

**DELAWARE STATE UNIVERSITY
CONTRACT # PC-18-006**

**SPECIFICATIONS
FOR**

**Alumni Stadium
NCAA Track and Field Surfacing Replacement**

IN

**East Dover Hundred - Kent County
Dover, Delaware**

**PREPARED
BY**

DSU OFFICE OF CAPITAL PLANNING

**ISSUED FOR BID
February 22, 2018**



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INVITATION TO BID

Sealed bids for Delaware State University Contract No. **PC-18-006 – Alumni Stadium NCAA Track and Field Surfacing Replacement** will be received by the Delaware State University, in the Office of Capital Planning & Environmental Sustainability, Room 101 in the Facilities Management Building, 1200 N. DuPont Highway, Dover, DE 19901-2277, until **3pm** local time on **March 16, 2018**, at which time they will be publicly opened and read aloud in the Conference Room. Bidder bears the risk of late delivery. Any bids received after the stated time will be returned unopened.

Project involves the replacement of the existing NCAA track and NCAA turf surfacing, including but not limited to the demolition of existing surfaces, regrading and localized repair, and preparation of existing substrate, and installation of new surfaces as indicated within the bid documents. Bids will be accepted for the following bid packages:

Bid Package A – NCAA Turf Surfacing and other work as defined in the bid documents.

Bid Package B – NCAA Track Surfacing and other work as defined in the bid documents.

A **MANDATORY** Pre-Bid Meeting will be held on March 1, 2018, at 1pm at the Facilities Management Building Conference Room for the purpose of establishing the listing of subcontractors and to answer questions. Representatives of each party to any Joint Venture must attend this meeting. **ATTENDANCE OF THIS MEETING IS A PREREQUISITE FOR BIDDING ON THIS CONTRACT.**

Basis of award shall be BEST VALUE, and bids will be evaluated based on a weighted average consisting of Price (70%), Qualifications (20%), and Schedule (10%). The bids shall be ranked according to the established criteria and awarded to the highest ranked bidder. In addition to other criteria indicated in § 6962 (d)(13) a., Title 29, Delaware Code, Delaware State University reserves the right to utilize submitted schedule as a criteria in determining the responsibility of the bidder.

Sealed bids shall be addressed to the Delaware State University c/o the Office of Planning & Construction, Facilities Management Building, Room 101, Dover, DE 19901-2277, Attn: Zafar Chaudhry, Associate Vice President of Contract & Procurement. The outer envelope should clearly indicate: "**DSU CONTRACT NO. PC-18-006 – ALUMNI STADIUM NCAA TRACK AND FIELD SURFACING REPLACEMENT - SEALED BID - DO NOT OPEN.**"

Contract documents may be obtained or reviewed at the DSU Office of Capital Planning and Environmental Sustainability upon receipt of \$500.00 per set/non-refundable, starting on the day of the mandatory pre-bid. Checks are to be made payable to "Delaware State University". Alternatively, in consideration of our environment, and in alignment with the University's sustainability initiatives, bidders may request an electronic copy of the bidding documents by submitting a written request to constructionbid@desu.edu. Delaware State University will track all bidders and ensure plan holder receive all addenda.

Summary of Events and Dates:

March 1, 2018	Mandatory Site Visit at Facilities Management Building (1:00PM EST)
March 9, 2018	Deadline for Questions (4:00PM EST)
March 12, 2018	Posting of Answers to Contractor Questions
March 14, 2018	Final Date for Addenda
March 16, 2018	Proposals Due (3:00 PM EST)
March 23, 2018	Contractor Selection Date
April 16, 2018	Latest Date for Contract Award

May 15, 2018 **Anticipated Start of Construction Date (subject to change)**
July 15, 2018 **Substantial Completion**

Bidders will not be subject to discrimination on the basis of race, creed, color, sex, sexual orientation, gender identity or national origin in consideration of this award, and Minority Business Enterprises, Disadvantaged Business Enterprises, Women-Owned Business Enterprises and Veteran-Owned Business Enterprises will be afforded full opportunity to submit bids on this contract. Each bid must be accompanied by a bid security equivalent to ten percent of the bid amount and all additive alternates. The successful bidder must post a performance bond and payment bond in a sum equal to 100 percent of the contract price upon execution of the contract. Delaware State University reserves the right to reject any or all bids and to waive any informalities therein. Delaware State University may extend the time and place for the opening of the bids from that described in the advertisement, with not less than two calendar days' notice by certified delivery, facsimile machine or other electronic means to those bidders receiving plans.

DRUG TESTING REQUIREMENTS FOR LARGE PUBLIC WORKS

Pursuant to 29 Del.C. §6908(a)(6), effective as of January 1, 2016, OMB has established regulations that require Contractors and Subcontractors to implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds. The regulations establish the mechanism, standards and requirements of a Mandatory Drug Testing Program that will be incorporated by reference into all Large Public Works Contracts awarded pursuant to 29 Del.C. §6962. Final publication of the identified regulations can be found at the following: [4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects](#)

END OF ADVERTISEMENT FOR BIDS

INSTRUCTIONS TO BIDDERS

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ARTICLE 1: GENERAL

1.1 DEFINITIONS

1.1.1 Whenever the following terms are used, their intent and meaning shall be interpreted as follows:

1.2 STATE: The State of Delaware.

1.3 BOARD: The Delaware State University Board of Trustees

1.4 UNIVERSITY: The Delaware State University

1.5 AGENCY: The Delaware State University

1.6 DESIGNATED OFFICIAL: The agent authorized to act for the Agency.

1.7 BIDDING DOCUMENTS: Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bid, Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the Bid Form (including the Non-collusion Statement), and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, as well as the Drawings, Specifications (Project Manual) and all Addenda issued prior to execution of the Contract.

