner's representative and the project engineer shall certify on the pay request that the completed work has been approved prior to the submission of the invoice. Retainage to be held should be reflected by the engineer/architect on the contractor's original invoice. A turn-around time of 3-4 weeks is expected before said funds are forwarded to the contractor.

It is important that the progress schedule be based on achievable goals, and that the Contractor makes every effort to meet target dates. Township of Chester may hold the pay request, or a portion of the pay request, in cases where the Contractor is found to be in violation of any of the terms and conditions in this contract, e.g. federal labor standards compliance, until such violations are corrected.

ARTICLE 17 - LIVE UTILITIES AND OTHER PROPERTY

The contractor shall assume all responsibility for damage attributed to him to any property upon, or passing through, the Project Area, but excluded from the work or not owned by the Local Public Agency, such as utility lines, surface improvements, or like items.

If disconnections of underground utility services are required to be made in public thoroughfares, the Contractor shall comply with all local requirements and regulations respecting the barricade of streets, the removal and restoration of pavement, and other pertinent matters.

ARTICLE 18 - LIVE UTILITIES AND OTHER PROPERTY

The contractor shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms conditions and agreements of said contract.

If disconnections of underground utility services are required to be made in public thoroughfares, the Contractor shall comply with all local requirements and regulations respecting the barricade of streets, the removal and restoration of pavement, and other pertinent matters.

ARTICLE 19 - HOLD HARMLESS

The contractor shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Local Public Agency, with or without notice to the Surety, and he shall satisfy all claims and demands incurred under such contract and shall fully indemnify and save harmless the Local Public Agency from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Local Public Agency all outlay and expense which the Local Public Agency may incur in making good any default.

SUPPLEMENTAL GENERAL CONDITIONS

1. ENUMERATION OF PLANS, SPECIFICATIONS AND ADDENDA

Following are the Plans, Specifications, and Addenda which form a part of this contract, as set forth in Article I of the General Contract Conditions, "Contract and Contract Documents".

Drawings:	Number	Date
Construction Plans (3 Sheets)		2/2024

Specifications:	Page
Technical Specifications	

Addenda:	Number	Date
----------	--------	------

2. STATED ALLOWANCES

The Contractor shall include the following cash allowances in his proposal:

3. SPECIAL HAZARDS

The Contractor's and his Subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards:

4. CONTRACTOR'S AND SUBCONTRACTOR'S PUBLIC LIABILITY, VEHICLE LIABILITY, AND PROPERTY DAMAGE INSURANCE

See Article 5 of General Contract conditions.

The Contractor shall either (1) require each of his/her subcontractors to procure and to maintain during the life of his/her subcontract, Subcontractor's Public Liability and Property Damage of the type and in the same amounts as specified in Article 5, or (2) insure the activities of his/her subcontractors in his/her own policy.

5. PHOTOGRAPHS OF PROJECT

The Contractor will furnish photographs in the number, type, and stage as enumerated below:

The Contractor and Engineer shall please forward any photographs taken during the project to the Township.

6. BUILDER'S RISK INSURANCE

The Contractor will maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portions of the project for the benefit of the Owner, the Contractor, and all subcontractors, as their interests may appear.

BID FOR LUMP SUM CONTRACTS

Place Online Via PENNBID

Date April 2, 2024

Proposal of _____ (hereinafter called "Bidder")* a corporation, organized and existing under the laws of the State of _____,** a partnership, or an individual doing business as _____.

To the TOWNSHIP OF CHESTER (hereinafter called "Owner")

Ladies and Gentlemen:

The Bidder, in compliance with your invitation for bids the CHESTER TOWNSHIP POLICE STATION RENOVATIONS having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or after a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within 120 consecutive calendar days thereafter as stipulated in the specifications, Bidder further agrees to pay as liquidated damages, the sum of \$ _____ for each consecutive calendar day thereafter as hereinafter provided in Paragraph of the General Conditions.

Bidder acknowledges receipt of the following addendum:

GENERAL CONSTRUCTION BID: Bidder agrees to perform all the General Construction work described in the specifications and shown on the plans, for the sum of _____ (\$_____). (Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

ELECTRICAL CONSTRUCTION BID: Bidder agrees to perform all the Electrical Construction work described in the specifications and shown on the plans, for the sum of _____ (\$_____). (Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

HVAC/MECHANICAL CONSTRUCTION BID: Bidder agrees to perform all the Electrical Construction work described in the specifications and shown on the plans, for the sum of _____ (\$_____). (Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

* Insert corporation, partnership or individual as applicable.

** Insert name of State

ALTERNATE PROPOSALS:

Alternate A (General Contractor) – Construct New CMU Partitions and install new HM doors per plan, paint and install shelving per plans and schedule, for the addition sum of _____ (\$_____).

Alternate A (Electrical Contractor) – Install wiring and lighting in new Evidence Room, for the addition sum of (\$_____).

UNIT PRICES:

For changing quantities of work items from those indicated by the contract drawings upon written instructions from the architect/engineer, the following unit prices shall prevail:

N/A

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Paragraph ___ of the General Conditions.

The bid security attached is the sum of _____ (\$_____) is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

By: _____
(Signature)

(Title)

(Business Address and Zip Code)

DUNS Number

Central Contractor Registration Number

(SEAL - if bid is by a corporation)

SUBCONTRACTOR DECLARATION FORM

Each prime contractor is required to submit a list of subcontractors it intends to use on the project.

Subcontractor	Business Address	Type of Work

Project Name

Prime Contractor

Signature Title Date

CONTRACT

THIS AGREEMENT made this _____ day of _____, 20____, by and between _____ hereinafter called the "Contractor, and _____ hereinafter called the "Owner".

WITNESSETH, that the Contractor and the Owner for the considerations stated herein mutually agree as follows:

ARTICLE 1. Statement of Work.

The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for the construction of the Improvements embraced in the project; namely, _____, and required supplemental work for the _____ all in strict accordance with the Contract Documents including all addenda thereto, numbered _____, dated _____, and dated _____, all as prepared by _____ acting and in these Contract documents preparation, referred to as the "Engineer".

ARTICLE 2. The Contract Price.

The Owner will pay the Contractor for the total quantities of work performed at the unit prices stipulated in the Bid for the respective items of work completed for the sum not to exceed _____ (Dollars) subject to additions and deductions as provided in Section ___ hereof.

ARTICLE 3. Contract.

The executed contract documents shall consist of the following:

- a. This Agreement
- b. Addenda
- c. Invitation for Bids
- d. Instructions to Bidders
- e. Signed copy of Bid
- f. General Conditions, Parts I and II
- g. Special Conditions
- h. Technical Specifications
- i. Drawings (as listed in the Schedule of Drawings)
- j. Other Contract Provisions required by the Township

This Agreement, together with other documents enumerated in this ARTICLE 3, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in _____ original copies on the day and year first above written.

CONTRACTOR:

OWNER:

Signature

Signature

Typed/printed name

Typed/printed name

Title

Title

Certifications:

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____ who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____ (Corporate Seal)

PERFORMANCE AND PAYMENT BOND (OR BONDS)

Following the Form of Agreement, attach the approved form of the statutory surety bond or bonds to insure the performance of the Contract and payment of labor and materials. In addition to the corporation signatures of the surety company(ies) on the bond(s), each bond should be countersigned by the surety company's attorney-in-fact, authorized to act within the state in which the Project is situated.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ of _____, as PRINCIPAL and _____ a corporation incorporated under the laws of the State of _____ as Surety, are held and firmly bond unto the _____ in the full and just sum of _____ (\$ _____) dollars, lawful money of the United States of America, to be paid to the said _____ or its assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a contract with the above, hereinafter called Obligee, bearing even date herewith, for the improvement of:

_____ for approximately the sum of _____ (\$ _____) dollars.

NOW, THEREFORE, the condition of this obligation is such that the above bounden PRINCIPAL shall and will promptly pay cause to be paid in full all sums of money which may be due by contractor or otherwise, to any individual, firm, partnership, association or corporation, for all material furnished or labor supplied or performed in the prosecution of the work, whether or not the said material or labor entered into and became component parts of the work and for rental of the equipment used and services rendered by public utilities in, or in connection with the prosecution of such work, then this obligation to be void, otherwise to remain in full force and effect.

THE PRINCIPAL and SURETY, hereby, jointly and severally, agree with the Obligee herein that any individual firm, partnership, association or corporation, which has performed labor or furnished material in the prosecution of the work as provided, and any public utility which has not been paid in full therefore, may sue in assumpsit on this Payment Bond, in his, their, or its own name and may prosecute the same to final judgment for such sum or sums as may be justly due him, them or it, and have execution thereon. Provided, however, that the Obligee shall not be liable for the payment of any costs of expenses of such suit.

RECOVERY by any individual, firm, partnership, association or corporation hereunder shall be subject to the provisions of the "Public Works Contractor's Bond Law of 167", Act No. 385, approved December 20, 1967, P.L. 869, which Act shall be incorporated herein and made a part hereof, as fully and completely as though its provisions were fully and at length herein recited.

It is further provided that any alteration which may be made in the terms of the contract or its work to be done or materials to be furnished or labor to be supplied or performed under it or the giving by the Obligee of any extension of time for the performance of the contract or any other forbearance on the part of either the Obligee or the Principal to the other, shall not in any way release the PRINCIPAL and the SURETY or SURETIES of any such alteration, extension or forbearance being hereby waived.

IN WITNESS WHEREOF, the said PRINCIPAL and SURETY have duly executed this Bond under seal the _____ day of _____, 20_____.

WITNESS:
PLACE
SEAL
HERE

Contractor

Title:

BY _____
Title:

WITNESS:
PLACE
SEAL
HERE

Surety Company

Title:

Title:

PERFORMANCE BOND
(With Corporate Surety)

KNOW ALL MEN BY THESE PRESENTS, that we, _____
(Name and Address of Contractor)

as Principal and _____
(Surety Company)

a corporation incorporated under the laws of the State of _____ as Surety.
(Name of State)

are held and firmly bound unto _____ in
(Name of Contract Owner)

the full and just sum of _____ (\$ _____) dollars lawful money of the United States of America, to be paid to the above Owner or its assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a contract with the above Municipality, bearing even date herewith, for the undertaking of certain obligations as therein set forth.

NOW, THEREFORE, the condition of this obligation is such that if the above bounden Principal, as Contractor, shall in all respects comply with and faithfully perform the terms and conditions of said Contract, including the Specifications and conditions referred to and made a part thereof, and such alterations as may be made in said specifications as therein set forth, then this Obligation shall be void, but otherwise the same shall be and remain in full force, virtue and effect.

It is further provided that any alteration which may be made in the terms of the contract or its specifications with the express approval of the Municipality or the Principal to the other, shall not in any way release the Principal and the Surety or either of any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alteration or forbearance being hereby waived.

IN WITNESS WHEREOF, the said Principal and Surety have duly executed this Bond under Seal, pursuant to due and legal action authorizing the same to be done on _____.
(Date of Bond)

Attest/Witness: _____
PLACE SEAL HERE Contractor

Title: BY _____
Title:

Attest/Witness: _____
PLACE SEAL HERE Surety Company

Title: _____
Title:

NOTICE OF AWARD

To: _____

PROJECT Description: _____

The OWNER has considered the BID submitted by you on _____, 20__ (BID Date) for the above described WORK in response to its Advertisement for BIDS and Information for BIDDERS.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Information for BIDDERS to execute the Agreement and furnish the required CONTRACTOR's Contract BOND, if applicable, and Certificates of Insurance within 10 calendar days from the date of this notice to you.

If you fail to execute said Agreement and to furnish said BOND within 10 days from the date of this notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID guaranty. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this ____ day of _____, 20__.

Owner

By: _____

Name: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by: _____ on this ____ day of _____, 20__.

By: _____

Name and Title: _____

cc: CONTRACTOR's Surety
Surety's Agent

NOTICE TO PROCEED

To: _____ Date: _____

PROJECT Description: _____

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20__,
on or

after _____, 20__, and you are to complete the WORK within _____ consecutive calendar days
thereafter.

The date of completion of all WORK is therefore _____, 20__.

Owner

By: _____

Name: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO
PROCEED is hereby acknowledged
by _____
on this _____ day of _____, 20__.

By: _____

Name: _____

Title: _____

SECTION II
CONTRACT PROVISIONS AND FORMS

COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM- CONTRACT CHANGE ORDER

Contract No. _____

Date _____

Change Order No. _____

Project No. _____

To: (Contractor) _____

You are hereby requested to comply with the following changes from the contract plans and specifications:

ITEM NO. (1)	DESCRIPTION OF CHANGES – QUANTITIES, UNIT, UNIT PRICES, CHANGE IN COMPLETION SCHEDULE, ETC. (2)	DECREASE IN CONTRACT PRICE (3)	INCREASE IN CONTRACT PRICE (4)
	Change in contract price due to this change order	\$	\$
	Total decrease	\$	\$
	Total increase	\$	\$
	Difference between Columns (3) and (4)	\$	\$
	Net (increase) (decrease) contract price	\$	\$

The sum of \$ _____ is hereby added to, deducted from, the total contract price and the total adjusted price to date thereby is \$ _____.

The time provided for completion in the contract is unchanged, increased, decreased, by _____ calendar days. This document shall become an amendment to the contract and all provisions of the contract will apply hereto.

Accepted by:

Contractor

Date

Owner

Date

Recommended by:

Architect/Engineer

Date

Approved by:

Township Manager

Date

Note: Work performed under this change order prior to Township concurrence is at owner's risk. Township concurrence will be evidenced by signature of Township Manager or Engineer.

NONDISCRIMINATION CLAUSE

During the term of this contract, Contractor agrees as follows:

1. Contractor shall not discriminate against any employee, applicant for employment, independent contractor, or any other person because of race, color, religious creed, ancestral national origin, age, or sex. Contractor shall take affirmative action to insure that applicants employed, and that employees or agents are treated during employment, without regard to their race, color, religious creed, handicap, ancestry, national origin, age, or sex. Such affirmative action shall include, but is not limited to: employment, upgrading, demotion or transfer, recruitment, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; or selection for training. Contractor shall post in conspicuous places, available to employees, agency of applicants for employment, and other persons, a notice to be provided by the contracting agencies setting forth the provisions of this nondiscrimination clause.

2. Contractor shall, in advertisements or requests for employment placed by it or on its behalf, state that all qualified applicants will receive consideration for employment without regard to race, color, religious creed, handicap, ancestry, national origin, age or sex.

3. Contractor shall send each labor union or workers' representative with which it has collective bargaining agreement or other contract or understanding, a notice advising said labor union or workers' representative of its commitment to this nondiscrimination clause. Similar notice shall be sent to every other source of recruitment regularly utilized by Contractor.

