

Project Manual for Paving Project

Trinity Area School District
231 Park Ave. Washington, PA 15301

**TRINITY AREA SCHOOL DISTRICT
PAVING PROJECT**

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THE BID DOCUMENTS INCLUDED IN THIS PROJECT MANUAL ARE INTEGRATED AND FORM THE ENTIRE BASIS FOR WHICH BIDDERS SHALL SUBMIT BIDS FOR THE PROJECT. BIDDERS SHALL CAREFULLY READ EACH AND EVERY BID DOCUMENT PRIOR TO SUBMITTING ITS BID TO FULLY UNDERSTAND THE OBLIGATIONS IT ASSUMES AND RIGHTS IT WAIVES BY SUBMITTING ITS BID AND PERFORMING THE CONTRACT, IF AWARDED.

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INVITATION TO BID

The Trinity Area School District will receive sealed bids for the Paving Project. Bids shall be received by the Trinity Area School District by 1:00 P.M. (Eastern Standard Time) on June 13, 2023, at its business office located at 231 Park Avenue Washington, PA 15301.

Bid Documents, including the Specifications, may be obtained on the district website, www.trinitypride.org.

Timely submitted Bids will be publicly opened and read aloud on June 13, 2023 in the Board Room at 1:00 P.M. of the Trinity Area High School, 231 Park Avenue, Washington, PA 15301. Bid Award will be made at our regularly scheduled board meeting on June 15, 2023 at 6:00 P.M.

A pre-bid meeting will be held as follows:

May 31, 2023 at 10:00 A.M.

The **mandatory** pre-bid meeting will be held at 231 Park Avenue Washington, PA 15301.

Bids will be received for any and/or all of the following separate prime contracts:

General Construction

Bids must be submitted on forms included in the bidding documents and must be accompanied by Bid Security and Non-Collusion Affidavit in accordance with the Instructions to Bidders.

Bids shall conform to all other requirements as more fully set forth in the bidding documents, including compliance with all applicable laws and regulations.

This Project is subject to the Pennsylvania Prevailing Wage Law, approved August 15, 1961 (Act No. 442), as amended, and reference is made to the prevailing minimum wage rates applicable to this Project which have been promulgated by the Secretary of Labor and Industry.

All proposals submitted are valid for acceptance by the Owner and may not be withdrawn for a period of at least sixty (60) days after the actual date of the opening thereof unless the award of contract is delayed by the required approvals of another governmental agency, sale of bonds or award of grant or grants, in which case, proposals shall be irrevocable for one hundred twenty (120) days in accordance with Section 3911 of the Pennsylvania Commonwealth Procurement Code, 62 Pa.C.S. § 3911.

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The Owner reserves the right to reject any or all proposals or any part thereof or items therein and to waive informalities and/or technicalities as it deems in its best interest.

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INSTRUCTIONS TO BIDDERS

1. BID DOCUMENT AVAILABILITY

A. The Bid Documents have been prepared by and may be obtained from the Trinity Area School District, 231 Park Avenue, Washington, PA 15301. The Bid Documents will be made available on the Trinity Area School Districts web site at www.trinitypride.org and are made available only for the purpose of obtaining Bids for the Project. Their availability does not grant a license for any other purposes.

B. Upon receipt of Bid Documents, Bidders shall verify that the documents are complete. Bidder shall notify the District if the documents are incomplete or upon finding discrepancies or omissions in the Bid Documents. Bidder shall provide a mailing address and email address to the District for purposes of transmitting Addenda upon receipt of the Bid Documents. Each Bidder shall be responsible for the completeness of its set of Bid Documents. No allowance or concession will be made to a Bidder who complains of missing portions of Bid Documents or Addenda. All requests for clarifications must be in writing and received by the District no less than seven (7) days before Bid Deadline. All clarifications, modifications and corrections to the Bid Documents shall be issued in the form of Addenda and will be forwarded to Bidders that have previously supplied the District with a mailing and email address. Addenda listing revisions and changes to the Bid Documents shall become a part of and take precedence over the original Bid Documents and previously issued Addenda. Any information furnished related to the Project shall not be legally binding on the District unless issued in an Addendum.

2. DEFINITIONS

A. Addenda: Written and/or graphic instruments issued by the District prior to the Bid deadline which modify or interpret the Bid Documents by additions, deletions, clarifications or corrections.

B. Bid Deadline: The date and time which the District will receive and open sealed Bids for the Project as identified in the Invitation to Bid.

C. Bid Documents: The bid documents include, without limitation, the Bid Documents Table of Contents, Invitation to Bid, Instructions to Bidders, General Conditions of Contract, Bid Bond Form, Contract Form, Performance Bond Form, Payment Bond Form, Non-Collusion Affidavit Form, Specifications, Bid Form and any Addenda.

D. Bid Security: Bid Bond prepared on the form contained in the Bid Documents used to guarantee the Bid.

E. Bidder: Person or entity submitting a Bid.

F. Base Bid: Monetary sum identified by Bidder on the Bid Form for the full performance of the Project in accordance with the Contract.

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G. Contract: The entire integrated agreement between the District and Contractor in connection with the Project and includes, without limitation, the completed Contract Form, completed Performance Bond, completed Payment Bond, completed Non-Collusion Affidavit, completed Bid Form, and the Bid Documents. The Bid Documents, completed Contract Form, completed Performance Bond, completed Payment Bond, completed Non-Collusion Affidavit and completed Bid Form, and any other documents required to be completed per the Bid Documents, constitute the “Contract Documents” and form the Contract.

H. Contractor: Bidder to whom the Contract is awarded.

I. Detailed Cost Break-Down: An itemized list of all labor materials required to complete the Project and shall include, without limitation, the number of units of labor and materials to be installed and/or delivered and the price applicable each itemized component of labor and materials (which shall include, without limitation, charges for delivery, fuel, transportation, storage, placement, handling charges, labor, overhead and profit and shall not be subject to escalation or surcharge during the term of the Contract) in a form acceptable to the District.

J. District: Trinity Area School District, its agents, employees, elected officials and/or authorized representatives.

K. District Parties: The District Parties include, without limitation, employees, elected officials, agents and retained professionals (including, without limitation, a construction manager, architect and/or the engineer, if any) (collectively, the “District Parties”).

L. District Property: Shall mean any real property owned or operated by the District, and all buildings and improvements thereon, and any personal property, systems and equipment located therein or thereon.

M. Project: Paving Project, which Project, includes, without limitation, the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations.

N. Specifications: The drawings, plans and specifications included with the Bid Documents that provide the technical details of the work and products required to complete the Project.

O. Verification Form: The verification form required to be submitted to the District by contractors and subcontractors pursuant to the Public Works Employment Verification Act 43 P.S. § § 167.1 *et seq.*)

3. APPLICABILITY OF INSTRUCTIONS

These Instructions to Bidders are a standardized listing of items generally applicable to Bids for contracted construction services entered into by the District. If a Bidder is unsure as to

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the applicability of a particular item, the District should be contacted for clarification prior to the submission of a Bid.

4. PREPARATION AND SUBMISSION OF BIDS

A. Bidder shall be solely responsible for the delivery of its Bid in the manner and time prescribed. All Bids must be received by the District at the place designated in the Invitation to Bid no later than the Bid Deadline. Bids received after the Bid Deadline shall be returned to Bidders unopened.

B. By submitting its Bid, Bidder represents that it has read and understands the Bid Documents, including all Addenda, its Bid is based upon the labor, materials, systems, and equipment required by the Specifications and is willing to accept performance of the Project for the amounts set forth in its Bid.

C. Bids shall be prepared and submitted on forms included in the Bid Documents. All blank spaces shall be filled in, by computer, typewriter or blue ink. All prices are to be firm net prices and are to be F.O.B. destination, including, without limitation, charges for delivery, fuel, transportation, storage, placement, handling charges, labor, overhead and profit and shall not be subject to escalation or surcharge during the term of the Contract. Bidder warrants that its Base Bid includes a deduction(s) for all rebates and discounts (e.g., manufacturer and/or governmental) that may be available as a result of the District's purchase of the products, services and/or work set forth herein. On a separate sheet attached to the Bid Form, each Bidder shall identify such rebates and/or discounts that it will seek endorsement from the District associated with the goods identified herein.

D. Bids shall be irrevocable for sixty (60) days after the actual day of opening thereof unless delayed by the required approval of another governmental agency, the sale of bonds or the award of a grant, in which case, Bids shall be irrevocable for one hundred twenty (120) days after Bid opening. Extensions of the date for the award of contract may be made by the mutual written consent of District and the lowest responsible and responsive Bidder.

E. The Bid Form shall be signed in accordance with the following:

(i) If the Bidder is an individual, the Bid shall be executed by him/her, personally; his/her signature shall be witnessed; his/her business address shall be stated, and any trade name employed in the conduct of his/her business shall be stated.

(ii) If the Bidder is a partnership, the Bid Form shall be executed in the name of the partnership by each of the partners, or a general partner authorized for this purpose; the signatures of the partners shall be witnessed; and the business name and address of the partnership shall be stated.

(iii) If the Bidder is a corporation, the Bid Form shall be executed in its name and on its behalf: (a) by the President or Vice President and attested by the Secretary or Assistant Secretary, and the Corporate Seal shall be affixed; or (b) by a duly authorized agent of

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the corporation whose authority to act, as of the date of the Bid, shall be established by a certified copy of a resolution by the Board of Directors of the bidding corporation authorizing said agent to sign the Bid on behalf of the corporation, submitted with the Bid. The business address of the corporation and state of incorporation shall be stated.

(iv) If the Bidder is a limited liability company, the Bid Form shall be executed in its name and on its behalf: (a) by all of the members if the company is member-managed, or by the managing member if the company is manager-managed, or (b) by a duly authorized agent of the company whose authority to act, as of the date of the Bid, shall be established by a certified copy of a resolution by the members of the bidding company authorizing said agent to sign the Bid on behalf of the company, submitted with the Bid. The business address of the company and state of formation shall be stated.

(v) If the Bidder is a joint venture, each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above.

F. The lowest responsive and responsible Bidder, as determined by the District, shall submit a completed Verification Form required by the Public Works Employment Verification Act (43 P.S. § § 167.1 et seq.) acknowledging the Bidder's responsibilities and compliance with the Public Works Employment Verification Act within ten (10) calendar days of the date of the District's notification of its intent to award the Contract as a condition precedent to the award. Failure to timely submit such required Verification Form shall constitute a default by Bidder, and the District may, at its sole discretion, award the Contract to the next lowest responsive and responsible Bidder, reserving to itself all rights for damages relating to said default, or, in the alternative, allow Contractor additional time in which to provide the Verification Form. The Verification Form shall be obtained from the Secretary of the Pennsylvania Department of General Services and shall include a certification that the information is true and correct, subject to sanctions provided by law. The Verification Form shall be executed by a representative who has sufficient knowledge and authority to make the representations and certifications contained in the Verification Form.

G. Each Bid must be accompanied by Bid Security in the amount of ten percent (10%) of the total amount of the Base Bid plus any additive alternatives. Bid Security shall be in the form of a Bid Bond in the form set forth herein, naming the District as obligee. The Bid Bond shall be submitted on the form included in the Bidding Documents, and the Attorney-in-Fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of its Power of Attorney, authorizing said Attorney-in-Fact to act on behalf of the surety. The Power of Attorney must be dated the same date as the Bid Bond and both the Bid Bond and Power of Attorney shall have affixed the raised corporate seal of the surety. The Bid Bond form must be executed by a surety licensed and authorized to conduct business within the Commonwealth of Pennsylvania and named in the current list of companies holding Certificates of Authority as acceptable sureties on federal bonds and/or as acceptable reinsuring companies as published in Circular 570 (as amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department, and the amount of the bond shall not exceed the underwriting risk of such surety set forth in said circular or revision thereof. The Bid Security of

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Bidders will be returned at the Bidder's request, upon (1) the execution of the Contract by the District, or (2) the rejection of all bids by District, or (3) the expiration of the firm bid period.

H. If the Bidder receiving a Notice of Intent to Award shall fail to execute the Contract, or fail to furnish the required Performance Bond and Payment Bond, Verification Form required by the Pennsylvania Employment Verification Act, Detailed Cost Break-Down and/or certificate of insurance evidencing the insurance coverages required by the General Conditions within ten (10) calendar days after receipt of the Notice of Intent to Award (a "Defaulting Bidder"), the District may apply the Bid Security toward the difference between the amount of the Bid of the Defaulting Bidder as accepted by the District and any higher amount for which the District may contract for the required work, plus any advertising costs, legal fees, damages, penalties, and any and all other fees and expenses incurred by the District by reason of the failure of such Defaulting Bidder to comply herewith. If the amount of said damages exceeds the penal sum of the Bid Security, the Defaulting Bidder shall pay the District the full amount of the excess. If the District does not procure an executed contract with any other party for the performance of the work within thirty (30) days after the acceptance of the Bid from the Defaulting Bidder, whether because of the lack of other Bids or the inability or refusal of any other Bidder to contract, or because the cost under any higher Bid would be greater than the District would afford, as determined in the sole discretion of the District, then in that event, the Defaulting Bidder and its Surety shall pay to the District the full amount of the Bid Security as liquidated damages and not as a penalty.

I. All Bids shall be submitted in a sealed opaque envelope, clearly identified with Bidder's name and Project name. The envelope shall also contain a notation that it should not be opened until the time specified for Bid opening. Bid envelopes not bearing this notation and opened in error may be rejected by the District, in its sole discretion. If a Bidder elects to submit a Bid by mailing rather than hand delivery, the sealed Bid envelope described above shall be enclosed in a mailing envelope and addressed to the District, and must be received prior to the date and time specified for Bid opening.

5. STANDARD OF QUALITY

A. The various materials and products specified in the Specifications by name or description are given to establish a standard of quality and of cost for Bid purposes. It is not the intent to limit the Bidder to any one material or product specified but rather to describe the minimum standard. When proprietary names are used, they shall be followed by the words "or substitution meeting or exceeding the minimum standard of quality, as determined by the District as evidenced by Addenda." A Bid containing a substitution which does not meet the Specifications may be declared non-responsive. Where products or manufacturers are listed with the words "No Substitutions", these items are proprietary and the sole acceptable source for this Project, and no substitutions will be permitted.

B. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the District at least seven (7) calendar days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including, but not

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limited to, drawings, cuts, performance test data, manufacturer's warranty and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other work that result from the substitution shall be included. The burden of proof of the merit of the proposed substitute is upon the Bidder. The District's decision of approval or disapproval of a proposed substitution shall be final and binding.

C. If the District approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals in any other manner.

6. MODIFICATION AND WITHDRAWAL

Bids may not be modified after submittal. Bids may be withdrawn after submittal, provided the Bidder makes its request to withdraw in writing and the request is acknowledged by the District in writing prior to the time specified for Bid opening in the Invitation to Bid. Negligence by Bidder in preparing its Bid confers no right of withdrawal or modification of its Bid after such Bid has been opened. No claims on account of mistakes or omissions in any Bid will be considered. Notwithstanding the above, a Bidder may withdraw its Bid after such Bid has been opened in accordance with the causes set forth in the Pennsylvania Bid Withdrawal Act, Act No. 4 of 1974, 73 P.S. §1601 et seq. Strict compliance with said Bid Withdrawal Act is required to withdraw a Bid after Bid opening.

7. OPENING OF BIDS

Bids will be publicly opened and read on the date, at the location, and commencing at the time stated in the Invitation to Bid. Bidders or their authorized agents may be present at Bid opening. The District shall have no obligation to notify any other person other than the lowest responsive and responsible Bidder of the District's intent to award the Contract.

8. QUALIFICATIONS

Prior to the award of Contract, District may require satisfactory evidence to show that the Bidder is fully prepared in every way to perform the Contract timely and that he has been regularly engaged in such business.

9. COLLUSIVE BIDS

More than one Bid for one Contract from an individual, partnership, corporation, company, or an association under the same or different names will be grounds for rejection of all Bids in which such Bidder is interested. Any and all Bids will be rejected if there is any reason for believing that collusion exists among any of the Bidders. Participants in such collusion will not be considered in future Bids. A Non-Collusion Affidavit shall be executed and submitted with the Bidder's Bid using the form set forth herein.

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10. BID INELIGIBILITY

- A. Failure to provide Bid Security will result in rejection of Bid.
- B. Bids not based on Bid Documents, those indicating a qualification of the Bid, conditions or uninvited substitutions, or which contain alteration of Bid Document forms, may be rejected by the District in its sole and absolute discretion. In addition, Bids failing to adhere to the Specifications may be rejected by the District in its sole and absolute discretion.
- C. Bids that are unsigned, improperly signed or sealed, or illegible, will be rejected by the District in its sole and absolute discretion.
- D. Bids where the prices are obviously unbalanced will be rejected by the District in its sole and absolute discretion.
- E. Unless specifically required to be identified on the Bid Form, Bids containing “escalator” clauses may be rejected by the District at the District’s sole and absolute discretion.
- F. All Bids shall conform with these Instructions to Bidders. Bids containing minor irregularities or informalities may be rejected by the District in its sole and absolute discretion. The District reserves the right to waive any such informalities or irregularities when a waiver is in the District’s best interest.

11. BID REJECTION OR AWARD

- A. The District reserves the right to reject any and all Bids, or parts of a Bid, when a rejection is in the District’s best interest as determined by the District in its sole discretion. The District reserves the right to reject a Bid if the Bidder is not in a position to perform the Contract or has previously failed to perform similar contracts properly or on time as determined by the District in its sole and absolute discretion. If a Contract is awarded, it will be to the lowest responsive and responsible Bidder, provided such Bidder’s Bid is reasonable and in the District’s interest to accept.
- B. In the event of a dispute between a Bidder and the District regarding the District’s determination of which Bidder is the lowest responsive and responsible Bidder, such contesting Bidder shall be responsible for any legal fees (e.g., fees of attorneys, paralegals and other legal professionals), professional fees, or other costs or expenses incurred by the District to the extent the Bidder does not completely prevail in such contest. Furthermore, under no circumstances shall the District be responsible for any legal fees, professional fees, or other costs or expenses incurred by the contesting Bidder if the District decides not to award the Contract to such Bidder based upon the District’s determination in its sole and absolute discretion that such contesting Bidder is not the lowest responsive and responsible Bidder.
- C. Bidder agrees that it has prepared its Bid at its sole cost and expense. If, for any reason, the District rejects the Bidder’s Bid, Bidder agrees that it shall not seek to recover

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expected profits or Bid preparation fees or costs, nor make a claim of unjust enrichment against the District.

12. AWARD OF THE CONTRACT

A. It is the intent of the District to award the Contract to the lowest responsive and responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bid Documents and does not exceed the funds available to the District.

B. The District reserves the right to award a Contract for one or more of the items set forth in the Specifications, or for all items set forth in the Specifications.

C. The District will notify the lowest responsive and responsible Bidder of the award of the Contract. Such Bidder shall complete and execute the Contract Form, Performance Bond and Payment Bond in accordance with the amounts set forth in its Bid, and provide certificates of insurance, Verification Form, and Detailed Cost Break-Down. The executed Contract Form, executed Performance Bond, executed Payment Bond, executed Verification Form, Detailed Cost Break-Down and certificates of insurance shall be submitted to the District by the Bidder within ten (10) calendar days of the date of the District's notification of its award of the Contract as a condition of the award.

13. PAYMENT AND PERFORMANCE BONDS

A. Contractor shall furnish to District the following bonds:

(i) A performance bond in the amount of One Hundred Percent (100%) of the contract sum, conditioned upon the faithful performance of the Contract in accordance with the Contract shall be submitted. Such bond shall be executed on the form contained in the Bid Documents and shall be solely for the protection of District.

(ii) A payment bond in the amount of One Hundred Percent (100%) of the contract sum shall be submitted. Such bond shall be executed on the form contained in the Bid Documents and shall be solely for the protection of claimants supplying labor and materials to Contractor, or to any of Contractor's subcontractors, in the prosecution of the work provided for in such Contract, and shall be conditioned upon the prompt delivery of such materials or products furnished or labor supplied or performed in the prosecution of the work.

B. Each of the above-referenced bonds shall be executed by a surety named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," as published in Circular 570 (as amended) by the Audit Staff, Bureau of Governmental Financial Operations, U.S. Treasury Department, and the amount of the bonds shall not exceed the underwriting risk of the surety as set forth in said circular or revision thereof. The surety shall be licensed and qualified to do business in the Commonwealth of Pennsylvania. The bonds shall be accompanied by a power of attorney evidencing the authority of the agent of the surety to execute the bonds as of the date of the bonds.

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C. The lowest responsive and responsible Bidder, as determined by the District, shall submit a Payment and Performance Bond within ten (10) calendar days of the date of the District's notification of its award of the Contract as a condition to the award. Failure to timely submit such required bonds shall constitute a default by the Contractor, and the District may, at its sole discretion, award the Contract to the next lowest responsive and responsible Bidder, reserving to itself all rights for damages relating to said default, or, in the alternative, allow Contractor additional time in which to secure the required bonds. Other forms of bonds or changes in amounts may be required in the Specifications.

14. DETAILED COST BREAK-DOWN

Contractor shall submit a Detailed Cost Break-Down (the total of which shall equal the full amount of the contract sum). The Detailed Cost Break-Down shall be submitted to the District within ten (10) calendar days of the date of the District's notice of the award to the Contractor. Failure to timely submit such Detailed Cost Break-Down shall constitute a default by Contractor, and the District may, at its sole discretion, award the Contract to the next lowest responsive and responsible Bidder, reserving to itself all rights for damages relating to said default, or, in the alternative, allow Contractor additional time in which to provide the Detailed Cost Break-Down. The District shall also have the right to proceed with the Contract award, but withhold payment to Contractor until the Detailed Cost Break-Down is submitted by Contractor.

15. RECEIVING HOURS

All shipments are to be made to the District in accordance with the instructions forwarded to the successful Bidder by the District. All deliveries shall be made between the hours of 8:00 a.m. and 2:30 p.m., Monday through Friday, except on District holidays.

NOTICE: BIDS ARE PUBLICLY OPENED AND READ ON THE DATE SPECIFIED. IF YOU ARE INTERESTED IN IMMEDIATE INFORMATION RELATING TO THE BID, PLEASE HAVE A REPRESENTATIVE PRESENT AT BID OPENING. FOLLOWING BID OPENING, THE BIDS WILL BE REVIEWED BY THE APPROPRIATE AUTHORITIES OF AND FOR THE DISTRICT. THEREFORE, INFORMATION ON THE BIDS WILL NOT AGAIN BE AVAILABLE UNTIL THEY HAVE BEEN REVIEWED AND A FINAL RECOMMENDATION IS PRESENTED TO THE BOARD OF SCHOOL DIRECTORS OF THE DISTRICT AT ITS REGULARLY SCHEDULED MEETING.

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GENERAL CONDITIONS OF THE CONTRACT

1. APPLICABILITY OF THE GENERAL CONDITIONS OF THE CONTRACT

These General Conditions of the Contract shall apply and be binding upon the District and Contractor awarded the Contract for the Project upon execution of the Contract Form by each party. All capitalized terms not defined in these General Conditions of the Contract shall have the same meaning set forth in the Instructions to Bidders. These General Conditions of the Contract are a standardized listing of items generally applicable to Contracts for contracted construction services entered into by the District. Where an item applies in limited cases, the same shall be noted as well as the conditions respecting applicability.

2. FAMILIARITY WITH PROPOSED WORK

The Contract is entered into by the District with the understanding that Contractor, prior to submission of its Bid, acquainted itself with the requirements of all Bid Documents and that it has obtained all necessary information for completion of the services or Project on or before the date(s) specified. The Contractor shall not at any time after the execution of the Contract set up any claims whatsoever based upon insufficient data or incorrectly assumed conditions, nor shall Contractor claim any misunderstanding in regard to the nature, conditions or character of the services or work to be performed or products to be supplied under the Contract, and Contractor shall assume all risk resulting from any changes in the conditions which may occur during the progress of the work.

3. COMPETENT WORKERS

No person shall be employed to do work under the Contract except competent and first-class workmen and mechanics. No workman shall be regarded as competent and first class within the meaning of the Educate America Act of 1994 or this provision except those who are duly skilled in their respective branches of labor, and who shall be paid not less than such rates of wages and for such hours' worked as shall be the established and current rates of wages paid for such hours by employers of organized labor in doing of similar work in the district where the Contract is being performed.

4. CASH ALLOWANCES.

No cash allowances for any purposes are included in the Specifications for this Project.

5. INSURANCE

A. The Contractor shall purchase, maintain and carry such liability insurance at its sole expense as set forth below to fully protect the District against all claims which may arise in connection with the Project. No work shall be started until the District has been provided Certificates of Insurance executed by an insurer licensed and qualified to do business in the Commonwealth of Pennsylvania and having an A- or better, or financial rating of VI or better

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with the A.M. Best's Company Key Rating Guide-Latest Edition and being satisfactory to the District. All Certificates of Insurance must indicate that the District has (through endorsement to the policy) been specifically named as additional insured parties for all policies except Workers' Compensation. The Certificate of Insurance must also provide that the policy will not be cancelled, materially changed, or allowed to expire until at least thirty (30) days' prior written notice has been provided to the District. In addition, all of Contractor's insurance policies and the Certificate of Insurance shall state that all of Contractor's insurance policies are primary and non-contributory with respect to any other valid and collectible insurance policies. Failure to furnish the correct types of insurance on the correct forms in the correct amounts shall constitute a material breach of the conditions for award of the Contract and Contractor shall be deemed to be in default (i.e. a Defaulting Bidder).

B. General Liability Insurance. General liability coverages shall be provided by a commercial general liability policy on an occurrence and aggregate basis. The policy date or retroactive date shall predate the Contract. The termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of the Contract or later if otherwise specified in the Bid Documents. Where the Specifications require underground excavation, underground hazard coverage must be included. Where the Specifications require demolition and/or use of explosives, the explosion and collapse hazard coverage must be included.

- (i) Bodily Injury: \$1,000,000 each occurrence, \$2,000,000 aggregate.
- (ii) Property Damage: \$1,000,000 each occurrence, \$2,000,000 aggregate.

C. Automobile Liability. (Including owned, non-owned and hired vehicles).
Combined Single Limit

- (i) Bodily Injury: \$1,000,000 each occurrence.
- (ii) Property Damage: \$1,000,000 each occurrence.

D. Workers' Compensation and Employers' Liability.

- (i) Employers' Liability: \$500,000 each accident.
\$500,000 disease policy limits.
\$500,000 disease – each employee.
- (ii) Workers' Compensation: Statutory minimum.

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6. WAIVER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES; ECONOMIC LOSS

A. The Contractor waives claims against the District and the District Parties for consequential and/or incidental damages arising out of or relating to the Contract. This waiver includes, but is not limited to:

(i) Consequential damages incurred by Contractor for principal office expenses including, but not limited to, the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of actual and expected profits.

(ii) Incidental damages incurred by Contractor including, but not limited to, costs resulting from stopping performance under the Contract, removing and transporting Contractor's property (e.g., Contractor's equipment, supplies and materials) from the Project site, and storing Contractor's property (e.g., Contractor's equipment, supplies and materials) at an alternate location.

B. The above waiver is applicable, without limitation, to all consequential and/or incidental damages, due to the termination of the Contract by Contractor or the District.

C. The Contractor shall have no claim or right of recovery of damages against the District or the District Parties for economic loss sustained, in whole or in part, by any act or omission of the District Parties to the extent that such act or omission constitutes a breach of contract. Specifically, and without limiting the generality of the foregoing, Contractor shall have no claim against the District or the District Parties for economic loss based upon any tort, including, without limitation, negligence, negligent misrepresentation or any other tort-based theory of liability.

7. FEES, PERMITS AND CERTIFICATIONS

The Contractor shall pay for, secure and provide all necessary and required local, state and federal fees, permits and certificates. The contractor will be responsible for employing a licensed engineer if stamped drawings are required for local permits.

8. TAXES

A. Contractor hereby accepts and assumes full and exclusively liability for and shall pay all applicable sales, use, excise or other taxes required by law (collectively, the "Taxes") on all materials, tools, apparatus, equipment, fixtures, services, incidentals or otherwise which may be purchased or used in connection with the work under the Contract or portions thereof, including, without limitation, all sales taxes, state and municipal taxes, business privilege taxes, use taxes and all contributions and payroll taxes under the provisions of Federal law or the laws of the Commonwealth of Pennsylvania. Contractor's Bid was made in accordance with such laws and includes Taxes in the Bid. Notwithstanding the foregoing, however, certain items acquired as part of the work may be exempt from the Taxes, and no charges shall be allowed for such exempt items. It shall be Contractor's responsibility to determine those items for which an

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exemption will apply, and Contractor shall obtain independent legal or other tax advice to determine how and to what extent an exemption from Taxes applies. In order to facilitate purchases free of sales and/or use tax in the Commonwealth of Pennsylvania, and upon certification by Contractor's legal and tax advisors that an item is, in fact, tax exempt, the District agrees to execute a tax exemption certificate prepared by Contractor or a subcontractor as may be required by the regulations of the Pennsylvania Department of Revenue. In the event that Contractor pays Taxes not properly due, the District shall be entitled to any refund relating thereto and Contractor agrees to assign any and all rights to said refund to the District. It is further agreed that the District shall have the right to deduct the amount of any and all such Taxes from the compensation owed to Contractor under the terms of the Contract at any time, in the District's sole discretion, as the District deems advisable, it being agreed that the District shall have the right to deduct any and all such Taxes from the next payments due under the Contract and from the retained percentages. The District or its representatives shall be afforded access to all Contractor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, certifications, and similar data relating to the Contract, and Contractor shall preserve all such records for a period of three (3) years, or for such longer period as may be required by law, after final payment. Further, the District or its representative shall have the authority, but not the obligation, to require Contractor to provide the District with certified payroll records for the labor furnished by Contractor in connection with the work.

9. INDEMNIFICATION

To the fullest extent permitted by law, Contractor shall, immediately upon demand, indemnify, defend and hold harmless the District (with legal counsel selected by the District), and the District Parties from and against any and all claims, suits, demands, liabilities, damages, losses, taxes and expenses, including, without limitation, legal fees and legal costs, arising out of or resulting from Contractor's performance or non-performance of the Contract, including, without limitation, claims, suits, demands, liabilities, damages, losses, taxes and expenses attributable to bodily injury, sickness, disease or death, or to injury to or destruction of property, including, without limitation, loss of use resulting therefrom, caused in whole or in part by acts or omissions or negligence of Contractor, its subcontractors, their respective officers, employees, agents, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, suit, demand, liability, damage, loss, tax or expense is caused in part by the District. The indemnification obligation under this paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for Contractor or a subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

10. TIME PERIOD FOR PERFORMANCE OF WORK

A. The Contract shall be finally completed within twenty-four (24) calendar days after the District's issuance of a Notice to Proceed to Contractor. The date set for final completion of the Contract is designated in the Contract. Milestones may be set forth in the specifications or a project schedule submitted by Contractor and approved by the District after the award of the Contract. Time is of the essence in performing all services or work and/or

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supplying all products required by the Contract. Provisions for liquidated damages in the event of any delay in completing the Contract may be set forth in the Specifications.

B. Within ten (10) days of notification to proceed with the Project, Contractor shall provide the District with a Project schedule identifying the commencement and milestone dates for completion of components of the services or work and/or delivery of products required by the Contract for the District’s review and approval. The Contractor shall perform the work in strict accordance with the latest approved Project schedule. Substantial completion shall be by **August 18, 2023**.

C. In the event Contractor shall neglect or refuse to complete the Project as required, or any part thereof, or to replace or re-perform any service or work and/or product which is rejected, then the District is authorized and empowered to purchase materials, equipment and services from third parties, and in such manner as it shall elect at the expense of Contractor, or to cancel the Contract; reserving to itself, nevertheless, all rights for damages, including, without limitation, legal fees, legal costs, and additional architectural, engineering or other design costs, which may be incurred by the District.

D. If Contractor is delayed at any time in the progress of the work by any act or neglect of the District, its agents, employees, retained professionals (including, without limitation, a construction manager, architect and/or engineers, if any), any separate contractor employed by the District or by changes ordered in the work, labor disputes (excluding labor disputes with Contractor’s own employees, or its subcontractor’s own employees), fire, unusual delay in transportation, adverse weather conditions not reasonably anticipated, unavoidable casualties or by any other cause beyond the reasonable control of Contractor, Contractor’s exclusive remedy shall be an extension of time allowed for final completion of the work under the Contract. This extension of time shall not act as an entitlement for damages due and owing Contractor for said delay. Under no circumstances shall Contractor be entitled to claim or recover payment, compensation or damages for any delays from any cause whatsoever in the progress of the work, notwithstanding whether such delays be avoidable or unavoidable.

11. PAYMENT

A. Contractor will be paid according to the schedule below, provided all services or work and/or products which payment is requested has been completed in accordance with the Contract and Contractor is in full compliance with all requirements of the Contract. Invoices must be received by the end of each calendar month, and will be authorized for payment by the Board of School Directors for the District at the following calendar months’ regular meeting.

Amount of Contract	Payment Schedule
Under \$5,000	100% upon completion of specified work.
\$5,000 to \$20,000	Upon completion of 50% of specified work, respective payment amount shall be made, less retainage. Upon completion of 100% of specified work, remaining payment amount shall be made. Payments shall be

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	subject to conditions of paragraph B hereof.
\$20,001 to \$50,000	Upon completion of 25%, 50% and 75% of work, respective payment amount shall be made, less retainage. Upon completion of 100% of specified work, remaining payment amount shall be paid. Payments shall be subject to paragraph B hereof.
Over \$50,000	Payments shall be made monthly upon completion of specified work, less retainage.

B. For any Contract from Five Thousand Dollars (\$5,000) to Fifty Thousand Dollars (\$50,000), payment will be made only after the Detailed Cost Break-Down has been provided by Contractor and approved by the District. Payments shall be made only for work completed according to the Detailed Cost Break-Down. Five percent (5%) retainage shall be withheld by the District for all payments prior to final completion. Upon final completion to the satisfaction and acceptance by the District, in the District's sole and absolute discretion, final payment, including retainage, shall be made.

C. For any Contract in excess of Fifty Thousand Dollars (\$50,000):

(i) Payment will be made only after the Detailed Cost Break-Down has been provided by Contractor and approved by the District. Payments shall be made only for work completed according to the Detailed Cost Break-Down. Retainage in the amount of ten percent (10%) of the value of the completed work, based on monthly progress payments, shall be withheld by the District from each monthly payment until the work has achieved 50% completion. Except as otherwise provided herein, when the work for the specified Project is fifty percent (50%) completed, one-half (1/2) of the amount retained by the District shall be returned to Contractor, provided that Contractor is making satisfactory progress and that there is no specific cause for greater withholding.

(ii) Notwithstanding the foregoing, the District may continue to withhold ten percent (10%) of the amount due Contractor after the Contract is fifty percent (50%) completed if the District determines in its sole and absolute discretion that there is a specific cause for greater withholding. A specific cause for greater withholding shall include, without limitation, the following:

(1) The Contractor's inability to produce evidence satisfactory to the District evidencing payments for materials, labor and/or payments to Subcontractors, manufacturers or suppliers;

(2) The existence of a dispute between the District and Contractor regarding increased costs claimed by such Contractor; or

(3) Contractor's failure to complete the work in accordance with the Contract, including, without limitation, the Specifications, etc.

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D. If a specific cause for greater withholding does not exist after the work is fifty percent (50%) completed, the amount retained from each monthly payment shall be reduced to five percent (5%) of the value of the completed work based on monthly progress payments.

E. In the event a dispute arises between the District and Contractor, the District shall have the option as it deems necessary in its sole and absolute discretion to withhold additional retainage over and above the amount already retained by the District in the sum of one and one-half (1-1/2) times the amount of any possible liability until such time as a final resolution is agreed to by all parties directly or indirectly involved.

F. The Contractor shall retain the right to collect any proceeds from the rebates or discounts (e.g., manufacturer or governmental incentives) specifically enumerated in an attachment to Contractor's Bid Form. The District shall retain the right to collect any proceeds from any rebates or discounts not specifically enumerated in an attachment to Contractor's Bid Form. The Contractor and District will cooperate with each other in applying for all rebates or discounts that may be available for the purchase of the services or work and/or products identified herein.