4. It shall be no defense to a finding of noncompliance with this nondiscrimination clause that Contractor had delegated some of its employment practices to any union, training program or other source of recruitment which prevents it from meeting its obligations. However, if any evidence indicates that the Contractor was not on notice of the third-party discrimination or made good faith effort to correct it, such factor shall be considered in mitigation in determining appropriate sanctions.

5. Where the practices of a union or any training program or other source of recruitment will result in the exclusion of minority group persons, so that Contractor will be unable to meet the obligations under this nondiscrimination clause. Contractor shall then employ and fill vacancy through other nondiscriminatory employment procedures.

6. Contractor shall comply with all state and federal laws prohibiting discriminatory hiring or employment opportunities. In the event of Contractor's noncompliance with the nondiscrimination clause of this contract or with any such laws, this contract may be terminated, suspended, in whole or in part, and Contractor may be declared temporarily ineligible for future Commonwealth contracts, and other sanctions may be imposed and remedies invoked.

7. Contractor shall furnish all necessary employment documents and records to, and permit access to its books, records, and accounts by the contracting agency for purposes of investigation to ascertain compliance with the provisions of this clause. If Contractor does not possess documentation records reflecting the necessary information requested, it shall furnish such information on reporting forms supplied by the contracting agency.

8. Contractor shall actively recruit minority and women subcontractors or subcontractors with substantial minority representation among their employees.

9. Contractor shall include the provisions of this nondiscrimination clause in any subcontract, so that such provisions will be binding upon each Subcontractor.

10. Contractor obligations under this clause are limited to the Contractor's facilities in Pennsylvania or, where the contract is for purchase of goods manufactured outside of Pennsylvania, the facilities at which such goods are actually produced.

CONTRACTOR _____

Date _____

CONFLICT OF INTEREST

Interest of Local Public Officials

No member of the governing body of the locality or entity and no other officer, employee, agent or public official of such locality, who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct or indirect, in this contract; and the governing body contractor shall take appropriate steps to assure compliance.

Interest of Contractor and Employees

The Contractor covenants that he presently has no interest and shall not acquire interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of his services hereunder. The Contractor further covenants that in the performance of this Contract, no person having any such interest shall be employed.

RECORDS AND AUDITS

The Contractor shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Contract and such other records as may be deemed necessary by the Municipality and County to assure proper accounting for all project funds. These records will be made available for audit purposes to the Municipality and County or any authorized representative, and will be retained for three years after the close out of the project by the County unless stipulated otherwise by the County.

The undersigned contractor agrees to abide by the above provisions.

By: _____
Contractor

Date

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Bidder certified that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of his certification will be a violation of the Equal Opportunity Clause in any contract resulting from acceptance of this Bid. As used in this certification, the term “segregated facilities” means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage areas, transportation and facilities provided for employees which are segregated on the basis of race, color, religion or national origin, because of habit, local custom.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. Paragraph 1001.

DATE: _____

NAME OF BIDDER: _____

BY: _____

TITLE: _____

OFFICIAL ADDRESS (INCLUDING ZIP CODE)

PHONE NO.: _____

BIDDER'S QUALIFICATIONS

All questions must be answered and the date given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit additional information if he so desires.

- 1. Name of Bidder:
2. Permanent main office address:
3. When Organized:
4. If a corporation, where incorporated:
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: Schedule these showing amount of each contract and the appropriate anticipated dates of completion.
7. General character of work performed by your company:
8. Have you ever failed to complete any work awarded to you? If so, where and why.
9. Have you ever defaulted on a contract? If so, where and why.
10. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed.
11. List your major equipment available for this contract:
12. List experience in construction work similar in importance to this project:
13. List background and experience of the principal members of your organization, including the officers:
14. List credit available: \$
15. List bank references:
16. Will you, upon request, fill out a detailed financial statement and furnish any other information which may be required by the Owner?
17. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

Bidder: _____
By: _____
Title: _____

Dated this ____ day of _____, 20____.

State of _____ §

County of _____:

_____ being duly sworn deposes and says that he is _____ of
and that the answers to the foregoing questions and all statements therein contained are true and correct.

Subscribed and sworn to before me this ____ day of _____, 20____.

My commission expires: _____ Notary Public



COMMONWEALTH OF PENNSYLVANIA

PUBLIC WORKS EMPLOYMENT VERIFICATION FORM

Date _____

Business or Organization Name (Employer) _____

Address _____

City _____ State _____ Zip Code _____

Contractor

Contracting Public Body _____

Contract/Project No _____

Project Description _____

Project Location _____

As a contractor/subcontractor for the above referenced public works contract, I hereby affirm that as of the above date, our company is in compliance with the Public Works Employment Verification Act ('the Act') through utilization of the federal E-Verify Program (EVP) operated by the United States Department of Homeland Security. To the best of my/our knowledge, all employees hired post January 1, 2013 are authorized to work in the United States.

It is also agreed to that all public works contractors/subcontractors will utilize the federal EVP to verify the employment eligibility of each new hire within five (5) business days of the employee start date throughout the duration of the public works contract. Documentation confirming the use of the federal EVP upon each new hire shall be maintained in the event of an investigation or audit.

I, _____, authorized representative of the company above, attest that the information contained in this verification form is true and correct and understand that the submission of false or misleading information in connection with the above verification shall be subject to sanctions provided by law.

Authorized Representative Signature

PROJECT MANUAL

FOR

CHESTER TOWNSHIP

**POLICE STATION INTERIOR
RENOVATIONS**

Prepared By: MGE Associates

March 12, 2024

INTERIOR SPECIFICATIONS

SECTION 011100 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Contract work includes interior improvements to the Police Station.
 - a. Finish upgrades, new LVT resinous flooring and base, lighting replacements, select furnishings, new casework, and miscellaneous improvements.
 - b. New CMU partitions and HM doors
 - c. New Ductless Split HVAC Unit for IT Closet.
- B. Section includes a summary, including responsibilities for coordination and temporary facilities and controls.
- C. Related Requirements:
 - 1. Section 013100 "Project Management and Coordination" for general coordination requirements.

1.3 GENERAL REQUIREMENTS OF CONTRACTS

- A. Extent of Contract: Unless the Agreement contains a more specific description of the Work of each Contract, requirements indicated on Drawings and in Specification Sections determine which contract includes a specific element of Project.
 - 1. Unless otherwise indicated, the work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
 - 2. Blocking, backing panels, sleeves, and metal fabrication supports for the work of each contract shall be provided.
 - 3. Furnishing of access panels for the work.
 - 4. Cutting and Patching provided for the work
 - 5. Through-penetration firestopping for the work.
 - 6. Contractors' Startup Construction Schedule: Within five working days after startup horizontal bar-chart-type construction schedules showing construction operations sequenced and coordinated with overall construction.
- B. Close-out Procedures: Contractor shall be responsible for:
 - a. Preparation and submission of Project Record Documents (as-builts, record specifications, record shop drawings, etc.) for work completed.

- b. Preparation and submission of operation and maintenance manuals.
- c. Assembly and submission of extra materials and attic stock to Owner.
- d. Preparation and submission of warranties.

1.4 GENERAL CONSTRUCTION CONTRACT

A. Work of the General Construction Contract includes, but not limited to, the following:

- 1. General coordination of construction activities
- 2. Coordinate sequencing and scheduling of the Work.
- 3. Initial Coordination Meeting.
- 4. Prepare Construction Schedule for entire Project.
- 5. Provide photographic documentation.
- 6. Selected demolition
- 7. Interior finishes, interior specialties , and floor and ceiling finishes.
- 8. Patching of work
- 9. Replacement Plumbing fixtures.
- 10. Plumbing connections for replacement fixtures to existing piping systems
- 11. Replacement Interior lighting
- 12. Installation of washroom accessories

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

- 1. Project identification and temporary signs.
- 2. General waste disposal facilities.
- 3. Pest control.
- 4. Barricades, warning signs, and lights.

5. Security enclosure and lockup.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other Work of the Contract.
- C. Schedule: A Part 3 "Schedule of Alternates" Article is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Add Alternate No. A: Evidence room 2 and Storage room

1. Base Bid: no new partitions or doors
2. Add Alternate: Construct New CMU partitions and install new HM doors per plan, paint and install shelving per plans and schedule.

END OF SECTION 012300

SECTION 042200 - CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Mortar and grout.
3. Steel reinforcing bars.
4. Miscellaneous masonry accessories.
5. Masonry-cell fill.

1.2 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified in accordance with ASTM C1093 for testing indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.

- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6 except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.
- C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

2.3 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 - 2. Provide bullnose units for outside corners unless otherwise indicated.
- B. CMUs: ASTM C90.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of **2800 psi**.
 - 2. Density Classification: **Lightweight**.
 - 3. Size (Width): Manufactured to dimensions 3/8 inch less-than-nominal dimensions.
 - 4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
 - 5. Faces to Receive Plaster: Where units are indicated to receive a direct application of plaster, provide textured-face units made with gap-graded aggregates.

2.4 CONCRETE AND MASONRY LINTELS

- A. General: Provide one of the following:
- B. Concrete Lintels Matching CMU in Color, Texture: ASTM C1623, matching density classification; and with reinforcing bars indicated. **Provide lintels with net-area compressive strength not less than that of CMUs.**
- C. Precast or Formed-in-Place Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Section 032000 "Concrete Reinforcing," and with reinforcing bars indicated.
- D. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
 - 1. Alkali content is not more than 0.1 percent when tested in accordance with ASTM C114.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- D. Masonry Cement: ASTM C91/C91M.
- E. Mortar Cement: ASTM C1329/C1329M.
- F. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C979/C979M. Use only pigments with a record of satisfactory performance in masonry mortar.
- G. Colored Cement Products: Packaged blend made from **portland cement and hydrated lime, masonry cement, or mortar cement** and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 - 1. Colored Portland Cement-Lime Mix:
 - 2. Colored Masonry Cement:
 - 3. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
 - 4. Pigments does not exceed 10 percent of portland cement by weight.

5. Pigments does not exceed 5 percent of **masonry cement or mortar cement** by weight.

H. Aggregate for Mortar: ASTM C144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

I. Aggregate for Grout: ASTM C404.

J. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C494/C494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

K. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent.

L. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A615/A615M or ASTM A996/A996M, Grade 60.

B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

C. Masonry-Joint Reinforcement, General: Ladder type complying with ASTM A951/A951M.

1. Interior Walls: **Hot-dip** galvanized carbon steel.
2. Exterior Walls: **Hot-dip galvanized carbon** steel.
3. Wire Size for Side Rods: **0.187-inch** diameter.
4. Wire Size for Cross Rods: **0.187-inch** diameter.
5. Spacing of Cross Rods: Not more than 16 inches o.c.
6. Provide in lengths of not less than 10 feet, **with prefabricated corner and tee units.**

2.7 TIES AND ANCHORS

A. General: Ties and anchors extend at least 1-1/2 inches into masonry but with at least a 5/8-inch cover on outside face.

B. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Connector Section: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed from **0.105-inch-thick steel sheet, galvanized after fabrication.**
 2. Tie Section: Triangular-shaped wire tie made from **0.187-inch-diameter, hot-dip galvanized steel wire**
 3. Corrugated-Metal Ties: Metal strips not less than 7/8 inch wide with corrugations having a wavelength of 0.3 to 0.5 inch and an amplitude of 0.06 to 0.10 inch made from **0.105-inch-thick steel sheet, galvanized after fabrication** with dovetail tabs for inserting into dovetail slots in concrete.
- C. Partition Top Anchors: 0.105-inch-thick metal plate with a 3/8-inch-diameter metal rod 6 inches long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from **steel, hot-dip galvanized after fabrication.**

2.8 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from **neoprene, urethane, or PVC.**
- B. Preformed Control-Joint Gaskets: Made from **styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 or PVC, complying with ASTM D2287, Type PVC-65406** and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).

2.9 MASONRY-CELL FILL

- A. Lightweight-Aggregate Fill: ASTM C331/C331M.

2.10 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
 2. Use **portland cement-lime, masonry cement, or mortar cement** mortar unless otherwise indicated.
 3. For exterior masonry, use **portland cement-lime, masonry cement, or mortar cement** mortar.
 4. For reinforced masonry, use **portland cement-lime, masonry cement, or mortar cement** mortar.
 5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C270, **Proportion** Specification. Provide the following types of mortar for applications stated unless another type is indicated **or needed to provide required compressive strength of masonry**
 - 1. For masonry below grade or in contact with earth, use **Type M**.
 - 2. For reinforced masonry, use **Type S**.
 - 3. For mortar parge coats, use **Type N**.
 - 4. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.
 - 5. For interior nonload-bearing partitions, Type O may be used instead of Type N.
- D. Grout for Unit Masonry: Comply with ASTM C476.
 - 1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
 - 2. Proportion grout in accordance with ASTM C476, **Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi**.
 - 3. Provide grout with a slump of **8 to 11 inches** as measured in accordance with ASTM C143/C143M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
 - 2. Verify that foundations are within tolerances specified.
 - 3. Verify that reinforcing dowels are properly placed.
 - 4. Verify that substrates are free of substances that would impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.3 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in **bond pattern indicated on Drawings**; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than **2 inches**. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 - 1. Install compressible filler in joint between top of partition and underside of structure above.
 - 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors **48 inches** o.c. unless otherwise indicated.

3. Wedge nonload-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078443 "Joint Firestopping."

3.4 MORTAR BEDDING AND JOINTING

- A. Lay hollow CMUs as follows:
 1. Bed face shells in mortar and make head joints of depth equal to bed joints.
 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
 3. Bed webs in mortar in grouted masonry, including starting course on footings.
 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
- B. Lay solid CMUs with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
 1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
 2. Wet joint surfaces thoroughly before applying mortar.
 3. Rake out mortar joints for pointing with sealant.
- D. Rake out mortar joints at pre-faced CMUs to a uniform depth of 1/4 inch and point with epoxy mortar to comply with epoxy-mortar manufacturer's written instructions.
- E. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
- F. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.
- G. Cut joints flush where indicated to receive waterproofing unless otherwise indicated.

3.5 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
 1. Space reinforcement not more than 16 inches o.c.
 2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.
 3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings **in addition to continuous reinforcement.**

- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Cut and bend reinforcing units as directed by manufacturer for continuity at **corners**, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.6 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete, to comply with the following:
 - 1. Provide an open space not less than **1/2 inch** wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 - 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 - 3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 36 inches o.c. horizontally.