12. ACCESS CLEAN-UP/DAMAGE TO PREMISES.

Prior to entering District Property, Contractor shall notify Aaron Scott at 724-225-5380 Ext 6508 so that the District can notify Contractor of any security requirements and make appropriate arrangements to accommodate Contractor's work. Where work is to be performed by Contractor on District Property, Contractor shall keep the District's Property free from accumulation of waste materials or rubbish caused by Contractor's performance. During the progress of the work and at final completion of the work, Contractor shall remove from and about the District's Property, all waste materials, rubbish, Contractor's tools, construction equipment, machinery and surplus materials. If Contractor fails to clean up as provided herein, the District may do so, and the costs thereof shall be paid by Contractor upon demand or deducted from subsequent invoices, at the District's election. Contractor shall promptly remedy damage and loss to any District Property caused in whole or in part by Contractor, its subcontractors, or anyone directly or indirectly employed by them.

13. WARRANTY

All services or work and products shall be guaranteed by Contractor against defects in workmanship and materials for a period of two (2) years from the date of final completion of the Contract by Contractor and acceptance of the District of the work to be performed under the Contract in accordance with the Contract Documents (the "Warranty Period"). Contractor shall promptly remedy, at Contractor's expense, any defects which were caused, in the sole judgment of the District, by defective or inferior workmanship or materials during the Warranty Period.

14. ASSIGNING OF CONTRACT

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The Contractor shall not sell, transfer, assign, or otherwise dispose of the Contract, or any portion thereof, or of its right, title, or interest therein without the written consent of the District, which written consent of the District may be withheld in the District's absolute discretion.

15. GOVERNING LAW

The Contract shall be governed by the law of the Commonwealth of Pennsylvania, without regard to principles of conflict of laws. As between the District and Contractor, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued as provided by the laws of the Commonwealth of Pennsylvania. The District reserves all rights and privileges applicable to it pursuant to the doctrine of nullum tempus occurrit regi.

16. CLAIMS AND DISPUTES

A. Claims, disputes or other matters in question between the parties to the Contract arising out of or relating to the Contract or breach thereof shall be exclusively litigated in the Court of Common Pleas of Washington County and shall not be subject to arbitration, except for compulsory arbitration as provided by Washington County Civil Rules of Procedure, if applicable.

B. Pending resolution of any claim and/or dispute, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Contract so as to avoid delay in the schedule of completion of the Project.

C. To the extent Contractor pursues a claim or litigation against the District and the District prevails on any or all of its own claims or defenses to Contractor's claims, Contractor will be liable for any and all legal fees, professional fees, costs or expenses of the District, as well as the true cost of any of the District's employees' time, associated with analyzing any claim, pursuing litigation or defending the claim or litigation. Further, to the extent any Contractor makes an excessive number of claims, which excessiveness shall be determined solely in the discretion of the District, and the District incurs any legal fees, professional fees, expenses, costs (including, but not limited to, employee cost), Contractor shall be liable for such fees, expenses or costs. In the event of a dispute between Contractor and the District, to the extent that the District incurs any legal fees, professional fees, or other costs or expenses, Contractor will be responsible for those amounts, which will be deducted, to the extent available, from any amount due Contractor. If the amount due Contractor is not sufficient to cover such costs and expenses, Contractor shall pay the difference to the District within seven (7) days of receipt of the District's invoice for such legal fees, professional fees, or other cost or expenses.

17. WAIVER OF CLAIMS

The acceptance of final payment shall constitute a waiver of all claims by Contractor against the District other than those previously made in writing and specifically identified by Contractor as unsettled at the time of application for final payment.

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18. TERMINATION OF CONTRACT

Upon ten (10) days written notice to Contractor, the District may, with or without cause and without prejudice to any other right or remedy, elect to terminate the Contract. Upon receipt of written notice from the District of such termination, Contractor shall cease operations as directed by the District in the notice; take actions necessary, or as the District may direct, for the protection and preservation of the work or products; and except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing contracts, subcontracts and purchase orders and enter into no further contracts, subcontracts and purchase orders. In case of such termination, where Contractor is without fault, Contractor shall be entitled to receive payment from the District for all satisfactorily services or work and/or products completed prior to termination.

19. PENNSYLVANIA PROMPT PAY ACT

Contractor expressly waives any right to penalties, interest and attorney's fees pursuant to the prompt payment provisions of the Pennsylvania Commonwealth Procurement Code, 62 Pa.C.S. § 3931 et seq., as amended from time to time.

20. COMPLIANCE WITH LAWS

A. Contractor shall comply with all applicable federal, state, local and industry statutes, regulations, ordinances, codes and standards. The specific statutory requirements enumerated in this Section shall not limit the generality of the foregoing sentence or be construed as an exhaustive enumeration of Contractor's obligations under applicable laws. The failure to specifically reference or include said matters in the Contract does not excuse Contractor from compliance with same. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

B. Hazardous Materials. Each Contractor supplying or using any materials containing any hazardous substance listed on the Hazardous Substance List compiled by the Commonwealth of Pennsylvania, Department of Labor & Industry, must furnish appropriate material safety data sheets for all products for this Project. The District reserves the right to require Contractor to use alternative products if, in the District's sole discretion, the product is too hazardous to be used in a public school. The Contractor shall comply with all other terms and conditions of the Pennsylvania Worker and Community Right-to-Know Act, Act No. 159 of 1984, 35 P.S. §7301 *et seq.*, providing all information regarding the composition of all materials and products used or installed as part of the Project when required.

C. Human Relations. Contractor shall comply with the Pennsylvania Human Relations Act, 43 P.S. §951 *et seq.*, which prohibits discrimination because of race, color, religious creed, ancestry, age, sex, national origin, handicap or disability, by employers, employment agencies, labor organizations, contractors and others. Contractor's attention is

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directed to the language of the Commonwealth Non-Discrimination Clause as set forth in 16 Pa. Code §349.101.

D. Pennsylvania Uniform Construction Code. The Contractor shall comply with all requirements of the Pennsylvania Uniform Construction Code, 35 P.S. § 7210.301 – 7210.304.

E. Prevention of Environmental Pollution. Section 3301 of the Pennsylvania Commonwealth Procurement Code requires that all invitations for bids and requests for proposals for construction projects issued by any governmental agencies set forth any provision of Federal and State statutes, rules, and regulations dealing with prevention of environmental pollution and the preservation of public natural resources that affect the Project. In this regard, a list of said provisions has been prepared by the Pennsylvania Department of Environmental Resources under Act 247 of 1972, 52 P.S. § 1612 (repealed). A copy of said list is available from Owner upon request. Contractor is hereby notified and agrees to comply with the terms of all statutes, rules and regulations enumerated in said list. Where any identified environmental statute, rule and/or regulation has been revised, amended, supplemented, repealed and/or supplanted, Contractor shall comply with such statute, rule and/or regulation as so modified. Notwithstanding the foregoing, failure to include any applicable environmental statute, rule and/or regulation in said list shall not relieve Contractor of its obligation to comply with same.

F. Site Excavation. To the extent applicable, Contractor shall comply with all rules and regulations of Chapter 102, Title 25 of the Pennsylvania Code relating to soil erosion and sedimentation control. Prior to any grading, Contractor shall obtain approval from the Department of Environmental Protection or County Conservation Commission for an approved sedimentation and erosion control site plan and shall perform all necessary site work in accordance with said plan. The plan shall be available at the site at all times. The Contractor shall maintain all devices as required to control erosion caused by storm water and prevent dust and particles from being distributed on site. Contractor shall request the location and type of utility lines at the Project site by notifying utility owners through the one call system as defined in 73 P.S. § 176. Notification shall be not less than three (3) business days nor more than ten (10) business days in advance of beginning excavation or demolition work. No work shall begin earlier than the scheduled excavation date which shall be on or after the third business day after notification.

G. Aluminum and Steel Products. The Contractor shall strictly comply with all requirements of the Pennsylvania Steel Products Procurement Act, 73 P.S. § 1881, *et seq.*, and Trade Practices Act, 71 P.S. § 773.101, *et seq.*, with respect to any steel aluminum or cast iron product (including machinery and equipment) used in connection with the Project.

H. Discrimination Prohibited. According to 62 Pa.C.S. § 3701, Contractor agrees to comply with and require subcontractors to comply with the following:

(i) In the hiring of employees for the performance of work under the Contract, or any subcontract, no contractor, subcontractor, or any person acting on behalf of the Contractor or subcontractor shall, by reason of gender, race, creed or color, discriminate against

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any citizen of the Commonwealth of Pennsylvania who is qualified and available to perform the work to which the employment relates.

(ii) No Contractor, subcontractor, or any person acting on their behalf, shall in any manner discriminate against or intimidate any employee hired for the performance of work under the Contract on account of gender, race, creed or color.

(iii) The Contract may be canceled or terminated by the District and all money due or to become due under the Contract may be forfeited, for a violation of the terms or conditions of 62 Pa.C.S. § 3701.

(iv) Contractor and each subcontractor or any person acting on their behalf shall furnish necessary employment documents and records to and permit access to their books, records, and accounts by the District and the Bureau of Contract Administration and Business Development, for purposes of investigation, to ascertain compliance with the terms or conditions of the Contract. If Contractor or any subcontractor does not possess documents or records reflecting the necessary information requested, Contractor or subcontractor shall furnish such information on reporting forms supplied by the District or the Bureau of Contract Administration and Business Development.

I. Public Works Employment Verification Act. Contractor shall cause each subcontractor (as defined in the Public Works Employment Verification Act) to submit to the District a separate and complete Verification Form, executed by a representative who has sufficient knowledge and authority to make the representations and certifications contained in the Verification Form required by the Public Works Employment Verification Act, 43 P.S. § § 167.1 *et seq.*, before performing any work on the Project.

J. Pennsylvania Prevailing Wage Rates. If required by applicable laws, the Prevailing Wage Rates, as determined by the Secretary of the Department of Labor and Industry, Prevailing Wage Division of the State of Pennsylvania, for the locality of the work and for each classification of workers needed to perform the Contract shall be paid to all workers performing labor for the Project. The provisions of the Pennsylvania Prevailing Wage Act, 43 P.S. §165.1, *et seq.*, regulations and the Pennsylvania Prevailing Minimum Wage Rates, as determined by the Secretary of Labor and Industry, are made part of the Contract.

K. Criminal History and Child Protective Services Information. No employee of Contractor, or an employee of Contractor's subcontractors or material suppliers, if any, may enter upon District Property to perform any work in connection with the Project, until the District shall approve such individual based upon a review of the following complete documents supplied by Contractor at Contractor's expense:

(i) Original report of criminal history record information from the Pennsylvania State Police or a statement from the Pennsylvania State Police that the Pennsylvania State Police central repository contains no such information relating to any of Contractor's employees or its subcontractor's employees working on the Project site. Such report of criminal history shall be dated no more than one (1) year prior to the date of execution of the

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Form of Contract. To obtain this document, contact the nearest Pennsylvania State Police barracks.

(ii) Copy of the Federal Criminal History record from the Federal Bureau of Investigation in the manner prescribed by the Department of Education. To obtain such a report, contact the nearest FBI Field Office.

(iii) Original statement completed and signed by each employee or subcontractor detailing that individual's criminal arrests and convictions in accordance with Section 111 of the Public School Code of 1949, 24 P.S. Section 1-111, on the most recently published form by the Pennsylvania Department of Education.

(iv) An official certification from the Pennsylvania Department of Public Welfare as to whether the applicant is named in the Statewide database as the alleged perpetrator in a pending child abuse investigation or as the perpetrator of a founded report of child abuse or an indicated report of child abuse, pursuant to Act 151 of December 16, 1994 (P.L. 1292), subchapter C.2 of the Child Protective Services Law, and 23 Pa.C.S. §6344.2, as amended from time to time.

L. Prohibited Employment. The Contractor and its subcontractors shall refuse to employ any person as an independent contractor or employee whose Federal Criminal History record information indicates that such prospective employee has been convicted of any of the following offenses:

(i) An offense under one (1) or more of the following provisions of Title 18 of the Pennsylvania Consolidated Statutes:

- Chapter 25 (relating to criminal homicide).
- Section 2702 (relating to aggravated assault).
- Former section 2709(b) (relating to stalking).
- Section 2709.1 (relating to stalking).
- Section 2901 (relating to kidnapping).
- Section 2902 (relating to unlawful restraint).
- Section 3121 (relating to rape).
- Section 3122.1 (relating to statutory sexual assault).
- Section 3123 (relating to involuntary deviate sexual intercourse).
- Section 3124.1 (relating to sexual assault).
- Section 3125 (relating to aggravated indecent assault).
- Section 3126 (relating to indecent assault).
- Section 3127 (relating to indecent exposure).
- Section 4302 (relating to incest).
- Section 4303 (relating to concealing death of child).
- Section 4304 (relating to endangering welfare of children).
- Section 4305 (relating to dealing in infant children).
- A felony offense under Section 5902(b) (relating to prostitution and related offenses).

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- Section 5903(c) or (d) (relating to obscene and other sexual materials and performances).
- Section 6301 (relating to corruption of minors).
- Section 6312 (relating to sexual abuse of children).

(ii) An offense designated as a felony under the act of April 14, 1972 (P.L. 233, No. 64), known as "The Controlled Substance, Drug, Device and Cosmetic Act."

(iii) An out-of-State or Federal offense similar in nature to those crimes listed above.

(iv.) If a report of criminal history record information indicates that a person has been convicted of an offense graded as a felony offense of the first, second or third degree other than of the offenses enumerated above, the person shall be eligible for continued or prospective employment only if a period of ten (10) years has elapsed from the date of expiration of the sentence for the offense.

(v.) If a report of criminal history record information indicates that the person has been convicted of an offense graded as a misdemeanor of the first degree, other than the offenses enumerated above, the person shall be eligible for continued or prospective employment only if a period of five (5) years has elapsed from the date of expiration of the sentence for the most recent offense.

(vi.) If a report of criminal history record information indicates that the person has been convicted more than once of an offense relating to driving under the influence of marijuana or a controlled substance and the offense is graded as a misdemeanor of the first degree, the person shall be eligible for continued or prospective employment only if a period of three (3) years has elapsed from the date of expiration of the sentence for the most recent offense.

21. INTERPRETATIONS.

The captions and headings of various Paragraphs in the Contract are for convenience only and are not to be construed as defining or limiting, in any way, the scope or intent of the provisions hereof. The invalidity of any covenant, restriction, condition, limitation or any other part or provision of the Contract shall not impair or affect in any manner the validity, enforceability or effect of the remainder of the Contract.

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BID FORM

Trinity Area School District
231 Park Avenue
Washington, PA 15301

DATE _____

BIDDER _____

Attn: Taylor Hott, Director of Fiscal Services

Re: Paving Project

The following Bid is submitted in response to your Invitation to Bid.

The Bid Security in the amount required by the Instructions to Bidders and the General Conditions of the Contract is enclosed with the Bid. It is agreed by this Bidder that the Bid Security shall be forfeited to the Trinity Area School District (“District”) if this Bidder does not, within ten (10) days after notification of Award of Contract, furnish to the District the applicable Performance Bond, Payment Bond, insurance certificate, Verification Form, executed Contract and Detailed Cost Break-Down for the Project as required by the Bid Documents.

This Bidder has carefully examined the Bid Documents and the Project site, and certifies that it fully understands the requirements thereof. This Bidder agrees that, upon receipt of a fully executed Contract, it will furnish and deliver materials and perform the work necessary to complete the Project in accordance with the Specifications and other Contract Documents in an expeditious and workmanlike manner to the complete satisfaction and acceptance of the District for the price hereinafter stated.

This Bidder submits this Bid with the understanding that the work encompassed in the Bid Documents shall be commenced immediately upon receipt of the Notice to Proceed and shall be fully and finally completed within twenty-four (24) calendar days of the District’s issuance of a Notice to Proceed to Contractor and that time for the completion of the work shall be considered of the essence.

This Bidder understands the following supplements to the Bid Form must be submitted concurrent with this Bid submission.

Bid Security
Non-Collusion Affidavit
Attachment to Bid Form regarding Rebates and Discounts

Bidder understands the following supplements to the Bid Form must be executed and submitted to the District within ten (10) calendar days after notification is received that it is the lowest responsive and responsible Bidder and that failure to do so within such time shall be a deficiency

Bidder’s Initials _____

Bid Form
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in the Bid and cause for the District to reject this Bid, award the Contract to another entity and retain Bidder's Bid Security:

- Contract Form
- Performance Bond
- Payment Bond
- Certificate of Insurance
- Detailed Cost Break-Down
- Verification Form required by the Public Works Employment Verification Act

This Bid is submitted with the definite understanding that Bids are valid for acceptance by the District and may not be withdrawn for a period of at least sixty (60) days after the actual date of the opening thereof, or such longer period specified in the Construction Documents.

It is understood that the District reserves the right to reject any or all Bids, or part(s) thereof or item(s) therein, and to waive technical deficiencies with the Bid if it is in the best interests of the District. Omission of any information may be sufficient cause for rejection of this Bid. It is further understood that competency and responsibility of Bidders will receive consideration before the Award of Contract.

The undersigned will not assign its Bid or any of its rights or interests thereunder without the written consent of the District.

The Base Bid and other required information are submitted in the spaces provided. Handwritten initials on each page of this Bid Form identify each as a part of this Bid.

BASE BID

The sum for the Paving Project.

(words) _____ dollars (\$ _____)
(figures)

ALTERNATE BID

The Add Alternate Bid shall consist of the area shown on the drawings. This will include milling and resurfacing of that area. Please refer to the specifications for more detail.

The sum for the Alternate Bid.

(words) _____ dollars (\$ _____)
(figures)

Bidder's Initials _____

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UNIT PRICES

The Contractor is required to bid unit prices on the following items as identified below. If any extra work is required in these categories beyond the Contract requirements, the unit prices shall be used as a basis for determining the amount of additional payment to Contractor. Each unit price represents the full compensation per unit of measurement for the materials or services, including, without limitation, all labor, material, equipment, insurance, taxes, overhead, profit, mark-ups and other general condition costs. The District reserves the right to reject any unit price which is unreasonable or unbalanced, as compared with prevailing costs, or as compared with the unit prices submitted by the other bidders for this Project. The District reserves the right to ask for a revised unit price before or after the Contracts are signed.