3.7 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

3.8 LINTELS

- A. Provide **concrete or masonry** lintels where shown and where openings of more than 12 inches for brick-size units and 24 inches for block-size units are shown without structural steel or other supporting lintels.
- B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.9 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 5. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.

3.10 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 - 1. Crush masonry waste to less than 4 inches in each dimension.
 - 2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
 - 3. Do not dispose of masonry waste as fill within 18 inches of finished grade.
- C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.
- D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042200

SECTION 061000 - ROUGH CARPENTRY

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. Wood blocking, cants, and nailers.
 - 2. Plywood backing panels.

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Exposed Framing: Framing not concealed by other construction.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.
 - 2. Fire-retardant-treated wood.
 - 3. Power-driven fasteners.
 - 4. Post-installed anchors.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame

front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Treatment shall not promote corrosion of metal fasteners.
 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D2898. Use for exterior locations and where indicated.
 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D3201 at 92 percent relative humidity. Use where exterior type is not indicated.
 4. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D5664 and design value adjustment factors shall be calculated according to ASTM D6841.
- C. Kiln-dry lumber after treatment to maximum moisture content of 19 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat items indicated on Drawings, and the following:
1. Concealed blocking.
 2. Plywood backing panels.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
 2. Nailers.
 3. Rooftop equipment bases and support curbs.
 4. Cants.
 5. Furring.
 6. Utility shelving.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any of the following species:
1. Hem-fir (north); NLGA.
 2. Mixed southern pine or southern pine; SPIB.
 3. Spruce-pine-fir; NLGA.
 4. Hem-fir; WCLIB or WWPA.
 5. Northern species; NLGA.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.6 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Metal Framing: ASTM C954, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1.
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

2.7 MISCELLANEOUS MATERIALS

- A. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- C. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- D. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant-treated plywood backing panels with classification marking of testing agency exposed to view.
- E. Install shear wall panels to comply with manufacturer's written instructions.
- F. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- G. Install sill sealer gasket to form continuous seal between sill plates and foundation walls.
- H. Do not splice structural members between supports unless otherwise indicated.
- I. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
 - 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches on center.
- J. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- K. Comply with AWWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 - 1. Use inorganic boron for items that are continuously protected from liquid water.
 - 2. Use copper naphthenate for items not continuously protected from liquid water.
- L. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

- M. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
 - 2. ICC-ES evaluation report for fastener.
- N. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 INSTALLATION OF WOOD BLOCKING AND NAILERS

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet enough that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 064116 - PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Plastic-laminate-clad architectural cabinets.
 - 2. Cabinet hardware and accessories.

1.3 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to support loads imposed by installed and fully loaded cabinets.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product, including panel products and high-pressure decorative laminate and cabinet hardware and accessories.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 3. Show locations and sizes of cutouts and holes for items installed in plastic-laminate architectural cabinets.
- C. Samples for Verification: For the following:
 - 1. Plastic Laminates: 8 by 10 inches for each type, color, pattern, and surface finish required.
 - 2. PVC Edge materials
 - 3. Exposed Cabinet Hardware and Accessories: One full-size unit for each type and finish.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and fabricator.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver cabinets until painting and similar finish operations that might damage architectural cabinets have been completed in installation areas. Store cabinets in installation areas or in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.7 FIELD CONDITIONS.

- A. Established Dimensions: Where cabinets are indicated to fit to other construction, establish dimensions for areas where cabinets are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

- A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.
 - 1. The Contract Documents contain requirements that are more stringent than the referenced quality standard. Comply with requirements of Contract Documents in addition to those of the referenced quality standard.
- B. Architectural Woodwork Standards Grade: Custom
- C. Type of Construction: Frameless.
- D. Cabinet, Door, and Drawer Front Interface Style: Flush overlay.
- E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Basis of Design: Formica Corporation.
 - b. Pionite; a Panolam Industries International, Inc. brand.
 - c. Laminart LLC.
 - d. Wilsonart
 - 2. Provide high-pressure decorative laminate as noted on the Drawings.
- F. Laminate Cladding for Exposed Surfaces:
 - 1. Horizontal Surfaces: Grade HGS.
 - 2. Vertical Surfaces: Grade HGS.

3. Edges: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
4. Pattern Direction: Vertically for drawer fronts, doors, and fixed panels.

G. Materials for Semiexposed Surfaces:

1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, NEMA LD 3, Grade VGS.

Retain one edge construction from "Edges of Plastic-Laminate Shelves" Subparagraph below if retaining high-pressure decorative laminate in "Surfaces Other Than Drawer Bodies" Subparagraph above.

- a. Edges of Plastic-Laminate Shelves: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.

Retain first subparagraph below if required to provide balanced construction.

- b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, NEMA LD 3, Grade VGS.
2. Drawer Sides and Backs: Solid-hardwood lumber.
 3. Drawer Bottoms: Hardwood plywood.

Retain "Dust Panels" Paragraph below if required. Dust panels are not required by standards.

- H. Dust Panels: 1/4-inch plywood or tempered hardboard above compartments and drawers unless located directly under tops.

Retain "Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces" Paragraph below if required to provide balanced construction.

- I. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, NEMA LD 3, Grade BKL.
- J. Drawer Construction: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.
1. Join subfronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners.
- K. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
1. Match Architect's sample.

2.2 CABINET HARDWARE AND ACCESSORIES

- A. Butt Hinges: 2-3/4-inch, five-knuckle steel hinges made from 0.095-inch-thick metal, and as follows:
1. Semiconcealed Hinges for Flush Doors: BHMA A156.9, B01361.

- B. Back-Mounted Pulls: BHMA A156.9, B02011.
- C. Wire Pulls: Back mounted, solid metal 5 inches long, 2-1/2 inches deep, and 5/16 inch in diameter.
- D. Catches: Magnetic catches, BHMA A156.9, B03141.
- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04102; with shelf brackets, B04112.

Shelf rests in "Shelf Rests" Paragraph below are installed in holes drilled in cabinet sides and partitions.

- F. Drawer Slides: BHMA A156.9.
 - 1. Grade 1 and Grade 2: Side mounted full-extension type; zinc-plated steel with polymer rollers.
 - 2. For drawers not more than 3 inches high and not more than 24 inches wide, provide Grade 2.
 - 3. For drawers more than 3 inches high but not more than 6 inches high and not more than 24 inches wide, provide Grade 1.
 - 4. For drawers more than 6 inches high or more than 24 inches wide, provide Grade 1HD-100.
- G. Door and Drawer Silencers: BHMA A156.16, L03011.
- H. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Stainless Steel: BHMA 630.
- I. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.3 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesive for Bonding Plastic Laminate: Un-pigmented contact cement.

Retain "Adhesive for Bonding Edges" Subparagraph below unless good chemical, fire, or temperature resistance is required.

- 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.4 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesive for Bonding Plastic Laminate: Un-pigmented contact cement.
 - 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.5 FABRICATION

- A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- B. Fabricate architectural cabinets to dimensions, profiles, and details indicated.
- C. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Trial fit assemblies at manufacturer's shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements before disassembling for shipment.
- D. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.
- B. Before installing cabinets, examine shop-fabricated work for completion and complete work as required.

3.2 INSTALLATION

- A. Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to be installed.
- B. Assemble cabinets and complete fabrication at Project site to extent that it was not completed in the shop.
- C. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head cabinet installation screws.
- D. Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches using concealed shims.
 - 1. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
 - 2. Install cabinets without distortion so doors and drawers fit openings and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective cabinets, where possible, to eliminate functional and visual defects. Where not possible to repair, replace architectural cabinets. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean cabinets on exposed and semiexposed surfaces.

END OF SECTION 064116

SECTION 090190.52 - MAINTENANCE REPAINTING

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 maintenance repainting as follows:
 - 1. Removing existing paint.
 - 2. Patching substrates.
 - 3. Repainting
- B. Related Requirements:

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.
- B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.
- C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.
- D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.
- E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.
- F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.
- G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at each School

1.5 SEQUENCING AND SCHEDULING

- A. Perform maintenance repainting in the following sequence, which includes work specified in this and other Sections:
1. Dismantle existing surface-mounted objects and hardware except items indicated to remain in place. Tag items with location identification and protect.
 2. Verify that temporary protections have been installed.
 3. Examine condition of surfaces to be painted.
 4. Remove existing paint to the degree required for each substrate and surface condition of existing paint.
 5. Apply paint system.
 6. Reinstall dismantled surface-mounted objects and hardware unless otherwise indicated.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
1. Include recommendations for product application and use.
 2. Include test data substantiating that products comply with requirements.
- B. Samples: For each type of paint system and each pattern, color, and gloss;
1. Include stepped Samples defining each separate coat, including fillers and primers. Resubmit until each required sheen, color, and texture is achieved.
 2. Sample Size:
 - a. Painted Surfaces: **4-by-8-inch (100-by-200-mm)** Samples for each color and material, on hardboard.
- C. Product List: For each paint product indicated, include the following:
1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 2. VOC content.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra paint materials, from the same production run, that match products applied and that are packaged with protective covering for storage and identified with labels describing contents, including material, finish, source, and location on building.
1. Quantity: Furnish Owner with an additional **3** percent, but not less than **1 gal. (3.8 L)** or one case, as appropriate, of each material and color applied.

1.8 QUALITY ASSURANCE

- A. Mockups: Prepare mockups of maintenance repainting processes for each type of coating system and substrate indicated and each color and finish required to demonstrate aesthetic effects and to set quality standards for materials and execution. Duplicate appearance of approved Sample submittals.
1. Locate mockups **locations that enable viewing under same conditions as the completed Work**
 2. Coating Mockups: **Two** surfaces of at least **100 sq. ft. (9 sq. m)** to represent surfaces and conditions for application of each type of coating system under same conditions as the completed Work.
 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than **45 deg F (7 deg C)**.
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste daily.

1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with maintenance repainting only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.
- B. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between **50 and 95 deg F (10 and 35 deg C)**.
- C. Do not apply paint in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than **5 deg F (3 deg C)** above the dew point; or to damp or wet surfaces.
1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer for surface preparation and during paint application and drying periods.

PART 2 - PRODUCTS

2.1 PREPARATORY CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F (60 to 71 deg C).
- C. Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 1/2 cup (125 mL) of laundry detergent that contains no ammonia, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of warm water for every 5 gal. (20 L) of solution required.
- D. Abrasives for Ferrous Metal Cleaning: Aluminum oxide paper, emery paper, fine steel wool, steel scrapers, and steel-wire brushes of various sizes.
- E. Rust Remover: Manufacturer's standard phosphoric acid-based gel formulation, also called "naval jelly," for removing corrosion from iron and steel.

2.2 PAINT, GENERAL

- A. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: **As indicated with each paint system in painting schedule..**

2.3 PAINT MATERIAL MANUFACTURERS

- A. Basis of Design : Sherwin Williams

2.4 PAINT MATERIALS

- A. Primers and Sealers:
 - 1. Primer Sealer, Latex, Interior:[**MPI #50.**]
 - 2. Primer, Stain Blocking, Water Based:[**MPI #137.**]
- B. Metal Primers:
 - 1. Primer, Metal, Surface Tolerant:[**MPI #23.**]

C. Water-Based Paints:

1. Latex, Interior, Institutional Low Odor/VOC, Flat (Gloss Level 1):[**MPI #143.**]
2. Latex, Interior, Institutional Low Odor/VOC (Gloss Level 2):[**MPI #144.**]
3. Latex, Interior, Institutional Low Odor/VOC (Gloss Level 3):[**MPI #145.**]
4. Latex, Interior, Institutional Low Odor/VOC (Gloss Level 4):[**MPI #146.**]
5. Latex, Interior, Institutional Low Odor/VOC, Semigloss (Gloss Level 5):[**MPI #147.**]

2.5 PATCHING MATERIALS

- A. Wood-Patching Compound: Two-part, epoxy-resin, wood-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated from weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.
- B. Metal-Patching Compound: Two-part, polyester-resin, metal-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of metal repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be produced for filling metal that has deteriorated from corrosion. Filler shall be capable of filling deep holes and spreading to feather edge.
- C. Cementitious Patching Compounds: Cementitious patching compounds and repair materials specifically manufactured for filling cementitious substrates and for sanding or tooling prior to repainting; formulation as recommended in writing by manufacturer for type of cementitious substrate indicated, exposure to weather and traffic, the detail of work, and site conditions.
- D. Gypsum-Plaster Patching Compound: Finish coat plaster and bonding compound according to ASTM C842 and manufacturer's written instructions.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
 1. Cover adjacent surfaces with materials that are proven to resist chemical solutions being used unless the solutions will not damage adjacent surfaces. Use protective materials that are UV resistant and waterproof. Apply masking agents to comply with manufacturer's

written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

2. Do not apply chemical solutions during winds of sufficient force to spread them to unprotected surfaces.
3. Neutralize and collect alkaline and acid wastes before disposal.
4. Dispose of runoff from operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.2 MAINTENANCE REPAINTING, GENERAL

- A. Maintenance Repainting Appearance Standard: Completed work is to have a uniform appearance as viewed by Architect from building interior at [**5 feet (1.5 m)**] [**10 feet (3 m)**] <Insert distance> away from painted surface and from building exterior at [**20 feet (6 m)**] [**50 feet (15 m)**] <Insert distance> away from painted surface.
- B. Execution of the Work: In repainting surfaces, disturb them as minimally as possible and as follows:
 1. Remove failed coatings and corrosion and repaint.
 2. Verify that substrate surface conditions are suitable for repainting.
 3. Allow other trades to repair items in place before repainting.
- C. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use gentle methods, such as scraping and lightly hand sanding, that will not abrade softer substrates, reducing clarity of detail.

3.3 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of painting work. Comply with paint manufacturer's written instructions for inspection.
- B. Maximum Moisture Content of Substrates: Do not begin application of coatings unless moisture content of exposed surface is below the maximum value recommended in writing by paint manufacturer and not greater than the following maximum values when measured with an electronic moisture meter appropriate to the substrate material:
 1. Concrete: [**12**] percent.
 2. Gypsum Board: [**12**] percent.
 3. Gypsum Plaster: [**12**] percent.
 4. Masonry (Clay and CMU): [**12**] < percent.
- C. Alkalinity: Do not begin application of coatings unless surface alkalinity is within range recommended in writing by paint manufacturer. Conduct alkali testing with litmus paper on exposed plaster, cementitious, and masonry surfaces.

- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
 - 1. If existing surfaces cannot be prepared to an acceptable condition for proper finishing by using specified surface-preparation methods, notify Architect in writing.
- E. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.4 PREPARATORY CLEANING

- A. General: Use the gentlest, appropriate method necessary to clean surfaces in preparation for painting. Clean all surfaces, corners, contours, and interstices.
- B. Detergent Cleaning: Wash surfaces by hand using clean rags, sponges, and bristle brushes. Scrub surface with detergent solution and bristle brush until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet. Rinse with water applied by clean rags or sponges.
- C. Solvent Cleaning: Use solvent cleaning to remove oil, grease, smoke, tar, and asphalt from painted or unpainted surfaces before other preparation work. Wipe surfaces with solvent using clean rags and sponges. If necessary, spot-solvent cleaning may be employed just prior to commencement of paint application, provided enough time is allowed for complete evaporation. Use clean solvent and clean rags for the final wash to ensure that all foreign materials have been removed. Do not use solvents, including primer thinner and turpentine, that leave residue.
- D. Mildew: Clean off existing mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. Rinse with water applied by clean rags or sponges.
- E. Mechanical Rust Removal:
 - 1. Remove rust with specified abrasives for ferrous-metal cleaning. Clean to bright metal.
 - 2. Wipe off residue with mineral spirits and either steel wool or soft rags.
 - 3. Dry immediately with clean, soft cloths. Follow direction of grain in metal.
 - 4. Prime immediately to prevent rust. Do not touch cleaned metal surface until primed.
- F. Paint Removal with Hand Tools: Remove paint manually using hand-held scrapers, wire brushes, sandpaper, and metallic wool as appropriate for the substrate material.

3.5 SUBSTRATE REPAIR

- A. General: Repair substrate surface defects that are inconsistent with the surface appearance of adjacent materials and finishes.

B. Wood Substrate:

1. Repair wood defects including dents and gouges more than [1/8 inch (3 mm)] [1/4 inch (6 mm)] <Insert dimension> in size and all holes and cracks by filling with wood-patching compound and sanding smooth. Reset or remove protruding fasteners.
2. Where existing paint is allowed to remain, sand irregular buildup of paint, runs, and sags to achieve a uniformly smooth surface.

C. Cementitious Material Substrate:

1. General: Repair defects including dents and chips more than [1/4 inch (6 mm)] [1/2 inch (13 mm)] <Insert dimension> in size and all holes and cracks by filling with cementitious patching compound and sanding smooth. Remove protruding fasteners.
2. New and Bare Plaster: Neutralize surface of plaster with mild acid solution as recommended in writing by paint manufacturer. In lieu of acid neutralization, follow manufacturer's written instruction for primer or transition coat over alkaline plaster surfaces.
3. Concrete, Cement Plaster, and Other Cementitious Products: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. If surfaces are too alkaline to paint, correct this condition before painting.

D. Gypsum-Plaster and Gypsum-Board Substrates:

1. Repair defects including dents and chips more than [1/8 inch (3 mm)] [1/4 inch (6 mm)] <Insert dimension> in size and all holes and cracks by filling with gypsum-plaster patching compound and sanding smooth. Remove protruding fasteners.
2. Rout out surface cracks to remove loose, unsound material; fill with patching compound and sand smooth.

E. Metal Substrate:

1. Preparation: Treat repair locations by wire-brushing and solvent cleaning. Use **mechanical** rust removal method to clean off rust.
2. Priming: Prime iron and steel surfaces immediately after repair to prevent flash rusting. Stripe paint corners, crevices, bolts, welds, and sharp edges. Apply two coats to surfaces that are inaccessible after completion of the Work.

3.6 PAINT APPLICATION, GENERAL

- A. Comply with manufacturers' written instructions for application methods unless otherwise indicated in this Section.
- B. Prepare surfaces to be painted according to the Surface-Preparation Schedule and with manufacturer's written instructions for each substrate condition.
- C. Apply a transition coat over incompatible existing coatings.

- D. Metal Substrate: Stripe paint corners, crevices, bolts, welds, and sharp edges before applying full coat. Apply two coats to surfaces that are inaccessible after completion of the Work. Tint stripe coat different than the main coating and apply with brush.

3.7 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 090190.52

SECTION 095123 - ACOUSTICAL TILE CEILINGS

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. Acoustical tiles for interior ceilings.
 - 2. Fully concealed, direct-hung, suspension systems with exposed grid.
 - 3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings
 - 4. Perimeter Trim

1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data: For each type of product.
- C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of sizes indicated below:
 - 1. Minimum 6 inch x 6 inch samples of specified acoustical panel
 - 2. 8 inch long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination drawings for reflected ceiling plans drawn accurately to scale and coordinating penetrations and ceiling-mounted items. Show the following:
 - 1. Ceiling suspension system members.
 - 2. Method of attaching suspension system hangers to building structure.
 - 3. Ceiling-mounted items including light fixtures; air outlets and inlets; speakers; sprinklers; and special moldings at walls, column penetrations, and other junctures of acoustical ceilings with adjoining construction.
 - 4. Minimum Drawing Scale: 1/8 inch = 1 foot.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For finishes to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. Deliver extra materials to Owner.
 - 1. Acoustical Ceiling Units: Full-size tiles equal to 5 percent of quantity installed.
 - 2. Suspension-System Components: Quantity of each concealed grid and exposed component equal to 2 percent of quantity installed.

1.7 QUALITY ASSURANCE

- A. A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.
 - 1. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
 - 2. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 Classification.
 - 3. Fire Resistance: As follows tested per ASTM E119 and listed in the appropriate floor or roof design in the Underwriters Laboratories Fire Resistance Directory
 - 4. Acoustical Panels: As with other architectural features located at the ceiling, may obstruct or skew the planned fire sprinkler water distribution pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems are present.
 - 5. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical tiles, suspension-system components, and accessories to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

- B. Before installing acoustical tiles, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not install acoustical tile ceilings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
 - 1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical tile ceiling installation.

1.10 WARRANTY

- A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:
 - 1. Acoustical Panels: Sagging and warping
 - 2. Grid System: Rusting and manufacturer's defect
- B. Warranty Period:
 - 1. Acoustical panels: Ten (10) years from date of substantial completion
 - 2. 2. Suspension: Ten (10) years from date of substantial completion
 - 3. 3. Ceiling System: Thirty (30) years from date of substantial completion

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations:
 - 1. Suspended Acoustical Tile Ceilings: Obtain each type of acoustical ceiling tile and its suspension system from single source from single manufacturer.
 - 2. Directly Attached Acoustical Tile Ceilings: Obtain each type of acoustical ceiling tile from single source from single manufacturer.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
 - 1. Basis of Design: 2'x4' Provide Armstrong "Ultima 1" tegular edge, 2' x 2' and 2' x 4'

2. Rockfon
3. Certainteed
4. USG

2.2 ACOUSTICAL TILES

- A. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E1264 classifications as designated by type, form, pattern, acoustical rating, and light reflectance unless otherwise indicated.
1. Mounting Method for Measuring Noise Reduction Coefficient (NRC): Type E-400 (plenum mounting in which face of test specimen is 15-3/4 inches away from the test surface) per ASTM E 795.
 2. Test Method for Ceiling Attenuation Class (CAC): Where acoustical panel ceilings are specified to have a CAC, provide units identical to those tested per ASTM E 1414 by a qualified testing agency.

2.3 METAL SUSPENSION SYSTEM, GENERAL

- A. Metal Suspension-System Standard: Provide manufacturer's standard, direct-hung, fully concealed, metal suspension system and accessories of type, structural classification, and finish indicated that complies with applicable requirements in ASTM C635/C635M.
- B. Finishes and Colors: Provide manufacturer's standard factory-applied finish for type of system indicated.
1. High-Humidity Finish: Comply with ASTM C 635 requirements for "Coating Classification for Severe Environment Performance" where high-humidity finishes for all locker room areas.
- C. Attachment Devices: Size for 5 times the design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.
- D. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
1. Zinc-Coated Carbon Steel Wire: ASTM A 641 (ASTM A 641M), Class 1 zinc coating, soft temper.
 2. Stainless Steel Wire: ASTM A 580/ A 580 M, Type 304, Non-magnetic.
 3. Nickel-Copper Alloy Wire: ASTM B 164, nickel-copper alloy UNS N04400.
 4. Size: Select wire diameter so that its stress at 3 times the hanger design load (ASTM C 635, Table 1, Direct Hung) will be less than the yield stress of wire, but provide not less than 0.106-inch- diameter wire.
- E. Edge Moldings and Trim: Type and profile indicated, or if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical panel edge details and suspension systems indicated; formed from sheet metal of same material and finish as that used for exposed flanges of suspension system runners.

1. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.

METAL EDGE MOLDINGS AND TRIM

- A. Extruded-Aluminum Edge Moldings and Trim: Where indicated, provide manufacturer's extruded-aluminum edge moldings and trim of profile indicated or referenced by manufacturer's designations, including splice plates, corner pieces, and attachment and other clips, complying with seismic design requirements.
 1. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.
 2. Factory finished baked polyester paint
 3. Color: White
 4. Size: 120" x 4" high

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine acoustical tiles before installation. Reject acoustical tiles that are wet, moisture damaged, or mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Install acoustical panel ceilings to comply with publications referenced below per manufacturer's instructions and CISCA "Ceiling Systems Handbook."
 1. Standard for Ceiling Suspension System Installations: Comply with ASTM C 636.
 2. CISCA Recommendations for Acoustical Ceilings: Comply with CISCA "Recommendations for Direct-Hung Acoustical Tile and Lay-In Panel Ceilings."
- B. Suspend ceiling hangers from building's structural members and as follows:
 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of the supporting structure or of the ceiling suspension system.
 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

3. Splay hangers only where required, and if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 4. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
 5. Secure wire hangers to ceiling suspension members and to supports above with a minimum of 3 tight turns. Connect hangers either directly to structures or to inserts, eye screws, or other devices that are secure, that are appropriate for substrate, and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 6. Do not attach hangers to steel deck tabs.
 7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 8. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise shown; and provide hangers not more than 8 inches (200 mm) from ends of each member.
 9. Use stainless steel wire hangers in shower rooms.
- C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
1. Screw attach moldings to substrate at intervals not over 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.18 mm in 3.66 m). Miter corners accurately and connect securely.
 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- E. Install acoustical panels with undamaged edges and fitted accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide neat, precise fit.
1. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension system runners and moldings.
 2. Paint the cut panel edges remaining exposed after installation; match color of exposed panel surfaces using coating recommended for this purpose by acoustical panel manufacturer.
 3. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.

- B. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095123

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

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. Thermoplastic-rubber base.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.5 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C) , in spaces to receive resilient products during the following periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C) .
- C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 VINYL BASE

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Basis of Design: Johnsonite; a Tarkett company.
 - 2. Armstrong
 - 3. Roppe

- B. Product Standard: ASTM F 1861, Type TV (vinyl, thermoplastic).
 - 1. Group: I (solid, homogeneous).
 - 2. Style and Location:
 - a. Style A, Straight: Provide in areas with carpet.
 - b. Style B, Cove: Provide in areas with resilient floor coverings.

- C. Minimum Thickness: 0.125 inch (3.2 mm).

- D. Height: 4 inches (152 mm).

- E. Lengths: Coils in manufacturer's standard length.

- F. Outside Corners: Job formed.

- G. Inside Corners: Job formed.

2.2 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

- B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
 1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- C. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.3 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. Job-Formed Corners:
 1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.
 2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

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. Vinyl composition floor tile.
 - 2. Luxury Vinyl floor tile

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: Full-size units of each color, texture, and pattern of floor tile required.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Floor Tile: Furnish one box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 65 deg F or more than 85 deg F, in spaces to receive floor tile during the following periods:
 1. 48 hours before installation.
 2. During installation.
 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.
 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 VINYL COMPOSITION FLOOR TILE

- A. Products: Provide products listed on the finish schedule.
- B. Tile Standard: ASTM F1066, Class 2, through pattern.
- C. Wearing Surface: Smooth.
- D. Thickness: 0.125 inch.

- E. Size: 12 by 12 inches.
- F. Colors and Patterns: As noted on the finish schedule.

2.3 LUXURY VINYL FLOOR TILE

- A. Products: Provide products listed on the finish schedule.
- B. Tile Standard: ASTM F700, Class 3, Type B
- C. Wearing Surface: Embossed
- D. Thickness: 0.125 inch.
- E. Size: 6 by 36 inches.
- F. Colors and Patterns: As noted on the finish schedule.

2.4 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
- C. Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

2.5 ACCESSORIES

- A. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl, or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.
- B. Provide metal edge strips of width shown on the drawings and of required thickness to protect exposed edges of the flooring. Provide units of maximum available length to minimize the number of joints. Use butt-type metal edge strips for concealed anchorage or overlap-type metal edge strips for exposed anchorage. Unless otherwise shown, provide strips made of extruded aluminum with a mill finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
 - 3. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of [3 lb of water/1000 sq. ft.] <Insert rate> in 24 hours.
 - b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum [75] <Insert number> percent relative humidity level.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until materials are the same temperature as space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
 - 1. Lay tiles square with room axis and in tile patterns indicated on drawings.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
 - 1. Lay tiles with grain direction alternating in adjacent tiles (basket-weave pattern).
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in installation areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

- D. Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.
 - 1. Apply three coat(s).
- E. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 265100 - INTERIOR LIGHTING

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. Replacement of existing interior light fixtures with interior solid-state luminaires that use LED technology.
 - 2. Lighting fixture supports.

1.3 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color-rendering index.
- C. Fixture: See "Luminaire."
- D. IP: International Protection or Ingress Protection Rating.
- E. LED: Light-emitting diode.
- F. Lumen: Measured output of lamp and luminaire, or both.
- G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include data on features, accessories, and finishes.
 - 2. Include physical description and dimensions of luminaires.

1.5 INFORMATIONAL SUBMITTALS

- A. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

- B. Product Certificates: For each type of luminaire.
- C. Product Test Reports: For each luminaire, for tests performed by a qualified testing agency.
- D. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.
 - 1. Provide a list of all lamp types used on Project; use ANSI and manufacturers' codes.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.8 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
- B. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to **ASCE/SEI 7**.
- B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.

2.2 MANUFACTURERS

- A. Products: Basis of Design Manufacturer – Columbia Lighting.
 - 1. Acceptable Alternate Manufacturers Subject to compliance with requirements, provide products as indicated in lighting schedule

2.3 LUMINAIRE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

- B. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.
- C. Recessed Fixtures: Comply with NEMA LE 4.
- D. CRI of **minimum 80**.
- E. Rated lamp life of **50,000** hours.
- F. Lamps dimmable from 100 percent to 0 percent of maximum light output.
- G. Internal driver.
- H. Nominal Operating Voltage: **120 V ac**.
 - 1. Lens Thickness: At least **0.125 inch (3.175 mm)** minimum unless otherwise indicated.