Item	Units	Price per Unit
Unit Price 1: Additional asphalt needed to extend any paving areas. (full designed profile)	\$/SF	_____
Unit Price 2: Additional LF of asphalt wedge curb.	\$/LF	_____
Unit Price 3: Additional line stripping or curb painting.	\$/LF	_____
Unit Price 4: Remove and replace unsuitable subgrade material.	\$/YD	_____
Unit Price 5: Provide and install Geotech fabric to stabilize any questionable subgrade areas that are soft or wet.	\$/SY	_____

ADDENDA

The Bidder acknowledges receipt of Addenda listed below which have been issued during the bidding period and agrees that said Addenda shall become part of the Contract (Bidder shall list numbers and dates of Addenda received). Bidder understands that it had the responsibility to confirm its receipt of all Addenda prior to the submission of its Bid. Addenda properly issued by District and not listed herein shall be cause for rejection of the Bid.

No. _____ Date _____

No. _____ Date _____

No. _____ Date _____

IDENTIFICATION OF BIDDER

Company _____ Phone _____

Bidder's Initials _____

**TRINITY AREA SCHOOL DISTRICT
PAVING PROJECT**

Address _____

Please check the appropriate category:

_____ Sole Proprietorship _____ Partnership _____ Joint Venture

_____ Pennsylvania Corporation or Limited Liability Company

_____ Foreign Corporation or Company Registered in PA

Other: _____ (please identify)

State of Organization: _____

Federal Identification Number: _____

All correspondence and notices to the Bidder related to this Bid and Contract, if awarded, shall be directed to:

Name: _____

Title: _____

Phone: _____

Address: _____

Email Address: _____⁺

⁺Correspondence directed to the following email address shall be deemed received by the Bidder on the date the email was transmitted.

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

SIGNATURES

(Individual)

(Signature of Individual) (SEAL)

WITNESS:

Bidder's Initials _____

**TRINITY AREA SCHOOL DISTRICT
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(print name of Individual)
trading & doing business as

(Partnership)

WITNESS:

(Name of Partnership)

By: _____ (SEAL)

Print Name: _____

Partner

By: _____ (SEAL)

Print Name: _____

Partner

By: _____ (SEAL)

Print Name: _____

Partner

(Corporation)

ATTEST:

(Name of Corporation)

Print Name: _____

Title: Secretary (Assistant Secretary)

By: _____ (SEAL)

Print Name: _____

Title: President (Vice President)

(CORPORATE SEAL)

or (if appropriate)

WITNESS:

(Name of Corporation)

*By: _____

(Authorized Representative)

Bidder's Initials _____

**TRINITY AREA SCHOOL DISTRICT
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Print Name: _____

*Attach resolution evidencing authority to execute on behalf of the corporation.

Bidder's Initials _____

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(Limited Liability Company)

WITNESS:

(Name of Limited Liability Company)

By: _____ (SEAL)

Print Name: _____

(Managing) Member

By: _____ (SEAL)

Print Name: _____

Member

By: _____ (SEAL)

Print Name: _____

Member

or (if appropriate)

WITNESS:

(Name of Limited Liability Company)

*By: _____

(Authorized Representative)

Print Name: _____

*Attach resolution evidencing authority to execute on behalf of the company.

**TRINITY AREA SCHOOL DISTRICT
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NON-COLLUSION AFFIDAVIT

Commonwealth of Pennsylvania :
: s.s.
County of _____ :

I state that I am _____ of _____ the Bidder
(Title) (Name of My Company),
that submitted the attached Bid and that I am authorized to make this affidavit on behalf of my
company, its owners, directors, and officers. I am the person responsible in my company for the
price(s) and the amount of this Bid.

I state that:

(1) The price(s) and amount of this Bid have been arrived at independently and without consultation, communication or agreement by the Bidder, any of its sureties, agents, representatives, owners, employees, or parties in interest with any other contractors, bidders, potential bidders or any other sureties, agents, representatives, owners, employees or parties in interest of any other contractors, bidders or potential bidders. The price(s) quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its sureties, agents, representatives, owners, employees, or parties in interest.

(2) Neither the price(s) nor the amount of this Bid, and neither the approximate price(s) nor approximate amount of this Bid, have been disclosed to any other company or person who is a bidder, potential bidder or a surety, agent, representative, owner, employee or party in interest of any other contractor, bidder or potential bidder, and they will not be disclosed before opening bid.

(3) No attempt has been made or will be made to induce any company or person to refrain from bidding on this contract, or to submit a Bid higher than this Bid, or to submit any collusive or intentionally high or non-competitive Bid or other form of complementary Bid.

(4) The Bid of my company is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any bidder, potential bidder or a surety, agent, representative, owner, employee or party in interest of any other contractor, bidder or potential bidder to submit a complementary or other non-competitive Bid.

(5) _____, its affiliates, subsidiaries, officers, directors, and
(Name of My Company)
employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State of Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows: _____

**TRINITY AREA SCHOOL DISTRICT
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I state that _____ understands and acknowledges that the
(Name of My Company)
above representations are material and important, and will be relied on by Lehigh Area
School District in awarding the contract(s) for Project for which this Bid is submitted.

I understand and my company understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment of true facts relating to the submission of Bids for this contract.

(Name and Position in Company)

**SWORN TO AND SUBSCRIBED
BEFORE ME THIS ____ DAY
OF _____, 20__**

Notary Public
My Commission Expires:

**TRINITY AREA SCHOOL DISTRICT
PAVING PROJECT**

CONTRACT FORM

This Contract is made and entered into this _____ day of _____, 2023 by and between the Trinity Area School District (hereinafter, the “District”) and _____ (the “Contractor”).

Whereas, Contractor submitted a Bid for the full and complete performance of the Paving Project (the “Project”) as detailed in the Specifications incorporated in the Contract Documents;

Whereas, the District notified Contractor that it was the lowest responsive and responsible Bidder for the Project;

Whereas, Contractor executes this Contract Form to memorialize its acceptance of the terms and conditions of the Contract.

Now, therefore for the consideration stated herein and other good and valuable consideration, the sufficiency of which is expressly acknowledged by both parties, and intending to be legally bound hereby, the parties mutually agree as follows:

1. Capitalized terms not defined herein shall have the same means as set forth in the Instructions to Bidders or General Conditions of the Contract, as applicable.
2. Contractor agrees to furnish all products and/or work for the completion of the Project to the District in accordance with the Contract Documents.
3. Subject to the requirements of the General Conditions of the Contract and adjustments for the unit prices set forth in the Bid, the Contract Sum to be paid by the District to Contractor for the completion of the work required for the Project shall be _____ DOLLARS and _____ CENTS (\$ _____).
4. Contractor shall complete all work for the Project so that the District may take beneficial use there of no later than twenty-four (24) calendar days after the District’s issuance of a Notice to Proceed to Contractor.
5. The entire integrated agreement between the District and Contractor in connection with the Project includes this Contract Form, the completed Performance Bond, the completed Payment Bond, the completed Non-Collusion Affidavit, the completed Bid Form, any other completed forms required by the Bid Documents, and the Bid Documents, all of which are incorporated herein by reference.

IN WITNESS WHEREOF, the Contractor and District cause this Contract to be signed, sealed and delivered as of the day and year first above written.

**TRINITY AREA SCHOOL DISTRICT
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Contractor:

Trinity Area School District:

Signature

Signature

Name and Title

Name and Title

**TRINITY AREA SCHOOL DISTRICT
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BID BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____
(hereinafter called the “Principal”), and _____
a company authorized to transact business in the Commonwealth of Pennsylvania, and having its
principal office at _____
(hereinafter called the “Surety”), as Surety, are held and firmly bound unto the TRINITY AREA
SCHOOL DISTRICT (hereinafter called the “Obligee”), as Obligee, in the amount equal to TEN
PERCENT (10%) OF THE BASE BID PLUS ANY ADDITIVE ALTERNATES (the “Penal
Sum”), as lawful money of the United States of America, for payment of which we bind
ourselves, and each of our respective heirs, legal representatives, successors and assigns, jointly
and severally, by these presents, on this ____ day of _____, 2023.

WHEREAS, said Principal is herewith submitting to the Obligee a bid to perform work
for the Obligee’s Paving Project in North Franklin Township, Washington County, Pennsylvania,
pursuant to drawings, specifications, and other Contract Documents incorporated into said bid by
reference; and it is a condition of the Obligee’s receipt and consideration of said bid that such
shall be accompanied by bid security to be held by the Obligee on terms embodied herein.

THEREFORE, the condition of this obligation is that if said Principal shall, in the event
of acceptance of its Bid by Obligee and within the period specified therefore in the Contract
Documents, enter into a written contract with the Obligee, in accordance with the Bid as
accepted, and give bond(s) with good and sufficient surety or sureties, as may be required for the
faithful performance and proper fulfillment of such contract, in the form specified by the
Obligee, and furnish the required verification form, detailed cost break-down, certificates of
insurance and any other documents listed in the Contract Documents, in all respects as required
by the Contract Documents, then this obligation shall be void and of no effect, but otherwise it
shall remain in full force. In the event of the failure to enter into such contract, give such
bond(s), and furnish such verification form, detailed cost break-down, certificates of insurance or
other required documents within the time specified, the Principal and Surety will pay to the
Obligee the difference between the amount of the Principal’s accepted bid and any higher
amount for which the Obligee may contract for the required products and work, as well as any
advertising, professional, architectural, legal and other costs incurred by the Obligee by reason of
the default; provided, however, that the obligations of the Surety hereunder shall not exceed the
amount of the Penal Sum together with interest. If the Obligee does not procure an executed
contract with any other party for the provision of the products and work within thirty (30) days
after the acceptance of the Bid from the Principal, whether because of the lack of other bids or
the inability or refusal of any other Bidder to contract, or because the cost under any higher bid
would be greater than the Obligee would afford, as determined in the sole discretion of the

**TRINITY AREA SCHOOL DISTRICT
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Obligee, then in that event, the Principal and Surety shall pay to the Obligee the full amount of the Penal Sum together with interest as liquidated damages and not as penalty.

IN WITNESS WHEREOF, the Principal and the Surety cause this Bid Bond to be signed, sealed and delivered this ____ day of _____, 20__ .

Individual Principal (Trading and/or Doing Business as: _____)	
Witness: _____	By: _____
	Name: _____

Partnership Principal	
Name of Partnership: _____	
Witness: _____	By: _____
	Name: _____
	Title: _____
Witness: _____	By: _____
	Name: _____
	Title: _____

Corporate/Limited Liability Principal	
Name of Corporation/Company: _____	
	By: _____
Attest: _____	Name: _____
	Title: _____ *
[SEAL]	
* If the signatory is an authorized representative, attach proof evidencing authority to execute on behalf of the corporation or limited liability company.	

Corporate Surety	
Name of Surety: _____	
Witness or Attest: _____	By: _____
	Name: _____
	Title: _____ **
[SEAL]	
** Attach an appropriate Power of Attorney evidencing the authority of the Attorney-in-Fact to act on behalf of the Surety.	

**TRINITY AREA SCHOOL DISTRICT
PAVING PROJECT**

**TRINITY AREA SCHOOL DISTRICT
PAVING PROJECT**

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____,
as Principal (the "Principal"), and _____, a corporation organized
and existing under laws of the _____ of _____, with a principal
office at _____
_____, and authorized to do business in the Commonwealth of
Pennsylvania, as Surety (the "Surety"), are held and firmly bound, jointly and severally, unto the
TRINITY AREA SCHOOL DISTRICT, as Obligee (the "Obligee"), as hereinafter set forth, in the
full and just sum of _____ Dollars (\$ _____) lawful
money of the United States of America, for the payment of which we bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents. If
more than one surety is named above, said sureties shall be jointly and severally liable to Obligee.

WITNESSETH THAT:

WHEREAS, The Principal heretofore has submitted to the Obligee a certain bid (the "Bid"),
to perform certain paving work for the Obligee, in connection with the Paving Project located in
North Franklin Township, Washington County, Pennsylvania, pursuant to drawings, specifications
and other related documents, which are incorporated into the Bid by reference and a part thereof
(the "Contract Documents"); and

WHEREAS, the Contract Documents are incorporated into this Bond by reference and
made a part hereof; and

WHEREAS, The Obligee, is a "contracting body" under provisions of Act No. 385 of the
General Assembly of the Commonwealth of Pennsylvania, approved by the Governor on
December 20, 1967, known as and cited as the "Public Works Contractors' Bond Law of 1967" (the
"Act"); and

WHEREAS, the Act, in Section 3(a), requires that, before an award shall be made to the
Principal by the obligee in accordance with the Bid, the Principal shall furnish this Bond to the

**TRINITY AREA SCHOOL DISTRICT
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Obligee, with this Bond to become binding upon the award of a contract to the Principal by the Obligee in accordance with the Bid; and

WHEREAS, it also is a condition of the Contract Documents that this Bond shall be furnished by the Principal to the Obligee; and

WHEREAS, under the Contract Documents, it is provided, *inter alia*, that if the Principal shall furnish this Bond to the Obligee, and if the Obligee shall make an award to the Principal in accordance with the Bid, then the Principal and the Obligee shall enter into a contract with respect to performance of such work (the "Contract"), the form of which Contract is set forth in the Contract Documents.

NOW, THEREFORE, the terms and conditions of this Bond are and shall be that if the Principal and any subcontractor of the Principal to whom any portion of the work under the Contract shall be subcontracted, and if all assignees of the Principal and of any such subcontractor, promptly shall pay or shall cause to be paid, in full, all money which may be due any claimant supplying labor or materials in the prosecution and performance of the work in accordance with the Contract and in accordance with the Contract Documents, including any amendment, extension or addition to the Contract and/or to the Contract Documents, for material furnished or labor performed, then this Bond shall be void; otherwise, this Bond shall be and shall remain in force and effect.

This Bond, as provided by the Act, shall be solely for the protection of claimants supplying labor or materials to the Principal or to any subcontractor of the Principal in the prosecution of the work covered by the Contract, including any amendment, extension or addition to the Contract. The term "claimant", when used herein and as required by the Act, shall mean any individual, firm, partnership, association or corporation. The phrase "labor or materials" when used herein and as required by the Act, shall include public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the site of the work covered by the Contract. As required by the Act, the provisions of this Bond shall be applicable whether or not the material furnished or labor performed enters into and becomes a component part of the public building, public work or public improvement contemplated by the Contract Documents and the Contract.

As provided and required by the Act, the Principal and the Surety agree that any claimant, who has performed labor or furnished material in the prosecution of the work in accordance with the Contract and in accordance with the Contract Documents, including any amendment, extension or addition to the Contract and/or to the Contract Documents, and who has not been paid therefore, in full, before the expiration of ninety (90) days after the day on which such claimant performed the last of such labor or furnished the last of such materials for which payment is claimed, may institute an action upon this Bond, in the name of the claimant, in assumpsit, to recover any amount due the claimant for such labor or material; and may prosecute such action to final judgment and may have execution upon the judgment; provided, however, that: (a) any claimant who has a direct contractual relationship with any subcontractor of the Principal, but has no contractual relationship, express or implied, with the Principal, may institute an action upon this Bond only if such claimant

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first shall have given written notice, served in the manner provided in the Act, to the Principal, within ninety (90) days from the date upon which such claimant performed the last of the labor or furnished the last of the materials for which payment is claimed, stating, with substantial accuracy, the amount claimed and the name of the person for whom the work was performed or to whom the material was furnished; and (b) no action upon this Bond shall be commenced after the expiration of one (1) year from the day upon which the last of the labor was performed or material was supplied, for the payment of which such action is instituted by the claimant; and (c) every action upon this Bond shall be instituted either in the appropriate court of the County where the Contract is to be performed or of such other County as Pennsylvania statutes shall provide, or in the United States District Court for the district in which the project, to which the Contract relates, is situated, and not elsewhere.

This Bond is executed and delivered under and subject to the Act, to which reference hereby is made.

The Principal and the Surety agree that any alterations, changes and/or additions to the Contract Documents, and/or any alterations, changes and/or additions to the work to be performed under the Contract in accordance with the Contract Documents, and/or any alterations, changes and/or additions to the Contract, and/or any giving by the Obligee of any extensions of time for the performance of the Contract in accordance with the Contract Documents, and/or any act of forbearance of either the Principal or the Obligee toward the other with respect to the Contract Documents and the Contract, and/or the reduction of any percentage to be retained by the Obligee as permitted by the Contract Documents and by the Contract, shall not release, in any manner whatsoever, the Principal and the Surety, or either of them, or their heirs, executors, administrators, successors and assigns, from liability and obligations under this Bond; and the Surety, for value received, does waive notice of any such alterations, changes, additions, extensions of time, acts of forbearance and/or reduction of retained percentage.

Provided, that it is expressly agreed that this Bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract Documents not increasing the contract price more than twenty percent (20%), so as to bind the Principal and the Surety to the full and faithful performance of the Contract Documents as so amended. The term "amendment", wherever used in this Bond and whether referring to this Bond, the Contract Documents, or the Contract, shall include any alteration, addition, extension or modification of any character whatsoever.

Provided, further, that no final settlement between the Obligee and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

If the Principal is a foreign corporation (incorporated under any laws other than those of the Commonwealth of Pennsylvania) then further terms and conditions of this Bond are and shall be that the Principal or the Surety shall not be discharged from liability on this Bond, nor this Bond surrendered until such Principal files with the Obligee a certificate from the Pennsylvania Department of Revenue evidencing the payment in full of all bonus taxes, penalties and interest, and a certificate from the Bureau of Employment and Unemployment Compensation of the

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Pennsylvania Department of Labor & Industry, evidencing the payment of all unemployment compensation, contributions, penalties and interest due the Commonwealth from said Principal or any foreign corporation, subcontractors thereunder or for which liability has accrued but the time for payment has not arrived, all in accordance with provisions of the Act of June 10, 1947, P.L. 493, of the Commonwealth of Pennsylvania.

IN WITNESS WHEREOF, the Principal and the Surety cause this Payment Bond to be signed, sealed and delivered this _____ day of _____, 20____.

Individual Principal (Trading and/or Doing Business as: _____)	
Witness: _____	By: _____ Name: _____

Partnership Principal Name of Partnership: _____	
Witness: _____	By: _____ Name: _____ Title: _____
Witness: _____	By: _____ Name: _____ Title: _____

Corporate/Limited Liability Principal Name of Corporation/Company: _____	
Attest: _____	By: _____ Name: _____ Title: _____*
[SEAL]	
* If the signatory is an authorized representative, attach proof evidencing authority to execute on behalf of the corporation or limited liability company.	

**TRINITY AREA SCHOOL DISTRICT
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Corporate Surety

Name of Surety: _____

Witness or Attest:

By: _____

Name: _____

[SEAL]

Title: _____ **

** Attach an appropriate Power of Attorney evidencing the authority of the Attorney-in-Fact to act on behalf of the Surety.

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PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____, as Principal (the "Principal"), and _____, a corporation organized and existing under the laws of the _____ of _____, having its principal office at _____, and authorized to do business in the Commonwealth of Pennsylvania, as Surety (the "Surety"), are held and firmly bound, jointly and severally, unto the TRINITY AREA SCHOOL DISTRICT, as Obligee (the "Obligee"), as hereinafter set forth in the full and just sum of _____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. If more than one surety is named above, said sureties shall be jointly and severally liable to Obligee.

WITNESSETH THAT:

WHEREAS, The Principal heretofore has submitted to the Obligee a certain bid (the "Bid"), to perform certain paving work for the Obligee, in connection with the Paving Project located in North Franklin Township, Washington County, Pennsylvania pursuant to plans, specifications and other related documents, constituting the contract documents, which are incorporated into the Bid by reference and a part thereof (the "Contract Documents"); and

WHEREAS, the Contract Documents are incorporated in this Bond by reference and made a part hereof; and

WHEREAS, the Obligee is a "Contracting Body" under provisions of Act No. 385 of the General Assembly of the Commonwealth of Pennsylvania, approved by the Governor on December 20, 1967, known and cited as the "Public Works Contractors' Bond Law of 1967" (the "Act"); and

**TRINITY AREA SCHOOL DISTRICT
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WHEREAS, the Act, in Section 3(a), requires that, before an award shall be made to the Principal by the Obligee in accordance with the Bid, the Principal shall furnish this Bond to the Obligee, with this Bond to become binding upon the award of a contract to the Principal by the Obligee in accordance with the Bid; and

WHEREAS, it also is a condition of the Contract Documents that this Bond shall be furnished by the Principal to the Obligee; and

WHEREAS, under the Contract Documents, it is provided, *inter alia*, that if the Principal shall furnish this Bond to the Obligee, and if the Obligee shall make an award to the Principal in accordance with the Bid, then the Principal and the Obligee shall enter into a contract with respect to performance of such work (the "Contract"), the form of which Contract is set forth in the Contract Documents.

NOW, THEREFORE, the terms and conditions of this bond are and shall be that if: (a) the Principal well, truly and faithfully shall comply with and shall perform the Contract in accordance with the Contract Documents, at the time and in the manner provided in the Contract and in the Contract Documents, and if the Principal shall satisfy all claims and demands incurred in or related to the performance of the Contract by the Principal or growing out of the performance of the Contract by the Principal, and if the Principal shall indemnify completely and shall save harmless the Obligee and all of its officers, agents and employees from any and all costs and damages which the Obligee and all of its officers, agents and employees may sustain or suffer by reason of the failure of the Principal to do so, and if the Principal shall reimburse completely and shall pay to the Obligee any and all costs and expenses which the Obligee and all of its officers, agents and employees may incur by reason of any such default or failure of the Principal, including, but not limited to, additional legal and professional fees resulting from such default or failure of the Principal, delay damages resulting from such default or failure of the Principal, and liquidated damages in accordance with the Contract Documents; and (b) if the Principal shall remedy, without cost to the Obligee, all defects which may develop during the period of two (2) years from the date of final completion by the Principal and acceptance of the Obligee of the work to be performed under the Contract in accordance with the Contract Documents, which defects, in the sole judgment of the Obligee or its legal successors in interests, shall be caused by or shall result from defective or inferior materials or workmanship, then this Bond shall be void; otherwise, this Bond shall be and shall remain in force and effect and all claims, demands, costs, expenses and damages including, but not limited to, additional legal and professional fees resulting from the default or failure of Principal, delay damages resulting from such default or failure of the Principal, and liquidated damages in accordance with the Contract Documents, shall be payable by Principal and Surety to Owner; provided, however, that the obligations of the Surety hereunder shall not exceed the amount of this Performance Bond.

This Bond is executed and delivered under and subject to the Act, to which reference hereby is made.

The Principal and the Surety agree that any alterations, changes and/or additions to the Contract Documents, and/or any alterations, changes and/or additions to the work to be performed

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under the Contract in accordance with the Contract Documents, and/or any alterations, changes and/or additions to the Contract, and/or any giving by the Obligee of any extensions of time for the performance of the Contract in accordance with the Contract Documents, and/or any act of forbearance of either the Principal or the Obligee toward the other with respect to the Contract Documents and the Contract, and/or the reduction of any percentage to be retained by the Obligee as permitted by the Contract Documents and by the Contract, shall not release, in any manner whatsoever, the Principal and the Surety, or either of them, or their heirs, executors, administrators, successors and assigns, from liability and obligation under this bond; and the Surety, for value received, does waive notice of any such alterations, changes, additions, extensions of time, acts of forbearance and/or reduction of retained percentage.

If the Principal is a foreign corporation (incorporated under any laws other than those of the Commonwealth of Pennsylvania) then further terms and conditions of this Bond are and shall be that the Principal and the Surety shall not be discharged from liability on this Bond, nor this Bond surrendered until such Principal files with the Obligee a certificate from the Pennsylvania Department of Revenue evidencing the payment in full of all bonus taxes, penalties and interest, and a certificate from the Bureau of Employment and Unemployment Compensation of the Pennsylvania Department of Labor and Industry, evidencing the payment of all unemployment compensation, contributions, penalties and interest due the Commonwealth from said Principal or any foreign corporation, subcontractor thereunder or for which liability has accrued but the time for payment has not arrived, all in accordance with provisions of the Act of June 10, 1947, P.L. 493, of the Commonwealth of Pennsylvania.

Any proceeding, legal or equitable, under this Bond shall be instituted in the Court of Common Pleas of Washington County, Pennsylvania, and in any such proceeding Obligee may join both Principal and Surety as parties, and Principal and Surety hereby consent to such joinder, jurisdiction and venue. This Bond shall be governed by, and construed and enforced in accordance with, the laws of the Commonwealth of Pennsylvania.

IN WITNESS WHEREOF, the Principal and the Surety cause this Performance Bond to be signed, sealed and delivered this _____ day of _____, 20____.

Individual Principal (Trading and/or Doing Business as: _____)	
Witness: _____	By: _____
_____	Name: _____

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Partnership Principal Name of Partnership: _____	By: _____
Witness: _____	Name: _____ Title: _____
Witness: _____	By: _____ Name: _____ Title: _____

Corporate/Limited Liability Principal Name of Corporation/Company: _____	By: _____
Attest: _____	Name: _____ Title: _____*
[SEAL]	
* If the signatory is an authorized representative, attach proof evidencing authority to execute on behalf of the corporation or limited liability company.	

Corporate Surety Name of Surety: _____	By: _____
Witness or Attest: _____	Name: _____ Title: _____**
[SEAL]	
** Attach an appropriate Power of Attorney evidencing the authority of the Attorney-in-Fact to act on behalf of the Surety.	

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PENNSYLVANIA PREVAILING WAGES

Attached please find the Bureau of Labor Law Compliance Prevailing Wages Project Rates for this Project.

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

Project Name:	Trinity High School Paving & Concrete Project
Awarding Agency:	Trinity Area School District
Contract Award Date:	6/15/2023
Serial Number:	23-04752
Project Classification:	Heavy/Highway
Determination Date:	5/19/2023
Assigned Field Office:	Pittsburgh
Field Office Phone Number:	(412)565-5300
Toll Free Phone Number:	(877)504-8354
Project County:	Washington County

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

Project: 23-04752 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	8/1/2021		\$40.05	\$27.86	\$67.91
Asbestos & Insulation Workers	8/1/2022		\$41.40	\$28.51	\$69.91
Boilermakers	6/1/2016		\$40.90	\$27.61	\$68.51
Bricklayer	6/1/2021		\$35.15	\$23.84	\$58.99
Bricklayer	6/1/2022		\$36.34	\$24.60	\$60.94
Bricklayer	12/1/2022		\$36.99	\$24.95	\$61.94
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2021		\$36.23	\$19.31	\$55.54
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	7/1/2022		\$37.67	\$19.93	\$57.60
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2023		\$39.69	\$19.93	\$59.62
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2024		\$41.49	\$19.93	\$61.42
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2025		\$43.34	\$19.93	\$63.27
Cement Masons	6/1/2021		\$31.77	\$21.89	\$53.66
Cement Masons	6/1/2022		\$32.57	\$22.59	\$55.16
Drywall Finisher	6/1/2021		\$31.00	\$21.39	\$52.39
Drywall Finisher	6/1/2022		\$32.00	\$21.89	\$53.89
Electricians & Telecommunications Installation Technician	12/26/2021		\$45.86	\$29.29	\$75.15
Electricians & Telecommunications Installation Technician	12/26/2022		\$48.31	\$29.29	\$77.60
Elevator Constructor	1/1/2018		\$47.22	\$33.00	\$80.22
Elevator Constructor	1/1/2023		\$56.14	\$42.83	\$98.97
Glazier	9/1/2021		\$32.61	\$27.19	\$59.80
Glazier	9/1/2023		\$34.05	\$28.65	\$62.70
Iron Workers	6/1/2022		\$38.39	\$34.27	\$72.66
Iron Workers	6/1/2023		\$38.89	\$35.02	\$73.91
Laborers (Class 01 - See notes)	1/1/2021		\$22.82	\$19.32	\$42.14
Laborers (Class 01 - See notes)	1/1/2022		\$24.82	\$19.46	\$44.28
Laborers (Class 01 - See notes)	1/1/2023		\$25.82	\$19.46	\$45.28
Laborers (Class 01 - See notes)	1/1/2024		\$26.82	\$19.46	\$46.28
Laborers (Class 01 - See notes)	1/1/2025		\$27.32	\$19.96	\$47.28
Laborers (Class 01 - See notes)	1/1/2026		\$27.82	\$20.46	\$48.28
Laborers (Class 02 - See notes)	1/1/2021		\$22.97	\$19.32	\$42.29
Laborers (Class 02 - See notes)	1/1/2022		\$24.97	\$19.46	\$44.43
Laborers (Class 02 - See notes)	1/1/2023		\$25.97	\$19.46	\$45.43
Laborers (Class 02 - See notes)	1/1/2024		\$26.97	\$19.46	\$46.43
Laborers (Class 02 - See notes)	1/1/2025		\$27.47	\$19.96	\$47.43
Laborers (Class 02 - See notes)	1/1/2026		\$27.97	\$20.46	\$48.43
Laborers (Class 03 - See notes)	1/1/2021		\$23.10	\$19.32	\$42.42
Laborers (Class 03 - See notes)	1/1/2022		\$26.47	\$19.46	\$45.93
Laborers (Class 03 - See notes)	1/1/2023		\$28.97	\$19.46	\$48.43
Laborers (Class 03 - See notes)	1/1/2024		\$29.97	\$19.46	\$49.43
Laborers (Class 03 - See notes)	1/1/2025		\$30.47	\$19.96	\$50.43

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

Project: 23-04752 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 03 - See notes)	1/1/2026		\$30.97	\$20.46	\$51.43
Laborers (Class 04 - See notes)	1/1/2021		\$23.57	\$19.32	\$42.89
Landscape Laborer (Skilled)	1/1/2020		\$21.64	\$16.98	\$38.62
Landscape Laborer (Tractor Operator)	1/1/2020		\$21.94	\$16.98	\$38.92
Landscape Laborer	1/1/2020		\$21.22	\$16.98	\$38.20
Millwright	6/1/2020		\$41.88	\$20.32	\$62.00
Operators (Class 01 - see notes)	6/1/2021		\$37.09	\$23.35	\$60.44
Operators (Class 01 - see notes)	6/1/2022		\$38.89	\$23.69	\$62.58
Operators (Class 01 - see notes)	6/1/2023		\$40.69	\$23.89	\$64.58
Operators (Class 01 - see notes)	6/1/2024		\$41.69	\$24.39	\$66.08
Operators (Class 02 -see notes)	6/1/2021		\$31.02	\$23.35	\$54.37
Operators (Class 02 -see notes)	6/1/2022		\$32.82	\$23.69	\$56.51
Operators (Class 02 -see notes)	6/1/2023		\$34.62	\$23.89	\$58.51
Operators (Class 02 -see notes)	6/1/2024		\$35.62	\$24.39	\$60.01
Operators (Class 03 - See notes)	6/1/2021		\$29.23	\$23.35	\$52.58
Operators (Class 03 - See notes)	6/1/2022		\$30.03	\$23.69	\$53.72
Operators (Class 03 - See notes)	6/1/2023		\$31.83	\$23.89	\$55.72
Operators (Class 03 - See notes)	6/1/2024		\$32.83	\$24.39	\$57.22
Painters Class 6 (see notes)	6/1/2021		\$29.15	\$21.89	\$51.04
Painters Class 6 (see notes)	6/1/2022		\$29.50	\$22.82	\$52.32
Pile Driver Divers (Building, Heavy, Highway)	1/1/2021		\$54.75	\$20.10	\$74.85
Pile Driver Divers (Building, Heavy, Highway)	1/1/2022		\$56.40	\$20.50	\$76.90
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		\$58.70	\$21.22	\$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		\$60.95	\$21.97	\$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		\$62.82	\$22.72	\$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		\$64.70	\$23.47	\$88.17
Piledrivers	1/1/2021		\$36.50	\$20.10	\$56.60
Piledrivers	1/1/2022		\$37.60	\$20.50	\$58.10
Piledrivers	1/1/2023		\$39.13	\$21.22	\$60.35
Piledrivers	1/1/2024		\$40.63	\$21.97	\$62.60
Piledrivers	1/1/2025		\$41.88	\$22.72	\$64.60
Piledrivers	1/1/2026		\$43.13	\$23.47	\$66.60
Plasterers	6/1/2021		\$30.69	\$19.09	\$49.78
Plasterers	6/1/2022		\$31.44	\$19.74	\$51.18
plumber	6/1/2021		\$47.25	\$21.77	\$69.02
plumber	6/1/2022		\$49.35	\$21.77	\$71.12
Plumbers and Steamfitters	6/1/2021		\$36.97	\$24.75	\$61.72
Plumbers and Steamfitters	6/1/2022		\$38.17	\$24.90	\$63.07
Plumbers and Steamfitters	6/1/2023		\$39.32	\$25.10	\$64.42
Pointers, Caulkers, Cleaners	6/1/2021		\$33.70	\$20.22	\$53.92
Pointers, Caulkers, Cleaners	6/1/2022		\$35.00	\$20.53	\$55.53
Pointers, Caulkers, Cleaners	12/1/2022		\$35.47	\$20.88	\$56.35
Roofers	6/1/2022		\$36.04	\$19.13	\$55.17
Sheet Metal Workers	7/1/2021		\$38.76	\$30.00	\$68.76

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

Project: 23-04752 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Sign Makers and Hangars	7/17/2021		\$29.49	\$23.90	\$53.39
Sign Makers and Hangars	7/15/2022		\$30.54	\$24.35	\$54.89
Sprinklerfitters	4/1/2021		\$40.33	\$26.94	\$67.27
Sprinklerfitters	4/1/2022		\$42.29	\$27.48	\$69.77
Sprinklerfitters	4/1/2023		\$44.33	\$28.04	\$72.37
Steamfitters	6/1/2021		\$42.75	\$26.72	\$69.47
Steamfitters	6/1/2022		\$44.15	\$27.32	\$71.47
Stone Masons	6/1/2021		\$36.37	\$22.85	\$59.22
Stone Masons	6/1/2022		\$37.91	\$23.26	\$61.17
Stone Masons	12/1/2022		\$38.56	\$23.61	\$62.17
Terrazzo Finisher	6/1/2021		\$34.00	\$17.46	\$51.46
Terrazzo Finisher	6/1/2022		\$35.33	\$17.68	\$53.01
Terrazzo Finisher	12/1/2022		\$36.13	\$18.03	\$54.16
Terrazzo Mechanics	6/1/2021		\$33.30	\$19.71	\$53.01
Terrazzo Mechanics	6/1/2022		\$34.69	\$19.97	\$54.66
Terrazzo Mechanics	12/1/2022		\$35.49	\$20.32	\$55.81
Tile Finisher	6/1/2021		\$27.19	\$16.71	\$43.90
Tile Finisher	6/1/2022		\$28.35	\$16.99	\$45.34
Tile Finisher	12/1/2022		\$28.76	\$17.34	\$46.10
Tile Setter	6/1/2021		\$33.58	\$21.12	\$54.70
Tile Setter	6/1/2022		\$35.04	\$21.46	\$56.50
Tile Setter	12/1/2022		\$35.64	\$21.81	\$57.45
Truckdriver class 1(see notes)	1/1/2022		\$31.43	\$21.71	\$53.14
Truckdriver class 1(see notes)	1/1/2023		\$33.18	\$22.21	\$55.39
Truckdriver class 1(see notes)	1/1/2024		\$34.93	\$22.71	\$57.64
Truckdriver class 1(see notes)	1/1/2025		\$36.43	\$23.21	\$59.64
Truckdriver class 1(see notes)	1/1/2026		\$37.93	\$23.71	\$61.64
Truckdriver class 2 (see notes)	1/1/2021		\$31.14	\$21.27	\$52.41
Truckdriver class 2 (see notes)	1/1/2022		\$31.89	\$22.02	\$53.91
Truckdriver class 2 (see notes)	1/1/2023		\$33.64	\$22.52	\$56.16
Truckdriver class 2 (see notes)	1/1/2024		\$35.39	\$23.02	\$58.41
Truckdriver class 2 (see notes)	1/1/2025		\$36.89	\$23.52	\$60.41
Truckdriver class 2 (see notes)	1/1/2026		\$38.39	\$24.02	\$62.41
Truckdriver class 3 (see notes)	1/1/2016		\$28.23	\$16.98	\$45.21
Window Film / Tint Installer	10/1/2019		\$25.00	\$2.63	\$27.63