2.4 MATERIALS

- A. Metal Parts:
 - 1. Free of burrs and sharp corners and edges.
 - 2. Sheet metal components shall be steel unless otherwise indicated.
 - 3. Form and support to prevent warping and sagging.
- B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.
- C. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
 - 1. Label shall include the following lamp characteristics:
 - a. "USE ONLY" and include specific lamp type.
 - b. Lamp diameter, shape, size, wattage, and coating.
 - c. CCT and CRI for all luminaires.

2.5 METAL FINISHES

- A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Remove existing Luminaires
- B. Examine substrates, areas, and conditions, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- C. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before fixture installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with NECA 1.
- B. Install replacement luminaires level, plumb, and square with ceilings and walls. Use existing mounting locations and supports as appropriate. Notify Engineer if any mounting locations are unsuitable for new fixtures. Engineer to provide direction.
- C. Install lamps in each luminaire.
- D. Wall-Mounted Luminaire Support:
 - 1. Attached to structural members in walls.
 - 2. Contractor to verify attachment method. Do not attach luminaires directly to gypsum board.
- E. Ceiling-Mounted Luminaire Support:
 - 1. Ceiling mount to existing support. Contractor to verify attachment method. Do not attach luminaires directly to gypsum board.
 - 2. Suspended Luminaire Support:
 - 3. Pendants and Rods: Where longer than 48 inches (1200 mm), brace to limit swinging.
 - 4. Stem-Mounted, Single-Unit Luminaires: Suspend with twin-stem hangers. Support with approved outlet box and accessories that hold stem and provide damping of luminaire oscillations. Support outlet box vertically to building structure using approved devices.
 - 5. Do not use ceiling grid as support for pendant luminaires. Connect support wires or rods to building structure.
- F. Ceiling-Grid-Mounted Luminaires:
 - 1. Secure to existing outlet box.

3.3 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
 2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.
- B. Luminaire will be considered defective if it does not pass operation tests and inspections.
- C. Prepare test and inspection reports.
- 3.4 Lighting Schedule
- A. See drawing Schedule and Fixture cutsheets

END OF SECTION 265119

SITWORK SPECIFICATIONS

SECTION 01000
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 General

- A. Only major items of work are given in the Bid Form, but it is the intent of the specifications to secure a completely interconnected and functioning system, and should any workmanship or materials be required which are obviously necessary to carry out the full intent and meaning of the plans and specifications, or to be reasonably inferred therefrom, the cost of such workmanship or materials shall be included in the items in the bid form.
- B. Where construction is being performed in traveled roadways or rights-of-way, the Contractor is to provide all necessary traffic controls and devices in accordance with the current Pennsylvania Department of Transportation standards.
- C. The Contractor shall notify all utility companies prior to construction of utilities, curbing, and paving.
- D. Prior to any excavation, the Contractor shall have all utilities marked and shall excavate or otherwise determine the exact location and elevations of said utilities. The Contractor shall notify the Engineer of any conflicts. The Contractor shall arrange for any necessary utility relocations or field changes and shall reschedule his operations appropriately.
- E. The Contractor, in the construction of the project, shall not stockpile materials or store equipment on any private property, except areas designated by the plans or as directed by the Engineer. If required, the Engineer may direct the Contractor to have equipment removed from any project during weekend hours.
- F. All work of refilling sunken ditches, repaving over trenches, and keeping streets and sidewalks in passable condition shall be done to the satisfaction of the Owner during the construction of the project, as well as during the maintenance period. If any remedial work is not done within three (3) days after written notice is given by the Engineer, the work may be done by the Owner and charged to the Contractor.
- G. Special care shall be taken to prevent contamination, siltation, or interference of any kind with the stream flows or ponds along the line of work. No waste matter of any kind will be allowed to discharge into the stream flows or impounded water of any ponds or other bodies of water.
- H. The Contractor is to insure that proper measures for erosion control are employed and provide for the early establishment of vegetation that will help avoid erosion problems during and after construction. It is expected that the Contractor will anticipate possible

problems and provide timely and adequate control to prevent or minimize adverse effects.

- I. The Contractor is to notify residents by door-hangers at least forty-eight (48) hours in advance of starting construction work that will directly affect their property frontage, driveway(s), and/or on-street parking.
- J. All notes on plans shall be made a part of the specifications.
- K. The Contractor shall notify the Engineer at least forty-eight (48) hours in advance of any work scheduled for Saturdays.
- L. Separate payment will not be made for construction layout. The costs for construction layout for all site work shall be included in the various items of the proposal.

1.02 Public Utilities

- A. The Contractor is required to ascertain all the facts concerning the location of utilities.
- B. The Contractor shall cooperate with the utility Owners in the adjustment of their facilities and shall notify the utility Owners not less than ten (10) days in advance of the time scheduled to perform any work that will impact or affect their facilities.
- C. The Contractor shall permit the Owners of utilities, or their agents, access to the site of the work at all times in order to relocate, construct, or protect their lines, and shall cooperate with them in performing this work.
- D. Separate payments will not be made for the coordination and cooperation of the Contractor with the utility companies, nor for the protection or replacement of utilities as specified hereinbefore, and the bidder shall include all such costs in the prices bid for the various scheduled items in the Bid Form.

1.03 Preconstruction Video

- A. The Contractor shall, at no extra cost to the Owner, take DVD video recordings of the site prior to the commencement of construction. The video recording shall accurately depict the existing preconstruction condition of all curbs, sidewalks, driveways, fences, lawns, landscaped area, mailboxes, street furniture, and all other appurtenances within or outside a 25 foot radius of the limits of the construction of the project. One (1) copy of the video recording shall be provided to the Engineer. The date of the DVD video, as well as identification as to the location which the video depicts, must be provided.

1.04 Maintenance and Protection of Traffic

- A. The Contractor shall erect, or place and maintain in good condition, barricades, warning signs, lights, flares, approved yellow-flashing light units, rubber traffic cones, and other warning and danger signals and devices appropriate and adequate for the specific project needs, and subject to the Engineer's approval. These shall be placed at working sites, closed roads, intersections, open excavations, locations of material storage, standing equipment, and other obstructions, at points where the usable vehicular or pedestrian traffic width of the road or sidewalk is reduced, at points where traffic is deflected from its normal courses or lanes, and at other places of danger to vehicular or pedestrian traffic.
- B. The Contractor shall provide sufficient watchmen and traffic directors, and shall take all other precautions, including any that may be ordered by the Engineer, which are necessary for the safety of the public and protection of the work.
- C. Road construction signs shall be placed at each end of the project along with every connecting intersection. At the start and end of each day, detour signs shall be placed if required.
- D. During the work on this project, the Contractor shall provide and/or be prepared to provide traffic protection devices in accordance with the Manual on Uniform Traffic Control Devices. The minimum numbers set forth in the Schedule shall be on hand at each separate project site prior to the commencement of any work (or phase of work) and shall be maintained on the project site throughout the period of the project (or phase). Failure to provide and maintain the minimum number of devices shall be sufficient cause for the Engineer to order cessation of work. When lack of any required safety devices presents an immediate hazard, the Engineer may order that such devices be provided by the Owner or by other Contractors, deducting the cost thereof from any monies due or becoming due to the Contractor lacking the required devices.
- E. The Contractor shall provide adequate means of access for fire, police, and emergency vehicles throughout the length of the project. The Contractor shall also provide for safe and adequate means of access to adjacent properties, both private and public.
- F. The cost of all work, as specified hereinbefore, and all other work required to protect public safety and maintain traffic flow shall be included in the prices bid for the various items in the Bid Form, unless specifically requested as a bid item in which case payment will be made as a lump sum.

1.05 Reference to the Standard Specifications

- A. Portions of the work performed under this contract shall comply with the requirements of the Commonwealth of Pennsylvania Department of Transportation Publication 408, latest edition and supplements, the Pennsylvania Department of Transportation Standard Construction Details as applicable, and all requirements modified, as amended or supplemented, and whose specifications are made part of these specifications.
- B. The Standard Specifications are made part of these specifications by this reference as if they were set forth in full. It is the responsibility of the prospective bidder to be familiar with these Standard Specifications.

1.06 Dust Control

- A. The Contractor will be required to maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or outside the project boundaries free from dust which would cause a hazard or nuisance to others. Approved temporary methods of stabilization, consisting of sprinkling, chemical treatment, light bituminous treatment, or similar methods, will be permitted to control dust. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs. If any dust control is not done within twenty-four (24) hours after written notice is given by the Engineer, the work may be done by the Owner and charged to the Contractor. Costs for dust control shall be included in the prices bid for the various items in the bid form.

1.07 Mobilization

- A. This work is the assembly and set-up of the general plant required to comply with the contract and with local and State laws and regulations. General plant includes Contractor's offices, shops, plants, storage areas, and sanitary or other facilities. This work includes obtaining the required permits, insurance, bonds, and any other initial items required for the start of the work. These materials and furnishings will not be considered a part of the other completed contract items.
- B. Mobilization shall be performed in strict compliance with Section 608 of the Commonwealth of Pennsylvania Department of Transportation, Publication 408.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

SECTION 02010
CLEANING AND RESTORATIONS

PART 1 - GENERAL

1.01 Description

- A. Contractor shall provide all equipment, labor & materials required to clean and restore the site to at least the existing condition.
- B. Maintain premises and public and/or private properties free from accumulations of waste, debris and rubbish caused by work operations.
- C. At the completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials; clean all visually exposed surfaces; leave project clean and ready for occupancy.
- D. At the completion of work, restore or replace, where and as directed by the Owner, any public or private property disturbed or damaged by Contractor's work operations to a condition at least equal to that existing prior to beginning work, or as otherwise specified. Materials, equipment and methods shall be approved by the Owner.

PART 2 - PRODUCTS

2.01 Materials

- A. For restorations associated with damage caused by the contractor, the contractor shall coordinate with the Township Engineer prior to making any repairs.

PART 3 – EXECUTION

3.01 Methods of Conducting Work - Cleaning

- A. Requirements of regulatory agencies:

All excess material shall be removed from the site and disposed of by the Contractor at his expense. Cost to be in the various items of the proposal. The disposal site shall be in permanently established licensed landfills.

- B. Cleaning during construction:

Provide periodic cleaning to keep the work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations. This includes dust, dirt and mud.

Provide on-site containers for the collection of waste materials, debris and rubbish. Maintain containers as required. Containers shall be covered as required to prevent unauthorized use.

3.02 Methods of Construction

A. General: All existing structures, unpaved areas and paved areas disturbed or damaged during the work under this contract shall be restored or replaced to a condition at least equal to that existing prior to beginning work, or as otherwise specified.

B. All Restorations:

Restore in accordance with applicable Articles of the Standard Specifications, or as approved by the Owner or authorities having jurisdiction.

PART 4 – QUANTITY AND PAYMENT

4.01 Cleaning and Restorations

A. Quantity of Cleaning and Restorations will not be measured for this project, but the work shall be performed as necessary to restore all disturbed areas to at least the pre-existing condition.

B. Payment for Cleaning and Restorations will not be made for this project, but the cost shall be included in the various items of the proposal.

END OF SECTION

SECTION 02200
EARTHWORK

PART 1 – GENERAL

1.01 Description

- A. The work covered by this section consists of all earthwork and related/incidental work required to complete the project as indicated on the drawings and specified herein, including but not limited to:
1. Site demolition and clearing
 2. Stripping, stockpiling, and respreading topsoil
 3. Mechanical stone removal
 4. Soil erosion and sedimentation control
 5. Rough grading
 6. Excavation
 7. Trenching
 8. Filling and backfilling
 9. Shoring and bracing
 10. Footing drains
 11. Stone base under slabs on earth
 12. Soil compaction
 13. Disposal of excess material
 14. Quality control testing

1.02 Work Not Included

- A. The following related items of work are included in other sections of these specifications:
1. Final preparation of subgrade or provision of subbase for bituminous paving
 2. Finished grading, lawns, planting, sodding, and seeding
 3. Quality Assurance testing

1.03 Basis of Contract

- A. Excavation for this project shall be considered unclassified and shall include all types of earth and soil, any pebbles, boulder, and bedrock, municipal trash, rubbish, and garbage, and all types of debris of the construction industry such as wood, stone, concrete, plaster, brick, mortar, steel and iron shapes, pipe, wire, asphaltic materials, paper, and glass. All such materials encountered which are identified by this paragraph as unclassified shall be removed to the required widths and depths to create a finished product as shown and/or noted on the drawings and as written in the specifications. No additional compensation shall be made to the Contractor for this unclassified excavation. The materials defined by this paragraph as unclassified will not be considered to be concealed conditions or unknown physical conditions below the surface of the ground.

1.04 Protection

- A. Existing monuments, bench marks, or other markers must not be damaged or disturbed. Suitable protection must be provided where required before starting work.
- B. Before starting work, any trees or shrubs shown or designated to be saved must be protected by boxing, wood, wire, or plastic fencing staked securely in place or other approved means, maintained until completion of work or until removal is approved by the Engineer.
- C. Any damage occurring because of failure of the Contractor to adequately provide protection shall be corrected at no additional cost to the Owner.

1.05 Disposition of Utilities

- A. Rules and regulations of the various utility companies and other authorities having jurisdiction over such work shall be observed in the performance of all excavating, backfilling, and rough grading. The Contractor shall comply with the requirements of House Bill No. 1735 (of December 1986), Amendments to Act 287 of 1974.
- B. Active underground lines owned by utility companies or by the Owner shown on the drawings shall be adequately protected and shall be removed or relocated only as indicated or specified.
- C. The Contractor shall bear the burden of locating existing utilities prior to excavation. The Engineer and Owner shall be notified immediately should active utilities not indicated on the drawings be encountered. Such utilities shall be adequately protected, supported, or relocated as directed by the Engineer and the Owner. All work associated with a utility shall be coordinated with the utility company at no additional cost to the Owner.
- D. Abandoned utilities not indicated on the drawings which are encountered in excavating within the limits of the construction shall be removed to a point at least three (3) feet outside of building walls, or as required by local regulations. Except as otherwise specified above, abandoned utilities may remain in place, provided they do not interfere with the new construction, in which case they shall be removed to the full extent of such interference. Remaining lines shall be suitably plugged or capped.

1.06 Subsurface Information

- A. There is no subsurface information available for the site.

PART 2 – PRODUCTS

2.01 Products

- A. Approval: All fill material shall be subject to the approval of the Engineer and the Owner.
- B. Notification: The City Engineer shall be notified at least seven working days in advance of intention to import material to the site so that the City Engineer may inspect the borrow area and review the tests to be assured of the quality of the material. If on-site material from excavations is to be used as fill, the Contractor shall allow the City Engineer five working days to review tests performed on this material prior to commencing fill placement.