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

Project: 23-04752 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	1/1/2021		\$36.12	\$19.32	\$55.44
Carpenter	1/1/2022		\$37.10	\$19.84	\$56.94
Carpenter	1/1/2023		\$38.60	\$20.59	\$59.19
Carpenter	1/1/2024		\$40.10	\$21.34	\$61.44
Carpenter	1/1/2025		\$41.35	\$22.09	\$63.44
Carpenter	1/1/2026		\$42.60	\$22.84	\$65.44
Carpenter Welder	1/1/2021		\$37.07	\$19.32	\$56.39
Carpenter Welder	1/1/2022		\$38.05	\$19.84	\$57.89
Carpenter Welder	1/1/2023		\$40.10	\$20.59	\$60.69
Carpenter Welder	1/1/2024		\$41.60	\$21.34	\$62.94
Carpenter Welder	1/1/2025		\$42.85	\$22.09	\$64.94
Carpenter Welder	1/1/2026		\$44.10	\$22.84	\$66.94
Cement Finishers	1/1/2021		\$32.84	\$22.60	\$55.44
Cement Finishers	1/1/2022		\$33.14	\$23.80	\$56.94
Cement Finishers	1/1/2023		\$34.14	\$25.05	\$59.19
Cement Finishers	1/1/2024		\$35.14	\$26.30	\$61.44
Cement Finishers	1/1/2025		\$35.94	\$27.50	\$63.44
Cement Masons	1/1/2020		\$32.84	\$21.10	\$53.94
Electric Lineman	5/27/2019		\$47.38	\$26.30	\$73.68
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2020		\$37.29	\$32.87	\$70.16
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2023		\$38.89	\$35.02	\$73.91
Laborers (Class 01 - See notes)	1/6/2021		\$26.90	\$24.80	\$51.70
Laborers (Class 01 - See notes)	1/6/2022		\$27.70	\$25.50	\$53.20
Laborers (Class 01 - See notes)	1/1/2023		\$29.95	\$25.50	\$55.45
Laborers (Class 01 - See notes)	1/1/2024		\$32.20	\$25.50	\$57.70
Laborers (Class 01 - See notes)	1/1/2025		\$33.70	\$26.00	\$59.70
Laborers (Class 01 - See notes)	1/1/2026		\$34.70	\$27.00	\$61.70
Laborers (Class 02 - See notes)	1/6/2021		\$27.06	\$24.80	\$51.86
Laborers (Class 02 - See notes)	1/6/2022		\$27.86	\$25.50	\$53.36
Laborers (Class 02 - See notes)	1/1/2023		\$30.11	\$25.50	\$55.61
Laborers (Class 02 - See notes)	1/1/2024		\$32.36	\$25.50	\$57.86
Laborers (Class 02 - See notes)	1/1/2025		\$33.86	\$26.00	\$59.86
Laborers (Class 02 - See notes)	1/1/2026		\$34.86	\$27.00	\$61.86
Laborers (Class 03 - See notes)	1/6/2021		\$27.45	\$24.80	\$52.25
Laborers (Class 03 - See notes)	1/6/2022		\$28.25	\$25.50	\$53.75
Laborers (Class 03 - See notes)	1/1/2023		\$30.50	\$25.50	\$56.00
Laborers (Class 03 - See notes)	1/1/2024		\$32.75	\$25.50	\$58.25
Laborers (Class 03 - See notes)	1/1/2025		\$34.25	\$26.00	\$60.25
Laborers (Class 03 - See notes)	1/1/2026		\$35.25	\$27.00	\$62.25
Laborers (Class 04 - See notes)	1/6/2021		\$27.90	\$24.80	\$52.70
Laborers (Class 04 - See notes)	1/6/2022		\$28.70	\$25.50	\$54.20
Laborers (Class 04 - See notes)	1/1/2023		\$30.95	\$25.50	\$56.45
Laborers (Class 04 - See notes)	1/1/2024		\$33.20	\$25.50	\$58.70

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

Project: 23-04752 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 04 - See notes)	1/1/2025		\$34.70	\$26.00	\$60.70
Laborers (Class 04 - See notes)	1/1/2026		\$35.70	\$27.00	\$62.70
Laborers (Class 05 - See notes)	1/6/2021		\$28.31	\$24.80	\$53.11
Laborers (Class 05 - See notes)	1/6/2022		\$29.11	\$25.50	\$54.61
Laborers (Class 05 - See notes)	1/1/2023		\$31.36	\$25.50	\$56.86
Laborers (Class 05 - See notes)	1/1/2024		\$33.61	\$25.50	\$59.11
Laborers (Class 05 - See notes)	1/1/2025		\$35.11	\$26.00	\$61.11
Laborers (Class 05 - See notes)	1/1/2026		\$36.11	\$27.00	\$63.11
Laborers (Class 06 - See notes)	1/6/2021		\$25.15	\$24.80	\$49.95
Laborers (Class 06 - See notes)	1/6/2022		\$25.95	\$25.50	\$51.45
Laborers (Class 06 - See notes)	1/1/2023		\$28.20	\$25.50	\$53.70
Laborers (Class 06 - See notes)	1/1/2024		\$30.45	\$25.50	\$55.95
Laborers (Class 06 - See notes)	1/1/2025		\$31.95	\$26.00	\$57.95
Laborers (Class 06 - See notes)	1/1/2026		\$32.95	\$27.00	\$59.95
Laborers (Class 07 - See notes)	1/6/2021		\$27.90	\$24.80	\$52.70
Laborers (Class 07 - See notes)	1/6/2022		\$28.70	\$25.50	\$54.20
Laborers (Class 07 - See notes)	1/1/2023		\$30.95	\$25.50	\$56.45
Laborers (Class 07 - See notes)	1/1/2024		\$33.20	\$25.50	\$58.70
Laborers (Class 07 - See notes)	1/1/2025		\$34.70	\$26.00	\$60.70
Laborers (Class 07 - See notes)	1/1/2026		\$35.70	\$27.00	\$62.70
Laborers (Class 08 - See notes)	1/6/2021		\$29.40	\$24.80	\$54.20
Laborers (Class 08 - See notes)	1/6/2022		\$30.20	\$25.50	\$55.70
Laborers (Class 08 - See notes)	1/1/2023		\$32.45	\$25.50	\$57.95
Laborers (Class 08 - See notes)	1/1/2024		\$34.70	\$25.50	\$60.20
Laborers (Class 08 - See notes)	1/1/2025		\$36.20	\$26.00	\$62.20
Laborers (Class 08 - See notes)	1/1/2026		\$37.20	\$27.00	\$64.20
Millwright	6/1/2020		\$41.68	\$20.32	\$62.00
Operators (Class 01 - see notes)	1/1/2021		\$33.89	\$22.73	\$56.62
Operators (Class 01 - see notes)	1/1/2022		\$34.79	\$23.33	\$58.12
Operators (Class 01 - see notes)	1/1/2023		\$36.79	\$23.58	\$60.37
Operators (Class 01 - see notes)	1/1/2024		\$38.59	\$24.03	\$62.62
Operators (Class 01 - see notes)	1/1/2025		\$40.39	\$24.23	\$64.62
Operators (Class 02 -see notes)	1/1/2021		\$33.63	\$22.73	\$56.36
Operators (Class 02 -see notes)	1/1/2022		\$34.53	\$23.33	\$57.86
Operators (Class 02 -see notes)	1/1/2023		\$36.53	\$23.58	\$60.11
Operators (Class 02 -see notes)	1/1/2024		\$38.33	\$24.03	\$62.36
Operators (Class 02 -see notes)	1/1/2025		\$40.13	\$24.23	\$64.36
Operators (Class 03 - see notes)	1/1/2021		\$29.98	\$22.73	\$52.71
Operators (Class 03 - See notes)	1/1/2022		\$30.88	\$23.33	\$54.21
Operators (Class 03 - See notes)	1/1/2023		\$32.88	\$23.58	\$56.46
Operators (Class 03 - See notes)	1/1/2024		\$34.68	\$24.03	\$58.71
Operators (Class 03 - See notes)	1/1/2025		\$36.48	\$24.23	\$60.71
Operators (Class 04 - See notes)	1/1/2021		\$29.52	\$22.73	\$52.25
Operators (Class 04 - See notes)	1/1/2022		\$30.42	\$23.33	\$53.75

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

Project: 23-04752 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Class 04 - See notes)	1/1/2023		\$32.42	\$23.58	\$56.00
Operators (Class 04 - See notes)	1/1/2024		\$34.22	\$24.03	\$58.25
Operators (Class 04 - See notes)	1/1/2025		\$36.02	\$24.23	\$60.25
Operators (Class 05 - See notes)	1/1/2021		\$29.27	\$22.73	\$52.00
Operators (Class 05 - See notes)	1/1/2022		\$30.17	\$23.33	\$53.50
Operators (Class 05 - See notes)	1/1/2023		\$32.17	\$23.58	\$55.75
Operators (Class 05 - See notes)	1/1/2024		\$33.97	\$24.03	\$58.00
Operators (Class 05 - See notes)	1/1/2025		\$35.77	\$24.23	\$60.00
Operators Class 1-A	1/1/2021		\$36.89	\$22.73	\$59.62
Operators Class 1-A	1/1/2022		\$37.79	\$23.33	\$61.12
Operators Class 1-A	1/1/2023		\$39.79	\$23.58	\$63.37
Operators Class 1-A	1/1/2024		\$41.59	\$24.03	\$65.62
Operators Class 1-A	1/1/2025		\$43.39	\$24.23	\$67.62
Operators Class 1-B	1/1/2021		\$35.89	\$22.73	\$58.62
Operators Class 1-B	1/1/2022		\$36.79	\$23.33	\$60.12
Operators Class 1-B	1/1/2023		\$38.79	\$23.58	\$62.37
Operators Class 1-B	1/1/2024		\$40.59	\$24.03	\$64.62
Operators Class 1-B	1/1/2025		\$42.39	\$24.23	\$66.62
Painters Class 1 (see notes)	6/1/2021		\$34.00	\$21.89	\$55.89
Painters Class 1 (see notes)	6/1/2022		\$34.45	\$22.82	\$57.27
Painters Class 2 (see notes)	6/1/2019		\$35.25	\$20.06	\$55.31
Painters Class 3 (see notes)	6/1/2021		\$36.25	\$21.89	\$58.14
Painters Class 3 (see notes)	6/1/2022		\$36.77	\$22.82	\$59.59
Painters Class 4 (see notes)	6/1/2019		\$28.20	\$20.06	\$48.26
Painters Class 5 (see notes)	6/1/2019		\$22.91	\$20.06	\$42.97
Pile Driver Divers (Building, Heavy, Highway)	1/1/2021		\$54.75	\$20.10	\$74.85
Pile Driver Divers (Building, Heavy, Highway)	1/1/2022		\$56.40	\$20.50	\$76.90
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		\$58.70	\$21.22	\$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		\$60.95	\$21.97	\$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		\$62.82	\$22.72	\$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		\$64.70	\$23.47	\$88.17
Piledrivers	1/1/2021		\$36.54	\$20.06	\$56.60
Piledrivers	1/1/2022		\$37.63	\$20.47	\$58.10
Piledrivers	1/1/2023		\$39.13	\$21.22	\$60.35
Piledrivers	1/1/2024		\$40.63	\$21.97	\$62.60
Piledrivers	1/1/2025		\$41.88	\$22.72	\$64.60
Piledrivers	1/1/2026		\$43.13	\$23.47	\$66.60
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		\$48.43	\$40.28	\$88.71
Truckdriver class 1(see notes)	1/1/2021		\$30.68	\$20.96	\$51.64
Truckdriver class 1(see notes)	1/1/2022		\$31.43	\$21.71	\$53.14
Truckdriver class 1(see notes)	1/1/2023		\$33.18	\$22.21	\$55.39
Truckdriver class 1(see notes)	1/1/2024		\$34.93	\$22.71	\$57.64
Truckdriver class 1(see notes)	1/1/2025		\$36.43	\$23.21	\$59.64
Truckdriver class 1(see notes)	1/1/2026		\$37.93	\$23.71	\$61.64

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

Project: 23-04752 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Truckdriver class 2 (see notes)	1/1/2021		\$31.14	\$21.27	\$52.41
Truckdriver class 2 (see notes)	1/1/2022		\$31.89	\$22.02	\$53.91
Truckdriver class 2 (see notes)	1/1/2023		\$33.04	\$22.13	\$55.17
Truckdriver class 2 (see notes)	1/1/2024		\$34.79	\$22.63	\$57.42
Truckdriver class 2 (see notes)	1/1/2025		\$36.29	\$23.13	\$59.42
Truckdriver class 2 (see notes)	1/1/2026		\$37.79	\$23.63	\$61.42
Truckdriver class 3 (see notes)	1/1/2019		\$29.59	\$19.82	\$49.41

SECTION 015200 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: General administrative and procedural requirements governing temporary facilities and controls including, but not limited to, the following:
 - 1. Temporary Construction Facilities:
 - a. Sanitary facilities.
 - b. Parking.
 - 2. Temporary Controls:
 - a. Barriers.
 - b. Miscellaneous controls.
 - c. Precautions.

1.2 SANITARY FACILITIES

- A. Provide, maintain and move temporary sanitary facilities for duration of construction period in required quantity.
- B. Sanitary Facilities: Enclosed portable self-contained units (portajohn) with toilet paper replaced as required. Includes cleaning and waste removal, weekly or more frequent as required by use and condition).
- C. Provide quantity of sanitary facilities as required by 29 CFR 1926 (OSHA).
- D. Coordinate location with Owner.
- E. Maintain temporary facilities in a neat and sanitary condition.
- F. Do not dispose flammables, solids, or liquids used as part of construction into sanitary facilities.

1.3 PARKING

- A. General Contractor shall designate in conjunction with the Owner the parking areas to be used by Construction personnel.
 - 1. Relocate on-site temporary parking areas as required by status of work.
- B. When designated parking areas are not adequate, each Contractor shall provide additional off-site parking.

1.4 BARRIERS AND CONSTRUCTION FENCE

- A. Each Contractor shall provide as required by 29 CFR 1926, law, and authorities having jurisdiction, and as required to warn public of construction areas, and to protect existing facilities and adjacent properties from damage as a result of construction operations.
- B. Contractor or Subcontractor creating an opening, excavation or hazard shall be the entity responsible for providing the barrier.
- C. Erect and maintain all barriers, barricades, lanterns, and fences required by law.
- D. Contractor shall be sole party to determine extent of barriers required to protect the work site, installed materials, and individuals whether they be workmen or general public.
- E. Provide barriers and fences which are structurally stable, neatly constructed, and suitable for purpose intended.
- F. Provide and maintain barriers and barricades required by governing authorities for public rights-of-way.
- G. Provide barriers around existing items designated to remain. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials, and puddling or continuous running water.

1.5 MISCELLANEOUS CONTROLS

- A. Each Contractor shall provide temporary miscellaneous controls as follows: dust control, pollution control, and noise control.
- B. Execute work by methods to minimize raising dust from construction operations. Provide positive means to restrict air-borne dust from dispersing into atmosphere.
- C. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced during construction.
- D. Drinking Water and Ice: Each Contractor is responsible to provide for their own work forces.

1.6 PRECAUTIONS

- A. Each Contractor shall promulgate and enforce rules to prevent following circumstances.
 - 1. Lighting of open fires upon premises.
 - 2. Burning of any combustible material on site.
 - 3. Smoking within project site at any time.
 - 4. Use of drugs and alcohol anywhere on or near project site.
- B. Each Contractor shall bring in, handle, use and dispose of gasoline, benzine, other like volatile flammable liquids in accordance with regulations of Fire Underwriters, 29 CFR 1926 (OSHA) and Authorities Having Jurisdiction. Store in properly labeled storage containers.

1.7 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS

- A. Each Contractor shall remove its temporary facilities and controls prior to Substantial Completion inspection.
- B. Each Contractor shall clean and repair damage caused by installation or use of temporary facilities.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 5200

SECTION 31 2000 - EARTH MOVING

PART 1 - GENERAL

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. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
 - 2. Over-excavation for structures and pavements.
 - 3. Subgrade proof rolling.
 - 4. Excavating and backfilling for buildings and structures.
 - 5. Drainage course for concrete slabs-on-grade.
 - 6. Subbase course for concrete walks and pavements.
 - 7. Subbase course for asphalt paving (see Section "ASPHALT PAVING" for base course).
 - 8. Subsurface drainage backfill for walls and trenches.

1.4 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Layer placed between the subbase course and hot-mix asphalt paving (see Section "ASPHALT PAVING").
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Aggregate layer supporting the interior concrete slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
- G. Fill: Soil materials used to raise existing grades.
- H. Inert: Soil or aggregate free of carbonaceous, pyritiferous, expansive, and slag materials.
- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- J. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and an exterior cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- K. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
1. Site soils are moisture sensitive and will be adversely affected by precipitation. Some site soils exhibit elevated in situ moisture contents which will render them difficult or impossible to properly compact immediately. These conditions require that these soils be extensively air-dried, mixed with drier material and disked for proper compaction.
 2. Break down rock to be used for fill and backfill to no larger than 3 inches (75 mm).
- B. Satisfactory Soils: Soil Classification Groups GW, GM, SW, SP, SM according to ASTM D 2487 free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter. Approved by Owner's Geotechnical Engineer.
- C. Qualified Satisfactory Soils for engineered fills: Groups CL, ML, GC, and SC, subject to the following limitations:
1. Liquid Limit: < 45. __
 2. Plasticity Index: < 20. __
 3. Organic Content <3% by weight
- D. Unsatisfactory Soils: Soil Classification Groups OL, CH, MH, OH, and PT according to ASTM D 2487.
1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
 2. Unsatisfactory soils also include satisfactory soils that contain carbonaceous, pyritiferous, or expansive soil, bedrock, and slag.
- E. Subbase Material: Naturally or artificially graded mixture of crushed stone and natural or crushed sand; "Pub 408," Section 350, qualify requirements Type C or better Table B; paragraph 703.2 PDT Number 2A Table C for size and grading requirements and Table D for material passing the No. 200 (0.075-mm) sieve. Slag and natural or crushed gravel are not acceptable.
- F. Base Course: See Section "ASPHALT PAVING".
- G. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- H. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- I. Drainage Course: Narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.
- J. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.
- K. Sand: ASTM C 33; fine aggregate.
- L. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:
1. Portland Cement: ASTM C 150, Type I, Type II, or Type III.
 2. Fly Ash: ASTM C 618, Class C or F.
 3. Normal-Weight Aggregate: ASTM C 33, 3/4-inch 3/8-inch nominal maximum aggregate size.
 4. Water: ASTM C 94/C 94M.
 5. Air-Entraining Admixture: ASTM C 260.
- B. Produce conventional-weight, controlled low-strength material with 1,500-psi minimum 28-day compressive strength.