2.02 Fill Materials

- A. Soil Fill Materials:
 - 1. Satisfactory Fill: Satisfactory fill or backfill, whether from on-site or borrowed off-site, shall be of soil classification group GW, GP, GM, GC, SW, SP, SM, or SC, as defined in ASTM D2487. The material shall be clean earth containing no organic matter, rubbish, or debris, but may contain sound rocks, pieces of concrete, and masonry material not over 6” in size if well distributed in earth, but not in the top 12” or against foundations, walls, grades beams, or similar construction. Select granular material, Penndot 2RC, complying with Form 408, Section 703.3, is also satisfactory fill.
 - 2. Unsatisfactory Fill: Unsatisfactory fill or backfill shall be soil in classification groups CL, ML, OL, CH, MH, OH, and PT. For Engineered fill, defined as fill supporting building footings, slabs, or paving, GC and SC is also unsatisfactory.
- B. Crushed Stone or Gravel:
 - 1. All material shall comply with PennDOT Publication 408, Section 703.2, Type “A” aggregate.
 - 2. Base course under sidewalks shall be PennDOT No. 2A Coarse Aggregate. Base course under concrete and asphalt paving shall be PennDOT No. 2A Coarse Aggregate.
- C. Topsoil:
 - 1. Topsoil stripped from the site is acceptable for respreading. Borrowed topsoil shall be tested for organic content, size of coarse fragments, and undesirable particles. The samples shall be submitted as requested.

PART 3 – EXECUTION

3.01 Site Demolition and Clearing

- A. Remove all improvements, abandoned structures, paved surfaces, utility lines and other items shown on the drawings and indicated to be removed or required to be removed in order to install new work as shown.
- B. Remove all objectionable material, rubbish, and junk within the project limits.

- C. Clear and grub the site of small caliper vegetative matter and roots. Hand grub under drip line of trees designated to remain.
- D. Remove trees, including stumps and root systems, unless specifically indicated to remain.
- E. Salvage items indicated on the plan and deliver as directed by the City Engineer.
- F. Dispose of removed material off site in accordance with requirements of this specification. Burning of waste material on the site is not permitted.

3.02 Stripping Topsoil

- A. Before starting rough grading, top soil shall be removed to its full depth and hauled from the site or stockpiled on site at suitable approved locations for use in future finish grading. Heavy growths of grass shall be removed before stripping topsoil.

3.03 Soil Erosion and Sedimentation Control

- A. No water transporting sediment resulting from earth moving, demolition, or other construction activities shall be permitted to discharge into the Waters of the Commonwealth or beyond the contract limits of the project.
- B. Natural surface water shall be diverted away from the work area. Diversion terraces and channels shall be constructed up-grade of the work area, as required, to convey tributary runoff around and beyond the outer limits of the area subject to earth moving, demolition, or other construction activities. Interception channels shall be constructed within the project area, as required, to control the discharge of sediment due to construction activities.
- C. All surface runoff from the project area and all discharge resulting from the de-watering of excavations shall be collected and diverted to facilities for removal of sediment. Water collected by interceptor channels shall be conveyed to sedimentation basins or to vegetated areas, but not directly to streams or storm drains.
- D. Earthmoving activities shall be planned to minimize the area, extent, and duration of exposure of disturbed land.
- E. Surfaces of cut and fill slopes, ditches, swales, earth stockpiles, and areas denuded of topsoil shall be stabilized to minimize surface erosion immediately after exposure.
- F. Temporary stabilization shall generally be accomplished by vegetative measures and seeding and with rapidly growing plants, such as annual rye grass, small grain, sudan grass, or field brome grass. This planting should be supplemented by mulches and protective netting as required or directed.

- G. Temporary erosion control facilities shall be maintained for the duration of construction and shall be removed only after the permanent drainage and erosion control features of the project have been completed and established in operation.
- H. Each Contractor is responsible for soil erosion and sedimentation control measures required by his earthwork. The lead Contractor shall coordinate all erosion and sedimentation control activity.
- I. Soil erosion and sedimentation control drawings have been reviewed and approved as to general scope of work required. Contractors are responsible for compliance with all regulations pertaining to soil erosion and sedimentation control during construction, notwithstanding the specifics of referenced drawings and specifications.

3.04 Rough Grading

- A. All areas within the construction area shall be rough graded to subgrade elevations, which shall be finished grades less thicknesses of finish materials as shown on the drawings. Only Satisfactory Fill, as previously specified, shall be used.
- B. If fill for construction of embankments is to be placed on existing slopes steeper than 4:1, benches shall be cut into the slope so that fill can be placed in level lifts. Benches shall be cut wide enough to allow passage of compaction equipment.
- C. Fill shall be placed and compacted in accordance with requirements of this section.
- D. At the end of each working day the fill surfaces shall be sealed by rolling to promote surface runoff and graded to prevent ponding of water.

3.05 Excavation

- A. The Contractor shall perform all excavation to accommodate all facilities and underground improvements and work incidental thereto. All work shall be performed with equipment suited to the task and operated by experienced operators. Sides of excavations shall be in accordance with OSHA and other applicable regulations and shall provide adequate space for inspection and access to work. All loose material shall be removed from excavations, and bottoms shall be carefully leveled to grade.
- B. The Contractor shall erect and maintain barricades, fences, warning lights, and other protection required to comply with all applicable regulations for safety of all persons at excavations according to requirements of "General Requirements."
- C. Excavated materials shall be piled away from the edge of excavations a sufficient distance to prevent overloading the bank, and graded in such a way as to prevent surface water from entering the excavated area. Excess material from excavation not suitable nor required for backfill or other purposes shall be disposed of in accordance with requirements of this specification and local ordinances.

- D. Excavations shall not be carried below existing building or wall foundations until underpinning and/or sheathing or shoring has been completed.
- E. Excavation to full depth is not to be done when rain or freezing conditions are imminent. Excavated foundation bearing surfaces shall be protected from frost. Where bearing surfaces are damaged by water, mud, or otherwise disturbed, all loose mud or other materials shall be removed and the surface regraded. Where the foundation excavation has been carried below plan grade due to errors in excavation, freezing, removal of mud, or other loose materials, or overshot or pitted rock surface, the foundation bearing surface shall be restored to plan grade with the same strength concrete as that specified for the footing above it at no additional cost to the Owner.
- F. When cutting of paved surfaces is required, the surface shall be machine cut in a neat, uniform manner. No paving shall be broken except that which has been previously cut. Edges of the cut pavement shall be protected during excavation and construction. Any edges which become broken shall be squared prior to pavement replacement.
- G. Hand excavation shall be done in any circumstance where machine excavation could damage existing or new structures or other underground improvements. Exploratory pits shall be hand dug to locate existing underground lines at connection points or points of crossing.

3.06 Blasting

- A. Blasting is not permitted on the site.

3.07 Approval of Bearing Strata

- A. The Contractor shall furnish adequate advance notification to the Owner and the Engineer of times when footing excavations are to be completed so that the bearing quality of the footings bottoms may be inspected and/or tested and approved. Form work and concreting shall follow only after this approval.
- B. Should the bearing at the levels indicated be found by the Engineer and the Owner to be inadequate, they may order the excavation carried down to sound bearing. Such excavation shall be classed as additional work and payment be made on the basis of an agreed price according to the General Conditions. Should suitable bearing be found at a lesser depth than indicated, the Engineer and the Owner may order the reduction of excavation specified or shown on the drawings and the Contractor shall allow a credit for excavation thus omitted on the same basis.
- C. All footings shall rest on level surfaces and rock shall be stepped and cleaned to a hard surface.

3.08 Filling and Backfilling

- A. Fill or backfill may not be done over frozen subgrade nor may any frozen material be used in fill or backfill.
- B. Excavations and areas to be filled must be cleaned of all topsoil, vegetable matter, refuse, and debris before placing any fill or backfill.
- C. No backfilling shall be done around any parts of the structures until such parts have been inspected and the backfilling authorized by the Inspector. No filling inside the building, or backfilling against foundation walls or areaways shall be done until concrete forms have been removed, pointing and dampproofing of concrete and masonry work has been completed, and the concrete is thoroughly cured.
- D. All fill shall be placed in 6" – 8" layers unless approved for thicker layers based upon Quality Control Agent's recommendation, considering soil, location, and compaction equipment. Excavations against walls to be waterproofed are not to be backfilled until waterproofing is completed, protected and approved.
- E. Filling and backfilling is to be performed carefully so as not to damage or otherwise affect the stability of any construction. Backfilling may be done only when the structure is fully capable of withstanding the resulting pressure and shall take place concurrently on both sides of walls.
- F. Where wood sheet piling, form work, bracing or shoring is used, it shall be removed as the work progresses and the voids left shall be backfilled with 2500 lb. concrete below the top of adjacent footings and foundations.
- G. Additional earth for fill or backfill to raise or change the exterior or interior subgrade to the required elevations shown on the drawings, required in excess of acceptable material from excavations on the site, shall be provided by the Contractor from a source approved by the Engineer and the Owner at no additional cost to the Owner.
- H. Any excavations improperly backfilled, or where settlement occurs, shall be opened to the depth required for proper compaction and then refilled in lifts and compacted in accordance with requirements of this section.

3.09 Compaction

- A. General: Compaction control shall be exercised during construction to provide no less than the minimum density specified for each class of area and type of material as indicated below.
- B. Cohesive soil fill shall be compacted with a suitable sheeps foot or segmented roller and shall be compacted to not less than the following percentages of maximum dry density as determined in accordance with laboratory test, ASTM D1557 (Modified Proctor) and field tests, ASTM D1556 (sand cone) or D2922 (nuclear):

1. Footings: Where footings are to be placed on Engineered fill, subgrade and succeeding lifts of fill material shall be compacted to 98% of maximum dry density at $\pm 2\%$ of optimum moisture.
 2. Building Slabs and Steps: Subgrade and each layer of fill material shall be compacted to 95% of maximum dry density at $\pm 2\%$ of optimum moisture.
 3. Walkways: Subgrade and each layer of fill materials shall be compacted to 92% of maximum dry density at $\pm 2\%$ of optimum moisture.
 4. Lawns or Unpaved Areas: Subgrade and each layer of fill materials shall be compacted to 90% of maximum dry density at $\pm 2\%$ of optimum moisture content.
 5. Paved Areas and Roadway Embankments: Subgrade and each layer of fill materials for paved areas shall be compacted to 98% of maximum dry density. Where paved area is to be constructed on embankment, the top three feet shall be compacted to 98% of maximum dry density, with the balance to 95%.
- C. For free draining, granular soils where Proctor test procedures may be inappropriate, the degree of compaction shall be 75% of Relative Density as determined by ASTM D4253.
- D. Crushed Stone shall achieve compaction by the application of appropriate mechanical compaction of the stone in succeeding lifts. Stone subbase for slabs and paving shall be compacted with a 10 ton (static weight) vibratory roller.
- E. Compaction of shale or other material which degrades upon compaction shall only be used if approved and then compacted in an approved manner.
- F. Prior to installing the stone base for slabs or concrete paving on earth, the subgrade shall be proof-rolled with a 10 ton roller until no displacement occurs or a minimum of 10 passes.

3.10 Moisture Control

- A. Cohesive soil must achieve moisture conditioning before compaction by the addition of water applied uniformly to the surface, scarified and mixed by discing or harrowing before compacting. If the soil is too wet to achieve proper compaction, it must be scarified and air dried before compacting, or it must be removed and replaced.
- B. Soil material too wet for proper compaction, which has been removed, may be stockpiled or spread and allowed to dry. Material may be reused when moisture content has been lowered sufficiently to allow proper compaction.
- C. Soil material which has been stockpiled for future incorporation into the project shall be protected from becoming saturated. Stockpiled fill in a loose and/or unprotected condition, which becomes too wet for use, shall be spread and allowed to dry until suitable for use or replaced with borrowed fill material at no additional cost to the Owner.

3.11 Stone Base under Slab on Earth

- A. Crushed stone or crushed gravel base course shall be provided under all floor slabs, paving slabs, or platforms on earth. Stone shall be as specified in this section and of thicknesses shown on the drawings.

3.11 Quality Control Testing

- A. The Contractor shall perform all necessary Quality Control (Q.C.) tests and procedures for the performance of the work in accordance with this section to produce the end results specified. The Contractor shall maintain clear and orderly records of such tests and procedures, and make them available for field review and approval of the Engineer and the Owner. The Contractor's bid shall include the cost of all Q.C. tests.
- B. The Contractor shall submit the plan for Q.C. testing to the Engineer and the Owner for review and comments.
- C. Q.C. tests shall include tests on fill material, optimum moisture content, and maximum density and field density tests of fill layers. The Q.C. testing agent shall comment on the suitability of all subgrades, and the subgrades shall be acceptable to the Q.C. Agency.
- D. Handwritten copies of field test reports shall be provided to the Contractor by the Q.C. Agency. They should be given to the Contractor and inspector within two (2) hours of completion, but in no event shall the technician leave the site without providing the Contractor and inspector with a copy of the test results. This shall include density, % moisture, plan location, elevation, comments, and any other relevant data. Comments shall include any condition that might have an adverse affect on the operations, including weather, drainage, etc.
- E. The Contractor shall consult the Consulting Soils/Foundation Engineer on any problems that arise during construction. Copies of the daily in-place soil density tests shall be faxed to the consultant by the Contractor through the testing agency within twenty-four (24) hours of the time the tests are made.
- F. The Contractor shall approve each subgrade and each fill layer before proceeding to the next layer. Any area which does not meet density, % moisture, or other requirements at any time, shall be suitably reworked and retested by the Contractor at his own expense.

3.13 Shoring and Bracing

- A. The Contractor shall provide and maintain sheeting, shoring, and bracing as necessary to protect workmen and work of this project and existing structures. Restoration of damaged areas to original condition is the Contractor's responsibility. The Contractor shall submit his plan for sheeting, shoring, and bracing for approval before commencing work.
- B. It is also the Contractor's responsibility to remove temporary sheeting, shoring, bracing, and protection when no longer required by adjacent conditions and completion of

foundation construction or backfill and rough grading as approved by the Engineer and The Owner.

- C. Contractor is to submit for approval his plan for excavation for underpinning, whether or not sheeting, shoring, or bracing is planned.

3.14 Pumping and Drainage

- A. The Contractor shall pump out, or otherwise remove, any water which may be found in the excavation, and shall provide drainage ditches, underdrains, flumes, well points, pumping equipment, and suction and discharge lines as necessary to keep the excavation entirely clear of water while the foundations are being built or other operations are being performed requiring a dry condition.

3.15 Respreading Topsoil

- A. Upon completion of concrete work, utilities, paving, drainage, and grading operations, the Contractor shall rough spread topsoil to a depth of 4" over disturbed and new lawn areas and to depths noted at planting beds. Additional topsoil needed to meet this requirement shall be supplied by the Contractor at no cost to the Owner.

3.16 Disturbed Areas

- A. The Contractor shall restore all paving, roadways, walkways, lawns, and other surfaces disturbed by this work to the condition prior to execution of the contract. The Contractor shall repair any damages to existing or new structures, site, or underground or above ground improvements caused directly or indirectly by this work.

3.17 Cleanup

- A. Any paved area (either new or existing) over which hauling operations or other moving equipment are conducted, shall be kept clean and any soil or other material which may be spilled or left upon the paved surfaces shall be removed. Paved surfaces shall be left broom clean. Wet down surfaces as required to prevent excessive airborne dust.

3.18 Disposal

- A. All debris and excess earth must be removed from the site using procedures resulting in full compliance with all applicable regulations. The Contractor shall obtain approval of the dump site(s) from the Engineer and the Owner, which approval will not relieve the Contractor of his responsibility herein.

END OF SECTION

SECTION 02310
SUBBASE

PART 1 – GENERAL

1.01 Description

- A. The subbase for Superpave Asphalt Areas and Flexible Pavement Surface shall be No. 2A Coarse Aggregate.
- B. Subbase for concrete sidewalks, concrete pads, and handicapped ramps shall be No. 2B Coarse Aggregate.
- B. All work shall be in conformance to Section 350 of the Pennsylvania Department of Transportation Specifications, Publication 408.

PART 2 – PRODUCTS

2.01 Material

- A. Aggregate for subbase shall comply with PennDOT Publication 408, Section 703.2, Type “A” Aggregate.

PART 3 – EXECUTION

Not Used

END OF SECTION

SECTION 02509
CONCRETE CURB RAMPS AND SIDEWALK

PART 1 – GENERAL

1.01 Description

- A. Construction of Concrete Handicapped Curb Ramps.
- B. Construction of Plain Concrete Sidewalk.
- C. Installation of Truncated Dome Detectable Warning Surfaces.
- D. Reinforced Concrete Driveway, 8” Thick

PART 2 – PRODUCTS

2.01 Materials

- A. Concrete:
 - 1. Use PennDOT Class AA concrete in accordance with Publication 408, Section 704.
 - 2. Use air-entrained concrete conforming to ACI 318-02, Section 4.2.1.
- B. Cement aggregate and water and air-entertainment methods and materials: Section 703 and 711 of the Pennsylvania Department of Transportation Specifications, Publication 408.
- C. Joint Filler: Bituminous cellular type, conforming to Section 705.01 of Pub. 408.
- D. Truncated Dome Detectable Warning Surface: Vitrified Polymer Composite Cast-In-Place Detectable / Tactile Warning Surfaces conforming to Section 09614.

PART 3 – EXECUTION

3.01 Methods of Construction

- A. Reference standards included in this Specification section:
 - 1. Pennsylvania Department of Transportation Standard Specifications Publication 408.
 - a. Section 501: Concrete Surface Course
 - b. Section 676: Sidewalks
 - c. Section 711.1 and .2(a): Curing Materials for Concrete
 - d. Section 705.1: Joint Fillers, Preformed.
 - 2. Curb ramps and sidewalk must conform to Pennsylvania Department of Transportation Standard Specifications RC-67M as last revised.

B. Submittals:

1. Certificates: All deliveries of concrete shall be accompanied by delivery slips, copies of which shall be provided to the Engineer by the Contractor.

C. Environmental Requirements:

1. Allowable temperatures for placement of concrete shall be in strict conformance with Penn DOT specifications Pub. 408, Section 704.1(f).

D. Protection:

1. The Contractor shall protect concrete from pedestrian and vehicular traffic until concrete has been sufficiently cured as determined by the Engineer.
2. Method of protection shall be approved by the Engineer prior to beginning work under this section.
3. Works shall be protected as specified in Section 105.13 of Pub. 408.

E. Preparation:

1. Coordinate with Engineer for marking out of curb ramps and sidewalk removal limits.
2. Excavate subgrade and set forms so that finished structure conforms to lines and grades shown on plans, or as directed by the Engineer.
3. Prepare subgrade as specified in Section 210 of Pub. 408.
4. Verify that earthwork is completed to correct line and grade.
5. Verify that forms conform on line, grade and cross section shown on plan.
6. Check that subgrade is smooth, compacted and free of frost or excessive moisture.
7. Do not commence work until conditions are satisfactory and approved by the City Engineer.

F. Performance: The method of curb ramp and sidewalk construction shall conform to PennDOT Publication 408, Section 676 "Cement Concrete Sidewalks," except as modified by the Supplemental Requirements below:

1. Construction shall be in accordance with the plans.

2. Restorations shall be performed as specified in the section entitled “Cleaning and Restoration.”

END OF SECTION

SECTION 02528
PLAIN CEMENT CONCRETE CURB

PART 1 – GENERAL

1.01 Description

- A. Construction of Plain Cement Concrete Curb, Including Permanent Pavement Restorations
- B. 12” x 18” Concrete Curb For Playground

PART 2 – PRODUCTS

2.01 Materials

- A. Concrete: PennDOT Class AA with a 28 day structural design compressive strength of 3,500 psi in accordance with Publication 408, Section 704.
- B. Cement, aggregates, water and air entrainment methods and materials for concrete curb: Section 703 and 704 PennDOT Specifications, Pub. 408.
- C. Joint filler: Premolded joint filler, conforming to Section 705.1 PennDOT Specifications, Pub. 408.
- D. Curing compound: White pigmented liquid, conforming to Section 711.2(a) Penn DOT Specifications, Pub. 408.

PART 3 – EXECUTION

3.01 Methods of Construction

- A. Reference standards included in this Specification section:

Commonwealth of Pennsylvania Department of Transportation, Specifications, Pub. 408 and Commonwealth of Pennsylvania Department of Transportation, Standards for Roadway Construction.

- B. Submittals:

Certificates: All deliveries of concrete shall be accompanied by delivery slips, copies of which shall be provided to the Owner by the Contractor.

C. Environmental requirements:

Allowable temperatures for placement of concrete shall be in strict conformance with Penn DOT specifications Pub. 408, Section 704.1(f).

D. Protection:

1. When directed by the Owner, protect new concrete curb from traffic for a minimum of seven (7) days.
2. The Owner shall approve the method of protection prior to beginning work under this Section.
3. Protect work as specified in Section 105.13 PennDOT Specifications, Pub. 408.

E. Preparation:

1. Sawcut existing concrete and bituminous surfaces eighteen inches (18") from the face of the proposed curbline.
2. Excavate existing pavement and subbase to required depth and set forms so that finished curb conforms to required lines and grades.
3. Prepare curb subgrade as specified in Section 210 PennDOT Specifications, Pub. 408.
4. Verify that earthwork is completed to correct line and grade. All lines and grades shall be inspected by the Engineer during subgrade preparation. The Contractor shall maintain a string line at the proposed alignment and grade for inspection by the Engineer during preparation of the subgrade. The complete compacted subgrade shall be approved by the Engineer prior to placement of forms.
5. Verify that forms conform to proposed line, grade and curb cross section. All concrete curb shall be fully formed in front and back. Steel forms, approved by the Engineer, must be used.
6. Check that subgrade is smooth, compacted and free of frost and excessive moisture.
7. Do not commence work until conditions are satisfactory and approved by the Engineer.
8. No new joints shall be installed within three feet of existing joints.
9. Any curb or structures damaged during construction shall be removed and replaced by the Contractor at the direction of the Engineer, and no payment will be made.
10. All form work will be inspected by the Engineer or authorized representative prior to pouring concrete. Inspection will be for general line and grade and soundness of forms.

Contractor will not pour concrete prior to this inspection. Final responsibility for proper line and grade shall be with the Contractor.

F. Performance: Method of curb construction shall conform to Section 630, respectively, of the Specifications, except as otherwise modified by this Specification section:

1. Install 3/16 inch wide expansion joints at equal intervals, not to exceed twenty feet (20'). Install additional expansion joints where curb abuts sidewalk or other structures. Fill expansion joints with joint filler, 3/16-inch thick. Insert joint filler 1/4-inch from the top and face of curb.
2. Construct contraction joints midway between expansion joints.

END OF SECTION

SECTION 02550
SAWCUTTING - BITUMINOUS AND CONCRETE SURFACES

PART 1 – GENERAL

1.01 Description

- A. When sawcutting is specified or required for a neat construction joint, sawing equipment shall be provided adequate in number of units and power to complete the sawing to the required dimensions and at the rate necessary to prevent uncontrolled cracking. The saws shall be equipped with water-cooled diamond edge blades or abrasive wheels and alignment guides.
- B. Saw shall be of a sufficient size to perform a straight even cut with no irregularities when measured with a ten (10) foot straight edge.
- C. This section shall include the full depth sawcutting of the existing concrete or bituminous material.
- D. At least one (1) standby saw in working order shall be provided. An ample supply of saw blades shall be maintained at the work site at all times during sawing operation.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project Name:	Chester Township Police Station Renovations
Awarding Agency:	Township of Chester
Contract Award Date:	4/4/2024
Serial Number:	24-02554
Project Classification:	Building
Determination Date:	3/14/2024
Assigned Field Office:	Philadelphia
Field Office Phone Number:	(215)560-1858
Toll Free Phone Number:	
Project County:	Delaware County

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	6/1/2023		\$57.84	\$43.36	\$101.20
Boilermaker (Commercial, Institutional, and Minor Repair Work)	1/1/2019		\$29.26	\$18.48	\$47.74
Boilermakers	1/1/2023		\$51.27	\$35.30	\$86.57
Boilermakers	1/1/2024		\$52.10	\$35.72	\$87.82
Bricklayer	5/1/2023		\$47.50	\$31.42	\$78.92
Carpenter - Chief of Party (Surveying & Layout)	5/1/2023		\$50.57	\$29.02	\$79.59
Carpenter - Chief of Party (Surveying & Layout)	5/1/2024		\$52.58	\$29.02	\$81.60
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		\$54.59	\$29.02	\$83.61
Carpenter - Instrument Person (Surveying & Layout)	5/1/2023		\$43.97	\$29.02	\$72.99
Carpenter - Instrument Person (Surveying & Layout)	5/1/2024		\$45.72	\$29.02	\$74.74
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		\$47.47	\$29.02	\$76.49
Carpenter - Rodman (Surveying & Layout)	5/1/2023		\$21.99	\$20.62	\$42.61
Carpenter - Rodman (Surveying & Layout)	5/1/2024		\$22.86	\$20.62	\$43.48
Carpenter - Rodman (Surveying & Layout)	5/1/2025		\$23.74	\$20.62	\$44.36
Carpenters	5/1/2023		\$43.97	\$29.02	\$72.99
Carpenters	5/1/2024		\$45.72	\$29.02	\$74.74
Carpenters	5/1/2025		\$47.47	\$29.02	\$76.49
Cement Finishers & Plasterers	5/1/2022		\$38.57	\$32.39	\$70.96
Cement Masons	5/1/2023		\$44.20	\$32.96	\$77.16
Dockbuilder, Pile Drivers	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder, Pile Drivers	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder, Pile Drivers	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder, Pile Drivers	5/1/2026		\$56.98	\$37.99	\$94.97
Dockbuilder/Pile Driver Diver	5/1/2023		\$58.41	\$41.74	\$100.15
Dockbuilder/Pile Driver Diver	5/1/2024		\$61.54	\$41.74	\$103.28
Dockbuilder/Pile Driver Diver	5/1/2025		\$64.35	\$41.74	\$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		\$66.54	\$41.74	\$108.28
Dockbuilder/pile driver tender	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder/pile driver tender	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder/pile driver tender	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder/pile driver tender	5/1/2026		\$56.98	\$37.99	\$94.97
Drywall Finisher	5/1/2023		\$38.77	\$31.12	\$69.89
Electricians	5/30/2022		\$47.64	\$35.14	\$82.78
Electricians	5/29/2023		\$49.24	\$36.04	\$85.28
Electricians	6/3/2024		\$50.17	\$38.87	\$89.04
Electricians	6/2/2025		\$52.71	\$40.07	\$92.78
Electricians	6/1/2026		\$55.25	\$41.28	\$96.53
Elevator Constructor	1/1/2023		\$66.21	\$43.64	\$109.85
Elevator Constructor	1/1/2024		\$68.97	\$44.70	\$113.67
Floor Coverer	5/1/2023		\$50.12	\$29.21	\$79.33
Floor Coverer	5/1/2024		\$52.19	\$29.21	\$81.40
Glazier	5/1/2023		\$46.68	\$36.62	\$83.30
Interior Finish	5/1/2023		\$34.60	\$25.80	\$60.40
Iron Workers (Bridge, Structural, Ornamental, Precast)	1/1/2023		\$50.70	\$39.51	\$90.21