2.3 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
1. Red: Electric.
 2. Yellow: Gas, oil, steam, and dangerous materials.
 3. Orange: Telephone and other communications.
 4. Blue: Water systems.
 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 6 inches beneath bottom of concrete slabs-on-grade.
 - f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.5 OVER-EXCAVATION FOR STRUCTURES AND PAVEMENTS

- A. Excavate to specified elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, for compacting backfill, and for inspections.

3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work. Remove loose material from surfaces.

3.7 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.11 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
 2. Dispose of stockpiled soil materials that become unacceptable due to exposure following procedure for disposal of unsatisfactory soil and replace with acceptable material at no cost to Owner.

3.12 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill or satisfactory soil material.
 - 5. Under footings and foundations, use engineered fill or lean concrete.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.15 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.16 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry density according to ASTM D 1557.
 - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and compact each layer of backfill or fill soil material at 95 percent.
 - 2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
 - 3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
 - 4. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

3.17 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus 1/2 inch.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.19 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course under pavements and walks as follows:
 - 1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions overlapping sides and ends.
 - 2. Place base course material over subbase course under hot-mix asphalt pavement.
 - 3. Shape subbase course to required crown elevations and cross-slope grades.
 - 4. Place subbase course 6 inches or less in compacted thickness in a single layer.
 - 5. Place subbase course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 6. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry density according to ASTM D 1557.

3.20 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
 - 1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 - 2. Place drainage course 6 inches or less in compacted thickness in a single layer.
 - 3. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 4. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry density.

3.22 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Owner's Geotechnical Engineer; reshape and recompact at optimum moisture content to the required density.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.23 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 2000

SECTION 32 1216 – ASPHALT PAVING

PART 1 - GENERAL

1.1 GENERAL

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. All Contractors, Subcontractors, Vendors and the like shall be required to familiarize themselves with said provisions.

1.2 SECTION INCLUDES

- A. Asphaltic binder course and bituminous wearing course materials.
- B. Placing and compacting asphaltic binder course and asphaltic wearing course.
- C. Striping.

1.3 RELATED DRAWINGS, DOCUMENTS, AND SECTIONS

- A. Supplemental Drawings provided by the District.
- B. Geotechnical Report and all updates..
- C. Section 321000 – Aggregate Materials.
- D. Section 321123 – Aggregate Base Course.
- E. Section 321313 – Concrete Paving.

1.4 REFERENCES

- A. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
- B. ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils.
- C. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.
- D. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- E. ASTM D4253 – Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
- F. ASTM D4254 – Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
- G. ASTM D2041 – Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures.
- H. ASTM D1188 – Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures.
- I. ASTM D2726 – Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
- J. Commonwealth of Pennsylvania Department of Transportation (PennDOT) Specifications Publication 408, latest edition.
- K. PennDOT Standards for Roadway Construction, Series RC 0 – 100.
- L. PennDOT Publication 19 – Field Test Manual of Pennsylvania Test Methods (PTM).
- M. PennDOT Publication 27 – Specifications for Bituminous Mixtures (Bulletin 27).
- N. PennDOT Publication 37 – Specifications for Bituminous Materials (Bulletin 25).
- O. PennDOT Publication 203 – Work Zone Traffic Control.
- P. PennDOT Publication 34 – Aggregate Producers (Bulletin 14).

1.5 DEFINITIONS

- A. Not used.

1.6 SUBMITTALS

- A. The Owner or his representative shall receive copies of all test results and may request additional tests of the aggregate at no cost to the Owner.
- B. The Contractor shall provide certifications from the suppliers of the aggregate and bituminous concrete materials to confirm that each material conforms to the applicable PennDOT Specification.
- C. Submit asphaltic concrete mix designs for approval prior to commencing with paving activities.
- D. Contractor to submit duplicate load slips stamped with the time the truck was loaded at the plant site.

1.7 REGULATORY REQUIREMENTS

- A. Conform to applicable local code for paving work on private property.
- B. Obtain required approvals and permits from the appropriate authority for the disposal of waste materials.
- C. Contractor shall not obstruct or close any road or driveway without approval of the local governing authority and/or highway department.
- D. Contractor shall not obstruct access to any fire hydrants without approval of the local fire department.

1.8 COORDINATION

- A. Placement of asphalt binder course shall not proceed until the aggregate base course has been completed.
- B. Coordinate the work with the installation of the concrete curbs and sidewalks.

1.9 PROJECT RECORD DOCUMENTS

- A. Not used.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Bituminous Binder Course: The bituminous binder course shall satisfy the requirements of Section 409 of PennDOT Specifications Publication 408.
- B. Bituminous Wearing Course: The bituminous wearing course shall satisfy the requirements of Section 409 of PennDOT Specifications Publication 408.
- C. Bituminous Tack Coat: The bituminous tack coat shall satisfy the requirements of Section 460 of PennDOT Specifications Publication 408.
- D. Striping: Painted pavement markings shall be formulated and manufactured from first-grade materials and shall be free from defects that may adversely affect the serviceability of the finished product. When the paint is stored in its container, the pigmented binder shall not settle out to the extent that re-mixing is difficult by standard methods or the application is detrimentally affected. Paint shall conform to the requirements of PennDOT Specifications Publication 408. Paint colors for handicap parking stalls shall satisfy the requirements of the Americans with Disabilities Act, the local jurisdictional authority, and the Owner. All paint (for striping) furnished must be shipped in strong, substantial, and properly sealed containers. All striping shall be 4-inch (minimum) wide and color as specified on the construction drawings.
- E. Joint Sealer: Sealer materials shall be as specified in Section 705.4 (Joint Sealing Material) of PennDOT Specifications Publication 408.
- F. Geotextile: A nonwoven geotextile for the asphalt pavement section shall be composed of polypropylene yarns. The geotextile shall conform to Section 735 of PennDOT Specification Publication 408 for Class 4, Type A Geotextiles.

2.2 STORAGE AND HANDLING

- A. Deliver, store, and handle geotextiles in accordance with the manufacturer's recommendations. During periods of shipment and storage, the geotextile shall be protected from direct sunlight, ultraviolet rays, temperatures greater than

140 degrees Fahrenheit, mud, dirt, dust, and debris. The fabric shall be wrapped in a heavy covering or shielded from direct sunlight.

- B. All paint shall be furnished in strong, substantial, and properly sealed containers.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify subgrade is dry and has been compacted and proof rolled, and that gradients and elevations are correct immediately prior to placement of the geotextile, if required, and aggregate base course. Contractor shall maintain the pavement subgrade in good condition until placement of aggregate base course.
- B. Verify that all curb work is complete, and all backfill placed, graded, and compacted immediately after the concrete curing period to avoid ponding water before any aggregate base course construction begins.
- C. Verify the aggregate base course is dry and has been compacted, and that gradients and elevations are correct prior to placement of the binder course.
- D. Verify that all frames, covers, grates, and all other miscellaneous castings located in the new pavement areas have been accurately positioned and set to the proper slope and elevation. All covers and grates shall be set flush with the required finish pavement surface. No depressions or mounds will be permitted to accommodate inaccuracies in the setting of these appurtenances.
- E. The Contractor shall be required to maintain the subgrade and aggregate base course in good condition until the application of the bituminous concrete binder course. Maintenance shall include immediate repairs of any defects that may occur. Any damage occurring to the pavement subgrade, before and during paving operations, shall be corrected at the Contractor's expense.

3.2 PLACEMENT OF GEOTEXTILE

- A. Place geotextile on the prepared subgrade prior to placement of the aggregate base course. Provide a minimum overlap of 12 inches between geotextile panels.

3.3 PLACING AGGREGATE BASE COURSE

- A. Place base coarse aggregate in continuous, loose lifts on the prepared geotextile and in a manner to minimize segregation. Uncontrolled spreading from piles dumped on the subgrade resulting in segregation will not be permitted. If geotextile is damaged during placement of aggregate base course, the geotextile shall be replaced or completely covered by an additional layer of fabric. The loose lift thickness shall be a maximum of 10 inches. The loose layer thickness shall be kept within the compacting ability of the equipment used.
- B. Level and contour surfaces to elevations and gradients indicated on the drawings.
- C. Add water, if necessary, to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- D. Use mechanical tamping equipment in areas inaccessible to compaction equipment.
- E. Compact aggregate base course to at least 100 percent of its maximum dry density and within 3 percent of optimum moisture contents determined by ASTM D698, or until sufficient non-movement of the material is observed by the Owner or his representative under the weight of the compaction equipment. When an aggregate base course has been placed, but subsequent paving operations have been delayed so that the base has been disturbed by construction activities or frost action, the Contractor shall recompact or repair the base course prior to continuation of paving activities.
- F. The Paving Contractor shall be required to maintain the aggregate base course in good condition until the application of the bituminous concrete binder course. Maintenance shall include immediate repairs of any defects that may occur. This work shall be done by the Paving Contractor at his own expense, and repeated as often as may be necessary to keep the area continuously intact.

3.4 PLACING ASPHALT PAVEMENT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Place hot-mix asphalt surface course in lifts not exceeding recommended thicknesses per PennDOT Publication 408.
 - 2. Spread mix at minimum temperature of 250 degrees F.
 - 3. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
 - 4. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt binder before placing asphalt wearing course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.
- D. If the wearing course is not placed immediately on top of the binder course, Contractor shall protect the binder course from precipitation. If water is allowed to come in contact with the binder course, it can soften and compromise the underlying aggregate base course and subgrade. If the aggregate base course or subgrade is damaged due to inadequate protection, the Contractor shall repair the aggregate base course, binder course, and subgrade at no additional cost to the Owner.
- E. Do not run construction equipment on the binder course (except during placement of wearing course) or on the final wearing course. The pavement section was not designed to accommodate construction traffic. If the Contractor would like to run dump trucks or equipment on paved areas during construction, the contractor must notify CEC and the Owner. The Owner may opt, at its discretion, to allow construction traffic. However, the pavement sections will likely have to be redesigned. Allow a minimum of two weeks for consideration of a request to allow construction traffic on pavement surfaces.

3.5 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 degrees F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: Greater than or equal to 92% and less than 97% of the daily maximum density.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.

- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.6 CONSTRUCTION JOINTS

- A. At the end of each working day, a straight transverse and/or longitudinal construction joint shall be formed by cutting back into the completed work to form a true vertical face, which shall be properly maintained until the abutting section is completed. The finished pavement at joints shall comply with the surface smoothness requirements and exhibit the same uniformity of texture and compaction as other sections of the course. Rollers shall not pass over the unprotected edges of a freshly laid mixture.

In the formation of all joints, the exposed edge of the existing layer that will become part of the joint shall be the full thickness of the layer and straight. If the existing edge is unacceptable, the edge shall be corrected by using a power driven saw or other approved tools to cut a neat line. A light coat of bituminous material shall be applied to the existing pavement edges in order to provide a bond with the newly laid pavement.

1. Transverse Joints: The placing of the course shall be as continuous as possible. The transverse joint shall be formed by cutting back on the previous run to expose the full depth of the course.
2. Longitudinal Joints: Longitudinal joints in the surface wearing course shall correspond with the edges of proposed traffic lanes, unless otherwise directed by the Owner or his representative. The mixture shall be laid such that no more than 100 feet of pavement edge will be exposed at the end of the working day. An exposed edge of this type in excess of 100 feet may be permitted, provided that the edge is adequately protected against damage by vehicles and equipment.

3.7 JOINT SEALING

- A. Prepare and seal joints between bituminous and concrete surfaces, bituminous and bituminous surfaces, and bituminous and utility castings with a minimum 4-inch wide bituminous joint sealer applied in accordance with Section 705.4 of PennDOT Specifications Publication 408.

3.8 MEETING EXISTING PAVEMENTS

- A. Where new pavements are to meet existing pavements, the Contractor shall line cut the existing pavements with approved pneumatic, saw cutting, or mechanical cutting tools so that there will be a vertical butting surface between the old and new pavements. There shall be a one (1) foot offset in each pavement course to permit each successive course to overlap the lower existing course. Line cutting of existing pavements shall be along neat, straight, and even lines, and shall be performed in such a manner so as not to damage the adjacent pavement, which is to remain.

3.9 VERTICAL SURFACES IN CONTACT WITH BITUMINOUS MIXTURES

- A. All vertical surfaces of curbs, structures, gutters, and existing pavement in contact with new bituminous mixtures shall be painted with a uniform coating of an approved bituminous emulsion or priming material. Extreme care shall be exercised in the application of this material to prevent splattering or staining of surfaces that are to remain exposed. Work that is stained as a result of the Contractor's operations shall be repaired and/or replaced at the Contractor's expense.

3.10 STRIPING

- A. The Contractor shall clean the pavement of any and all dust, dirt, old pavement markings, concrete curing compounds, and other foreign material, which may be detrimental to the adhesion of the striping.
- B. The striping shall be applied only on thoroughly dry pavement surfaces, when the atmospheric temperature is at or above 60 degrees Fahrenheit for plastic striping and markings and 40 degrees Fahrenheit for paint striping and markings, and when the weather is otherwise favorable.

- C. Painted pavement markings shall be applied with atomizing spray type striping machines. The equipment shall be compatible with and suitable for the application of the type of paint being used and shall have clean-cut edges, true and smooth alignment, and uniform film thickness of 15 +1 mils.
- D. The Contractor shall apply, for handicap symbols, white, yellow, and/or blue paint (as required by the local jurisdiction in authority and the Americans with Disabilities Act), utilizing rollers and/or brushes for marking turn arrows, letters, stop bars, handicap stalls, etc. Normal spreading rates for pavement marking paints shall be from 100 to 115 square feet per gallon so as to obtain a wet film thickness of 15 +1 mils.
- E. Existing pavement markings that are to be removed shall be removed in an approved manner that will cause the least damage to the pavement surface. Removal by painting over with black paint is not acceptable.
- F. The Contractor shall remove tracking marks, spilled paint, or striping applied incorrectly or in unauthorized areas.
- G. One coat of pavement striping shall be applied unless otherwise specified on the plans and specification.

3.11 DISPOSAL

- A. Removed excess material not being reused shall be disposed of off-site in an approved waste facility

3.12 TOLERANCES

- A. Aggregate Base Course:

Flatness: Maximum variation of 1/4 inch as measured with a 10-foot long straight edge
 Scheduled Compacted Thickness: Within 1/4-inch
 Variation from True Elevation: Plus or minus 1/10-foot

- B. Asphalt Pavement:

Flatness: Maximum variation of 1/6 inch as measured with a 10-foot long straight edge
 Scheduled Compacted Thickness: Within 1/8 inch
 Variation from True Elevation: Plus or minus 1/100 foot

3.13 FIELD QUALITY CONTROL

- A. All equipment shall be in first-class operating condition for the duration of the paving activities.
- B. The Owner or his representative shall visually observe to verify that compacted lift thicknesses for the aggregate base course do not exceed 8 inches.
- C. Owner's Testing Agency shall perform compaction testing of the aggregate base course and asphalt pavement in accordance with ASTM D2216, ASTM D2922, and/or ASTM D3017. The pavement subgrade shall be proof rolled prior to placement of the geotextile and aggregate base using a fully loaded (25 ton) pneumatic-tired dump truck. Areas displaying elasticity should be overexcavated to suitable material and replaced with properly compacted fill materials.
- D. The Owner or his representative shall visually observe the aggregate base course to verify that a firm unyielding foundation with no sudden, sharp, or abrupt changes or break in grades shall exist after compaction.

3.14 QUALITY ASSURANCE

- A. Perform Work in accordance with Section 409 (Superpave Mixture Design, Standard and RPS Construction of Plant-Mixed HMA Courses) of PennDOT Specifications Publication 408.
- B. Mixing Plant: As approved by the Owner.
- C. Obtain materials from same source throughout.
- D. Provide representative samples of proposed aggregate base course to Owner's Testing Agency a minimum of one week prior to placing aggregate base course. Owner's Testing Agency shall perform laboratory tests of aggregate to determine the maximum density and optimum moisture content in accordance with ASTM D698.
- E. Owner's Testing Agency shall perform laboratory sieve analysis of aggregate in accordance with ASTM D422 to determine if the percentages of aggregate meet the gradation requirements for PennDOT 2A aggregate.
- F. Visually observe aggregate to verify that it meets the project description.
- G. If tests indicate aggregate does not meet specified requirements, change material and retest, at no cost to the Owner.

3.15 TEMPERATURE REQUIREMENTS

- A. Do not place asphalt when base surface temperature is less than 40 degrees Fahrenheit, or surface is wet or frozen.

3.16 PROTECTION OF FINISHED WORK

- A. Immediately after placement of asphalt wearing course, protect pavement from mechanical injury until adequate stability and adhesion have been attained and the material has cooled to 140 degrees Fahrenheit or less.
- B. Provide barricades and/or flagmen to protect workers and the public where necessary.

3.17 DEFECTIVE WORK

- A. Defective areas shall be removed, subgrade recompacted and area repaved, unless otherwise directed by the Owner or his representative at no additional cost to the owner.

END OF SECTION 32 1216

SECTION 32 1313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 GENERAL

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. All Contractors, Subcontractors, Vendors, and the like shall be required to familiarize themselves with said provisions.

1.2 SECTION INCLUDES

- A. This Section includes exterior cement concrete pavement for the following:
 - 1. Curbs
 - 2. Sidewalks
 - 3. Driveways
 - 4. Concrete Encasement
- B. Related Sections include the following:
 - 1. Section 312000 – Earthmoving for subgrade preparation, grading, and subbase course.

1.3 RELATED DRAWINGS, DOCUMENTS AND SECTIONS

- A. Supplemental Drawings provided by the District.
- B. Geotechnical Report and all updates.

1.4 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.

1.5 SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Design Mixtures: For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.
- D. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
 - 1. Cementitious materials.
 - 2. Steel reinforcement and reinforcement accessories.
 - 3. Fiber reinforcement.
 - 4. Admixtures.
 - 5. Curing compounds.
 - 6. Applied finish materials.

7. Bonding agent or epoxy adhesive.
8. Joint fillers.

E. Field quality-control test reports.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities".
 2. Onsite batching of concrete will not be permitted.
- B. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.
- C. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.7 PROJECT CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 2. Products: Subject to compliance with requirements, provide one of the products specified.
 3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
 4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
1. Use flexible or curved forms for curves with a radius 100 feet or less.
 2. Forms shall be of metal or new wood at least 10 feet long.
 3. Wood forms shall be rigid enough not to bow and deflect when concrete is placed. Worn, broken, or distorted forms shall not be used.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- C. Each form shall be braced and staked in at least three places for each 10-foot length, closer if necessary to keep from deforming when concrete is placed.
- D. Forms must extend the full depth of the concrete curb, sidewalk, or driveway.
- E. The entire front and rear face of the curb must be formed. No wild pours or partial forming will be allowed.