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Iron Workers (Riggers)	7/1/2023		\$42.53	\$34.14	\$76.67
Iron Workers (Rodman/Reinforcing)	7/1/2023		\$45.70	\$34.77	\$80.47
Laborers (Class 01 - See notes)	5/1/2022		\$33.35	\$25.65	\$59.00
Laborers (Class 01 - See notes)	5/1/2023		\$34.60	\$25.80	\$60.40
Laborers (Class 02 - See notes)	5/1/2022		\$36.70	\$27.00	\$63.70
Laborers (Class 02 - See notes)	5/1/2023		\$37.95	\$27.30	\$65.25
Laborers (Class 03 - See notes)	5/1/2022		\$33.77	\$25.83	\$59.60
Laborers (Class 03 - See notes)	5/1/2023		\$35.02	\$25.98	\$61.00
Laborers (Class 04 - See notes)	5/1/2022		\$33.77	\$25.83	\$59.60
Laborers (Class 04 - See notes)	5/1/2023		\$35.02	\$25.98	\$61.00
Laborers (Class 05 - See notes)	5/1/2022		\$33.35	\$25.65	\$59.00
Laborers (Class 05 - See notes)	5/1/2023		\$34.60	\$25.50	\$60.10
Landscape Laborer	5/1/2023		\$29.45	\$23.98	\$53.43
Marble Finisher	5/1/2022		\$38.27	\$29.15	\$67.42
Marble Finisher	5/1/2023		\$39.52	\$29.30	\$68.82
Marble Mason	5/1/2022		\$45.90	\$31.20	\$77.10
Marble Mason	5/1/2023		\$47.20	\$31.95	\$79.15
Mason Tender, Cement	5/1/2023		\$35.02	\$25.98	\$61.00
Millwright	5/1/2023		\$51.60	\$35.81	\$87.41
Millwright	5/1/2024		\$54.67	\$35.81	\$90.48
Millwright	5/1/2025		\$57.39	\$35.81	\$93.20
Millwright	5/1/2026		\$60.20	\$35.81	\$96.01
Operators (Building, Class 01 - See Notes)	5/1/2023		\$52.20	\$32.81	\$85.01
Operators (Building, Class 01A - See Notes)	5/1/2023		\$55.20	\$33.70	\$88.90
Operators (Building, Class 02 - See Notes)	5/1/2023		\$51.95	\$32.74	\$84.69
Operators (Building, Class 02A - See Notes)	5/1/2023		\$54.97	\$33.61	\$88.58
Operators (Building, Class 03 - See Notes)	5/1/2023		\$47.87	\$31.53	\$79.40
Operators (Building, Class 04 - See Notes)	5/1/2023		\$47.57	\$31.44	\$79.01
Operators (Building, Class 05 - See Notes)	5/1/2023		\$45.85	\$30.93	\$76.78
Operators (Building, Class 06 - See Notes)	5/1/2023		\$44.85	\$30.65	\$75.50
Operators (Building, Class 07A- See Notes)	5/1/2023		\$63.33	\$37.68	\$101.01
Operators (Building, Class 07B- See Notes)	5/1/2023		\$63.04	\$37.59	\$100.63
Painters Class 1 (see notes)	5/1/2023		\$42.32	\$32.91	\$75.23
Painters Class 4 (see notes)	5/1/2023		\$44.41	\$32.91	\$77.32
Plasterers	5/1/2023		\$39.32	\$32.64	\$71.96
plumber	5/1/2023		\$64.73	\$37.61	\$102.34
Pointers, Caulkers, Cleaners	5/1/2022		\$47.64	\$30.06	\$77.70
Pointers, Caulkers, Cleaners	5/1/2023		\$48.80	\$30.70	\$79.50
Roofers (Composition)	5/1/2022		\$41.48	\$33.87	\$75.35
Roofers (Shingle)	5/1/2021		\$30.50	\$21.55	\$52.05
Roofers (Shingle)	5/1/2023		\$32.85	\$22.10	\$54.95
Roofers (Slate & Tile)	5/1/2021		\$33.50	\$21.55	\$55.05
Roofers (Slate & Tile)	5/1/2023		\$35.85	\$22.10	\$57.95
Sheet Metal Workers	5/1/2022		\$55.75	\$47.28	\$103.03

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Sheet Metal Workers	5/1/2023		\$57.31	\$48.97	\$106.28
Sign Makers and Hangars	7/15/2022		\$30.54	\$24.35	\$54.89
Sign Makers and Hangars	7/15/2023		\$31.76	\$24.63	\$56.39
Sprinklerfitters	1/1/2023		\$62.23	\$31.99	\$94.22
Steamfitters	5/1/2023		\$67.37	\$41.99	\$109.36
Stone Masons	5/1/2022		\$45.90	\$31.20	\$77.10
Stone Masons	5/1/2023		\$47.20	\$31.95	\$79.15
Terrazzo Finisher	5/1/2022		\$42.44	\$27.71	\$70.15
Terrazzo Finisher	5/1/2023		\$43.75	\$27.86	\$71.61
Terrazzo Grinder	5/1/2022		\$42.71	\$27.71	\$70.42
Terrazzo Grinder	5/1/2023		\$44.02	\$27.86	\$71.88
Terrazzo Mechanics	5/1/2022		\$48.81	\$29.46	\$78.27
Terrazzo Mechanics	5/1/2023		\$50.26	\$29.56	\$79.82
Tile Finisher	5/1/2022		\$38.27	\$29.15	\$67.42
Tile Finisher	5/1/2023		\$39.52	\$29.30	\$68.82
Tile Setter	5/1/2022		\$48.81	\$29.46	\$78.27
Tile Setter	5/1/2023		\$50.26	\$29.56	\$79.82
Truckdriver class 1(see notes)	5/1/2022		\$35.60	\$20.74	\$56.34
Truckdriver class 1(see notes)	5/1/2023		\$36.29	\$21.55	\$57.84
Truckdriver class 2 (see notes)	5/1/2022		\$35.70	\$20.74	\$56.44
Truckdriver class 2 (see notes)	5/1/2023		\$36.39	\$21.55	\$57.94
Truckdriver class 3 (see notes)	5/1/2022		\$35.95	\$20.74	\$56.69
Truckdriver class 3 (see notes)	5/1/2023		\$36.64	\$21.55	\$58.19
Window Film / Tint Installer	6/1/2019		\$24.52	\$12.08	\$36.60

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter - Chief of Party (Surveying & Layout)	5/1/2023		\$63.24	\$29.06	\$92.30
Carpenter - Chief of Party (Surveying & Layout)	5/1/2024		\$65.19	\$29.06	\$94.25
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		\$67.15	\$29.06	\$96.21
Carpenter - Chief of Party (Surveying & Layout)	5/1/2026		\$69.10	\$29.06	\$98.16
Carpenter - Instrument Person (Surveying & Layout)	5/1/2023		\$54.99	\$29.06	\$84.05
Carpenter - Instrument Person (Surveying & Layout)	5/1/2024		\$56.69	\$29.06	\$85.75
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		\$58.39	\$29.06	\$87.45
Carpenter - Instrument Person (Surveying & Layout)	5/1/2026		\$60.09	\$29.06	\$89.15
Carpenter - Rodman (Surveying & Layout)	5/1/2023		\$43.99	\$22.41	\$66.40
Carpenter - Rodman (Surveying & Layout)	5/1/2024		\$45.35	\$22.41	\$67.76
Carpenter - Rodman (Surveying & Layout)	5/1/2025		\$46.71	\$22.41	\$69.12
Carpenter - Rodman (Surveying & Layout)	5/1/2026		\$48.07	\$22.41	\$70.48
Carpenter	5/1/2023		\$54.99	\$29.06	\$84.05
Carpenter	5/1/2024		\$56.69	\$29.06	\$85.75
Carpenter	5/1/2025		\$58.49	\$29.06	\$87.55
Carpenter	5/1/2026		\$60.19	\$29.06	\$89.25
Cement Masons	5/1/2023		\$43.20	\$32.91	\$76.11
Dockbuilder, Pile Drivers	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder, Pile Drivers	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder, Pile Drivers	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder, Pile Drivers	5/1/2026		\$56.98	\$37.99	\$94.97
Dockbuilder/Pile Driver Diver	5/1/2023		\$58.41	\$41.74	\$100.15
Dockbuilder/Pile Driver Diver	5/1/2024		\$61.54	\$41.74	\$103.28
Dockbuilder/Pile Driver Diver	5/1/2025		\$64.35	\$41.74	\$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		\$66.54	\$41.74	\$108.28
Dockbuilder/pile driver tender	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder/pile driver tender	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder/pile driver tender	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder/pile driver tender	5/1/2026		\$56.98	\$37.99	\$94.97
Electric Lineman	5/30/2022		\$59.17	\$31.48	\$90.65
Electric Lineman	5/29/2023		\$60.48	\$32.77	\$93.25
Electric Lineman	6/3/2024		\$62.07	\$33.96	\$96.03
Iron Workers (Bridge, Structural, Ornamental, Precast)	1/1/2023		\$50.70	\$39.51	\$90.21
Iron Workers (Riggers)	7/1/2023		\$42.53	\$34.14	\$76.67
Iron Workers (Rodman/Reinforcing)	7/1/2023		\$45.70	\$34.77	\$80.47
Laborers (Class 01 - See notes)	5/1/2022		\$36.30	\$27.20	\$63.50
Laborers (Class 01 - See notes)	5/1/2023		\$37.55	\$27.45	\$65.00
Laborers (Class 02 - See notes)	5/1/2022		\$36.50	\$27.20	\$63.70
Laborers (Class 02 - See notes)	5/1/2023		\$37.75	\$27.45	\$65.20
Laborers (Class 03 - See notes)	5/1/2022		\$36.50	\$27.20	\$63.70
Laborers (Class 03 - See notes)	5/1/2023		\$37.75	\$27.45	\$65.20
Laborers (Class 04 - See notes)	5/1/2022		\$31.10	\$27.20	\$58.30
Laborers (Class 04 - See notes)	5/1/2023		\$32.35	\$27.45	\$59.80
Laborers (Class 05 - See notes)	5/1/2022		\$37.15	\$27.20	\$64.35

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 05 - See notes)	5/1/2023		\$38.40	\$27.45	\$65.85
Laborers (Class 06 - See notes)	5/1/2022		\$37.20	\$27.20	\$64.40
Laborers (Class 06 - See notes)	5/1/2023		\$38.40	\$27.45	\$65.85
Laborers (Class 07 - See notes)	5/1/2022		\$37.05	\$27.20	\$64.25
Laborers (Class 07 - See notes)	5/1/2023		\$38.30	\$27.45	\$65.75
Laborers (Class 08 - See notes)	5/1/2022		\$36.80	\$27.20	\$64.00
Laborers (Class 08 - See notes)	5/1/2023		\$38.05	\$27.45	\$65.50
Laborers (Class 09 - See notes)	5/1/2022		\$36.65	\$27.20	\$63.85
Laborers (Class 09 - See notes)	5/1/2023		\$37.90	\$27.45	\$65.35
Laborers (Class 10- See notes)	5/1/2022		\$36.80	\$27.20	\$64.00
Laborers (Class 10- See notes)	5/1/2023		\$38.05	\$27.45	\$65.50
Laborers (Class 11 -See Notes)	5/1/2022		\$36.70	\$27.20	\$63.90
Laborers (Class 11 -See Notes)	5/1/2023		\$37.95	\$27.45	\$65.40
Laborers (Class 12 -See Notes)	5/1/2022		\$38.40	\$27.20	\$65.60
Laborers (Class 12 -See Notes)	5/1/2023		\$39.65	\$27.45	\$67.10
Laborers (Class 13 -See Notes)	5/1/2022		\$40.43	\$27.20	\$67.63
Laborers (Class 13 -See Notes)	5/1/2023		\$41.65	\$27.45	\$69.10
Laborers (Class 14 -See Notes)	5/1/2022		\$36.55	\$27.20	\$63.75
Laborers (Class 14 -See Notes)	5/1/2023		\$38.25	\$27.45	\$65.70
Laborers Utility (PGW ONLY) (Flagperson)	5/1/2022		\$30.17	\$19.18	\$49.35
Laborers Utility (PGW ONLY) (Flagperson)	5/1/2023		\$31.42	\$19.43	\$50.85
Laborers Utility (PGW ONLY)	5/1/2022		\$37.20	\$19.18	\$56.38
Laborers Utility (PGW ONLY)	5/1/2023		\$38.45	\$19.43	\$57.88
Landscape Laborer	5/1/2022		\$27.73	\$23.65	\$51.38
Landscape Laborer	5/1/2023		\$29.03	\$23.80	\$52.83
Millwright	5/1/2023		\$51.60	\$35.81	\$87.41
Millwright	5/1/2024		\$54.67	\$35.81	\$90.48
Millwright	5/1/2025		\$57.39	\$35.81	\$93.20
Millwright	5/1/2026		\$60.20	\$35.81	\$96.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2023		\$52.20	\$32.81	\$85.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2024		\$53.36	\$33.65	\$87.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2025		\$54.52	\$34.49	\$89.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2026		\$55.67	\$35.34	\$91.01
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2023		\$55.20	\$33.70	\$88.90
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2024		\$56.37	\$34.53	\$90.90
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2025		\$57.52	\$35.38	\$92.90
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2026		\$58.68	\$36.22	\$94.90
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2023		\$51.95	\$32.74	\$84.69

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2024		\$53.11	\$33.58	\$86.69
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2025		\$54.27	\$34.42	\$88.69
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2026		\$55.43	\$35.26	\$90.69
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2023		\$54.97	\$33.61	\$88.58
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2024		\$56.13	\$34.45	\$90.58
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2025		\$57.29	\$35.29	\$92.58
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2026		\$58.44	\$36.14	\$94.58
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2023		\$47.87	\$31.53	\$79.40
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2024		\$49.03	\$32.37	\$81.40
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2025		\$50.18	\$33.22	\$83.40
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2026		\$51.34	\$34.06	\$85.40
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2023		\$47.57	\$31.44	\$79.01
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2024		\$48.73	\$32.28	\$81.01
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2025		\$49.88	\$33.13	\$83.01
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2026		\$51.04	\$33.97	\$85.01
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2023		\$45.85	\$30.93	\$76.78
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2024		\$47.00	\$31.78	\$78.78
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2025		\$48.16	\$32.62	\$80.78
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2026		\$49.32	\$33.46	\$82.78
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2023		\$44.85	\$30.65	\$75.50
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2024		\$46.02	\$31.48	\$77.50
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2025		\$47.17	\$32.33	\$79.50
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2026		\$48.34	\$33.16	\$81.50
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2023		\$63.33	\$37.68	\$101.01
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2024		\$64.80	\$38.61	\$103.41
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2025		\$66.26	\$39.55	\$105.81
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2026		\$67.73	\$40.48	\$108.21

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 24-02554 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2023		\$63.04	\$37.59	\$100.63
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2024		\$64.50	\$38.53	\$103.03
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2025		\$65.97	\$39.46	\$105.43
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2026		\$67.44	\$40.39	\$107.83
Painters Class 2 (see notes)	2/1/2023		\$48.82	\$32.09	\$80.91
Painters Class 2 (see notes)	2/1/2024		\$49.57	\$33.34	\$82.91
Painters Class 3 (see notes)	2/1/2023		\$59.78	\$32.13	\$91.91
Painters Class 3 (see notes)	2/1/2024		\$60.53	\$33.38	\$93.91
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		\$61.34	\$40.28	\$101.62
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2023		\$64.00	\$41.68	\$105.68
Steamfitters (Heavy and Highway - Gas Distribution)	3/4/2024		\$64.00	\$41.83	\$105.83
Truckdriver class 1(see notes)	5/1/2022		\$35.45	\$20.74	\$56.19
Truckdriver class 1(see notes)	5/1/2023		\$36.14	\$21.55	\$57.69
Truckdriver class 2 (see notes)	5/1/2022		\$35.55	\$20.74	\$56.29
Truckdriver class 2 (see notes)	5/1/2023		\$36.24	\$21.55	\$57.79
Truckdriver class 3 (see notes)	5/1/2022		\$35.80	\$20.74	\$56.54
Truckdriver class 3 (see notes)	5/1/2023		\$36.49	\$21.55	\$58.04