2.3 STEEL REINFORCEMENT

- A. The Contractor shall submit data sheets for all steel reinforcement.

2.4 SYNTHETIC FIBER REINFORCEMENT

- A. Synthetic Fiber: Monofilament or fibrillated polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C1116, Type III, 0.5 to 1.5 inches long.
 - 1. Products:
 - a. Monofilament Fibers:
 - 1) Axim Concrete Technologies; Fibrasol IIP.
 - 2) Euclid Chemical Company (The); Fiberstrand 100.
 - 3) FORTA Corporation; Forta Mono.
 - 4) Grace, W. R. & Co.--Conn.; Grace MicroFiber.
 - 5) Metalcrete Industries; Polystrand 1000.
 - b. Fibrillated Fibers:
 - 1) Axim Concrete Technologies; Fibrasol F.
 - 2) FORTA Corporation; Forta.
 - 3) Euclid Chemical Company (The); Fiberstrand F.
 - 4) Grace, W. R. & Co.--Conn.; Grace Fibers.

2.5 CONCRETE MATERIALS AND MIXTURES

- A. Cementitious Material: Use one of the following cementitious materials, of the same type, brand, and source throughout the Project:
 - 1. Portland Cement: ASTM C150, Type I, non-air Entraining Portland Cement.
- B. Normal Weight Aggregates: ASTM C33 coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at least 10 years satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
 - 1. Maximum Coarse-Aggregate (1530 lbs/cu.yd) must be limestone for reinforced concrete pavement, concrete curb, concrete sidewalk, reinforced concrete drives, and any exposed concrete in structures. To obtain approval, the aggregate mix design must be submitted two weeks before contemplated use.
 - 2. Fine Aggregate: Type A aggregate; 1220 lbs/cu.yd.
- C. Water: ASTM C 94/C 94M or 33 gallons/cu.yd.
- D. Twenty eight (28)-day strength: 4000 psi.
- E. Slump shall be 4 inches plus or minus 1-inch.
- F. Air Entraining Admixtures shall be in accordance with AASHTO Designation M-154 (ASTM C-260-01).
- G. Entrained air content shall be 5 percent with a tolerance of plus or minus 1 percent.
- H. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than 2.0 lb/cu. yd. Note: Synthetic Fiber is in addition to any traditional steel reinforcement required in the concrete.
- I. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed concrete mixture designs for the trial batch method.

2.6 CURING MATERIALS

- A. Absorptive Cover: AASHTO M182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
- B. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Curing and Sealing Compound: ASTM C309, Type 1, Classes A and B; ASTM C1315, Type 1, Class A; and AASHTO M148, Type 1 Classes A and B. Must meet US EPA maximum allowable VOC requirements.

2.7 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber (AASHTO M213).
- B. Concrete Joint Sealant: Sikaflex-1a (or approved equal). The sealant shall be a one part polyurethane, elastomeric sealant/adhesive meeting Federal Specification TT-S-00230C, Type II, Class A and ASTM C920, Type S, Grade NS, Class 35 use T, NT, O, M, G and I. Color shall be limestone or as chosen by the Owner.
- C. Bonding Agent: ASTM C1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy Bonding Adhesive: ASTM C881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to requirements, and as follows:
 1. Types I and II, non-load bearing or IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine exposed subgrade and subbase for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subgrade surface with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding as follows or as dictated by field conditions:
 1. Completely proof-roll subgrade in one direction and repeat in perpendicular direction. Limit vehicle speed to 3 mph.
 2. Proof-roll with a loaded tandem-axle dump truck weighing not less than 15 tons.
 3. Subgrade with soft spots and areas of pumping or rutting exceeding depth of 1/2-inch shall be repaired prior to placement of concrete.
 4. Concrete curb and sidewalk subbases shall be compacted using mechanical equipment to 100 percent maximum dry density within ± 3 percent optimum moisture content as per ASTM D698.
- C. Proceed with concrete pavement operations only after non-conforming conditions have been corrected.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.
- B. Concrete slabs shall be a minimum of 8 inches thick for roadways and 4 inches thick for sidewalks. The aggregate bed shall be a minimum of 6 inches thick and shall consist of AASHTO No. 57 crushed aggregate (or equivalent).

3.3 SUBGRADE REPAIR

- A. After the existing pavement and subbase have been removed to subgrade, the Owner will determine if soft spots exist and, if so, mark the limits of soft spots to be corrected.
- B. If soft spots are marked, the Contractor shall excavate such areas and replace excavated unsuitable materials with PennDOT Class IV, Type A geotextile fabric placed under a minimum of 12 inches of AASHTO No. 1 aggregate with a 2-inch PennDOT 2A aggregate "choke". The fabric shall wrap over the top of the placed aggregate prior to the placement of the required aggregate subbase. All unsuitable materials shall be removed from the site at no additional cost to the Owner.

3.4 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.5 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Concrete sidewalks and driveways shall be reinforced with 6-inch by 6-inch, W2.9 x W2.9 wire mesh with a minimum cover of 2 inches and 3 inches, respectively.
- F. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap of adjacent mats.
- G. Concrete slabs shall be constructed per PennDOT Publication 408 (most current edition), PennDOT RC standards and applicable plan Details.

3.6 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
 - 1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.
- B. All joints in new concrete shall be sealed including the joints in straight and rolled curbs, sidewalks, driveway and other concrete structures. The joints between old and new concrete must also be sealed.
- C. Contraction joints in the reinforced concrete pavement and/or base shall be constructed by sawing with a special concrete saw using one or more circular blades, cooled and lubricated with water.
- D. Expansion joints in reinforced concrete pavement and/or base shall be constructed with slip dowels, and minimum 1-inch thick expansion joint filler as detailed. A steel plate, slip dowels and minimum 1-inch joint filler can be used as an alternate. Spacing shall be at all points of curve, points of tangent, and at street intersections.
- E. Contraction joints in concrete curbs shall match joint spacing (or limits of remediation) to existing sidewalk or shall be spaced a minimum of 4 to a maximum of 6 feet. They shall not exceed 1/2-inch in thickness. Expansion joints 1-inch thick, shall be formed at not more than 40-foot intervals.
- F. Contraction joints in concrete sidewalks shall match joint spacing (or limits of remediation) to existing sidewalk or shall be spaced a minimum of 4 to a maximum of 6 feet and formed with a device to have the completed joint at least 1/4-inch deep. Expansion joints shall be spaced no more than 40 feet apart and formed with 1-inch pre-molded filler to the full depth of the slab. The 1-inch pre-molded filler shall also be placed adjacent to curbs, other sidewalks, buildings or pavement. If the sidewalk abuts a curb the joints on the sidewalk shall match the joints in the curb.
- G. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
- H. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Locate expansion joints at intervals of 40 feet unless otherwise indicated or directed.
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler not less than 1/2-inch or more than 1-inch below finished surface if joint sealant is indicated.
 - 4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.

5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- I. On any tooled joints or edges of concrete do not use the jointing or edging tool until the surface water has evaporated from the concrete (sheen disappears). Bull float and broom the surface, then finish the joint and edges and use broom to remove the tool marks on the surface.

3.7 SEALING OF CONCRETE JOINTS

- A. All expansion joints and joints against structures shall be sealed.
- B. The sealant shall be "Sikaflex-1A Polyurethane, Elastomeric Sealant/Adhesive" (or Owner approved equal). Sealant color shall be selected from the range of available colors by the Owner prior to application.
- C. All joints must be sound, clean, dry, and free from oil and grease. Curing compound residues and any foreign material must be thoroughly removed. A roughened surface will also enhance the bond. Install bond breaker tape or back rod to prevent bond at the base of the joint.
- D. Apply Sikaflex-1A at a temperature between 40 degrees Fahrenheit and 100 degrees Fahrenheit with a gun using the 20 ounce "uni-pac" sausage.

3.8 CONCRETE PLACEMENT

- A. Inspection: Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast in. Notify other trades to permit installation of their work.
- B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. No concrete shall be placed prior to April 15 or after December 1 except with written permission of the Owner and only if the Contractor is prepared to comply with the cold weather requirements specified in PennDOT Specification 408 (most current edition).
- D. When the air temperature is expected to drop below 40 degrees Fahrenheit at any time during the day or night for the first 24 hours following the placement of concrete, an additional three bales of straw hay, weighing approximately 100 pounds each, shall be spread for each 35 square yards of concrete placed and then covered with a tarpaulin. The concrete shall be maintained at a temperature of not less than 50 degrees Fahrenheit and not more than 80 degrees Fahrenheit. Gradually lower the temperature to the surrounding area for at least three additional days.
- E. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- F. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- G. Do not add water to concrete during delivery or at project site.
- H. Do not add water to fresh concrete after testing.
- I. No private, public, or contractor vehicles and/or equipment shall be placed or moved on concrete pavement until 14 days have elapsed from time of pour, and then only when earth shoulders are placed against the pavement edges. Opening to traffic shall not constitute a final acceptance of pavement from centerline. The Contractor shall provide the Owner with breaks at 7, 14, and 28 days from the date of the pour to determine the strength.
- J. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- K. The concrete shall be placed in forms in horizontal layers not to exceed 5 inches and vibrated sufficiently to eliminate all voids.
- L. Place concrete in two operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed.
 1. Remove and replace concrete that has been placed for more than 15 minutes without being covered by top layer or use bonding agent if approved by Owner.

- M. The crown in any pavement or base shall be measured from the high side edge where one edge is higher than the other except where otherwise noted.
- N. Screed pavement surfaces with a straightedge and strike off.
- O. Commence initial floating using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- P. Curbs and Gutters: When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.
- Q. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 - 1. When air temperature has fallen to or is expected to fall below 40 degrees Fahrenheit, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees Fahrenheit and not more than 80 degrees Fahrenheit at point of placement.
 - 2. Do not use frozen materials or materials containing ice or snow.
 - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.
- R. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
 - 1. Cool ingredients before mixing to maintain concrete temperature below 90 degrees F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 - 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.9 CONCRETE SIDEWALKS

- A. Forms shall be of metal or new wood at least 10 feet long. Each form shall be braced and staked in at least three places for each 10-foot length and closer if necessary to keep from deforming when concrete is placed. They shall be thoroughly cleaned and coated with non-staining oil. Wood forms shall be rigid enough not to bow and deflect when concrete is placed. Worn, broken, or distorted forms shall not be used.
- B. Contraction joints in concrete sidewalks shall match joint spacing (or limits of remediation) to existing sidewalk or shall be spaced a minimum of 4 to a maximum of 6 feet and formed with a device to have the completed joint at least 1/4-inch deep. Expansion joints shall be spaced no more than 40 feet apart and formed with 1-inch pre-molded filler to the full depth of the slab. The 1-inch pre-molded filler shall also be placed adjacent to curbs, other sidewalks, buildings or pavement. If the sidewalk abuts a curb the joints on the sidewalk shall match the joints in the curb.
- C. Concrete sidewalks shall be reinforced with 6-inch by 6-inch, W2.9 x W2.9 wire mesh with a minimum cover of 2 inches and 3 inches, respectively.
- D. The surface of the slab shall be brought to a uniform plane surface by means of a wood screed riding on forms. The surface shall then be finished with a wood or magnesium float and fine broom finished. The tool marks for joints and edges shall match the marks in the existing walk. Neither dry cement nor water shall be added to the surface during the finishing process.
- E. On any tooled joints or edges of concrete do not use the jointing or edging tool until the surface water has evaporated from the concrete. Bull float and broom the surface, then finish the joint and edges and use the broom to remove the tool marks on the surface.
- F. After 28 days (or as recommended by the manufacturer or directed by the Owner), apply an approved sealer.
- G. The concrete shall be thoroughly vibrated to eliminate voids within the placed concrete.
- H. Sealing of Joints
 - 1. All expansion joints and joints against structures shall be sealed.

2. The sealant shall be "Sikaflex 1A Polyurethane, Elastomeric Sealant/Adhesive" (or Owner approved equal). Sealant color shall be selected from the range of available colors by the Owner prior to application.
 3. All joints must be sound, clean, dry and free from oil and grease. Curing compound residues and any foreign material must be thoroughly removed. A roughened surface will also enhance the bond. Install bond breaker tape or back rod to prevent bond at the base of the joint.
 4. Apply Sikaflex 1A at a temperature between 40 degrees F and 100 degrees F with a gun using the 20 ounce "uni-pac" sausage.
- I. Insulated protection of the concrete shall be required dependent on weather conditions at the time of pouring and during the curing period. A polyethylene plastic sheeting shall be considered as the adequate minimum protection required for concrete during adverse weather conditions. The Owner reserves the right to require additional protective measures such as blanketing. No additional compensation will be considered in the event protective measures above the minimum are required by the Owner.
 - J. Replace rain conductors in kind if found under a sidewalk. Place a piece of No. 9 gauge wire mesh reinforcing 1-foot over the pipe for reinforcement. In addition, a construction joint shall be placed over the rain conductor location. No additional compensation will be considered for the removal and/or replacement of roof or driveway drains under a sidewalk.
 - K. Restore and/or raise to grade all gas valves, water valves, sewer vents, or other utility valve boxes encountered during driveway restoration. No additional compensation will be considered for work associated with this requirement.

3.10 CONCRETE CURB

- A. Forms shall be of metal or new wood at least 10 feet long. Each form shall be braced and staked in at least three places for each 10-foot length and closer if necessary to keep from deforming when concrete is placed. They shall be thoroughly cleaned and coated with non-staining oil. Wood forms shall be rigid enough not to bow and deflect when concrete is placed. Worn, broken or distorted forms shall not be used.
- B. Effort shall be made to minimize damage to curbs.
- C. The Contractor shall be responsible for providing AASHTO No. 57 crushed limestone aggregate for a suitable base for the curb in accordance with the Detail.
- D. A 2-ply tar paper must be placed between the AASHTO base and the concrete curb.
- E. Control joints shall be placed at 10 feet on center.
- F. Expansion joints shall be spaced no more than 50 feet apart and formed with 1/4 inch pre-molded filler to the full depth of the slab. The 1/4-inch pre-molded filler shall also be placed adjacent to curbs, other sidewalks, buildings, or pavement. If the curb abuts a sidewalk the joints on the curb shall match the joints in the sidewalk.
- G. A 4- inch minimum diameter PE slotted underdrain may be placed behind the curb in accordance with the Detail and connected to the storm sewer system as directed by the Owner.
- H. The concrete shall be thoroughly vibrated to eliminate voids within the placed concrete.
- I. The finish on the concrete shall match the finish of the existing curb.
- J. Sealing of Joints
 1. All expansion joints and joints against structures shall be sealed.
 2. The sealant shall be "Sikaflex 1A Polyurethane, Elastomeric Sealant/Adhesive" (or Owner approved equal). Sealant color shall be selected from the range of available colors by the Owner prior to application.
 3. All joints must be sound, clean, dry, and free from oil and grease. Curing compound residues and any foreign material must be thoroughly removed. A roughened surface will also enhance the bond. Install bond breaker tape or back rod to prevent bond at the base of the joint.
 4. Apply Sikaflex 1A at a temperature between 40 degrees Fahrenheit and 100 degrees Fahrenheit with a gun using the 20 ounce "uni-pac" sausage.
- K. After 28 days (or as recommended by the manufacturer or directed by the Owner), apply an approved sealer.
- L. If any rain conductors exist through the curb, they shall be replaced in kind. No additional compensation will be provided for the restoration of roof/driveway drains through the curb.
- M. Insulated protection of the concrete shall be required dependent on weather conditions at the time of pouring and during the curing period. A polyethylene plastic sheeting shall be considered as the adequate minimum protection

required for concrete during adverse weather conditions. The Owner reserves the right to require additional protective measures such as blanketing. No additional compensation will be considered in the event protective measures above the minimum are required by the Owner.

3.12 FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations.
- C. The surface of concrete sidewalks shall be brought to a uniform plane surface by means of a wood screed riding on forms. The surface shall then be finished with a wood or magnesium float and stiff textured broom finished perpendicular to line of traffic. The tool marks for joints and edges shall match the marks in the existing walk. Neither dry cement nor water shall be added to the surface during the finishing process.
- D. The portion of the curb to be exposed to the elements shall be finished smooth with a wood or magnesium float. All minor defects shall be filled with cement mortar. No watered brush finish or plastering of the curb will be permitted. All joints and exposed edges shall be tooled to a radius of 1/4-inch but no tool marks will be permitted to show on the finished curb. Final finish shall be made with a coarse broom.
- E. The surface of the concrete driveway slab shall be brought to a uniform plane surface by means of a wood screed riding on forms. The surface shall then be finished with a wood or magnesium float and fine broom finished. The tool marks for joints and edges shall match the marks in the existing driveway. Neither dry cement nor water shall be added to the surface during the finishing process.
- F. On any tooled joints or edges of concrete do not use the jointing or edging tool until the surface water has evaporated from the concrete. Bull float and broom the surface, then finish the joint and edges and use the broom to remove the tool marks on the surface.

3.13 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 pounds per square foot by depth before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

3.14 PAVEMENT TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:
 - 1. Elevation: 1/4-inch.
 - 2. Thickness: Plus 3/8-inch, minus 1/4-inch.
 - 3. Surface: Gap below 10-foot long, unlevelled straightedge not to exceed 1/4 inch.
 - 4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1-inch.
 - 5. Vertical Alignment of Tie Bars and Dowels: 1/4-inch.
 - 6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2-inch.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4-inch per 12 inches.
 - 8. Contraction Joint Depth: Plus 1/4-inch, no minus.
 - 9. Joint Width: Plus 3/16-inch, no minus.

3.15 BACKFILLING

- A. The Contractor shall not backfill against walks, driveways, curbs, etc., until concrete forms have been removed, concrete cured and written authorization has been given by the Owner. All debris shall be removed from top to bottom of all excavations prior to all backfilling operations. In lawn or ground covers areas, backfilling shall be done with clean earth placed in 6-inch compacted layers.

3.16 REPAIRS AND PROTECTION

- A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. Drill test cores, where directed by Owner, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy adhesive.
- C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than 2 days before date scheduled for Substantial Completion inspection or as directed by the Owner.

END OF SECTION 32 1313