1.8 CONTRACT DOCUMENTS: The Contract Documents consist of the, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the form of agreement between the Owner and the Contractor, Drawings (if any), Specifications (Project Manual), and all addenda.

1.9 AGREEMENT: The form of the Agreement shall be AIA Document A101, Standard Form of Agreement between Owner and Contractor where the basis of payment is a STIPULATED SUM. In the case of conflict between the instructions contained therein and the General Requirements herein, these General Requirements shall prevail.

1.10 GENERAL REQUIREMENTS (or CONDITIONS): General Requirements (or conditions) are instructions pertaining to the Bidding Documents and to contracts in general. They contain, in summary, requirements of laws of the State; policies of the Agency and instructions to bidders.

1.11 SPECIAL PROVISIONS: Special Provisions are specific conditions or requirements peculiar to the bidding documents and to the contract under consideration and are supplemental to the General Requirements. Should the Special Provisions conflict with the General Requirements, the Special Provisions shall prevail.

1.12 ADDENDA: Written or graphic instruments issued by the Owner/Architect prior to the execution of the contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.13 BIDDER OR VENDOR: A person or entity who formally submits a Bid for the material or Work contemplated, acting directly or through a duly authorized representative who meets the requirements set forth in the Bidding Documents.

1.14 SUB-BIDDER: A person or entity who submits a Bid to a Bidder for materials or labor, or both for a portion of the Work.

1.15 BID: A complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

- 1.16 BASE BID: The sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids (if any are required to be stated in the bid).
- 1.17 ALTERNATE BID (or ALTERNATE): An amount stated in the Bid, where applicable, to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents is accepted.
- 1.18 UNIT PRICE: An amount stated in the Bid, where applicable, as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- 1.19 SURETY: The corporate body which is bound with and for the Contract, or which is liable, and which engages to be responsible for the Contractor's payments of all debts pertaining to and for his acceptable performance of the Work for which he has contracted.
- 1.20 BIDDER'S DEPOSIT: The security designated in the Bid to be furnished by the Bidder as a guaranty of good faith to enter into a contract with the Agency if the Work to be performed or the material or equipment to be furnished is awarded to him.
- 1.21 CONTRACT: The written agreement covering the furnishing and delivery of material or work to be performed.
- 1.22 CONTRACTOR: Any individual, firm or corporation with whom a contract is made by the Agency.
- 1.23 SUBCONTRACTOR: An individual, partnership or corporation which has a direct contract with a contractor to furnish labor and materials at the job site, or to perform construction labor and furnish material in connection with such labor at the job site.
- 1.24 CONTRACT BOND: The approved form of security furnished by the contractor and his surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.
- 1.25 LIQUIDATED DAMAGES: An amount due and payable to the University by the Contractor for additional costs incurred by the University resulting from the Contractor's failure to complete within the Contract time.

ARTICLE 2: BIDDER'S REPRESENTATIONS

- 2.1 PRE-BID MEETING
 - 2.1.1 A pre-bid meeting for this project will be held at the time and place designated. Attendance at this meeting is a pre-requisite for submitting a Bid, unless this requirement is specifically waived elsewhere in the Bid Documents.
- 2.2 By submitting a Bid, the Bidder represents that:
 - 2.2.1 The Bidder has read and understands the Bidding Documents and that the Bid is made in accordance therewith.
 - 2.2.2 The Bidder has visited the site, become familiar with existing conditions under which the Work is to be performed, and has correlated the Bidder's his personal observations with the requirements of the proposed Contract Documents.
 - 2.2.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.
- 2.3 JOINT VENTURE REQUIREMENTS

- 2.3.1 For Public Works Contracts, each Joint Venturer shall be qualified and capable to complete the Work with their own forces.
- 2.3.2 Included with the Bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Venturers involved.
- 2.3.3 All required Bid Bonds, Performance Bonds, Material and Labor Payment Bonds must be executed by both Joint Venturers and be placed in both of their names.
- 2.3.4 All required insurance certificates shall name both Joint Venturers.
- 2.3.5 Both Joint Venturers shall sign the Bid Form and shall submit a copy of a valid Delaware Business License with their Bid.
- 2.3.6 Both Joint Venturers shall include their Federal E.I. Number with the Bid.
- 2.3.7 In the event of a mandatory Pre-bid Meeting, each Joint Venturer shall have a representative in attendance.
- 2.3.8 Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the State.

2.4 ASSIGNMENT OF ANTITRUST CLAIMS

- 2.4.1 As consideration for the award and execution by the Owner of this contract, the Contractor hereby grants, conveys, sells, assigns and transfers to the State of Delaware all of its right, title and interests in and to all known or unknown causes of action it presently has or may now or hereafter acquire under the antitrust laws of the United States and the State of Delaware, relating to the particular goods or services purchased or acquired by the Owner pursuant to this contract.

ARTICLE 3: BIDDING DOCUMENTS

3.1 COPIES OF BID DOCUMENTS

- 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the Architectural/Engineering firm designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.
- 3.1.2 Bidders shall use complete sets of Bidding Documents for preparation of Bids. The issuing Agency nor the Architect assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 3.1.3 Any errors, inconsistencies or omissions discovered shall be reported to the Architect immediately.
- 3.1.4 The Agency and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall report any errors, inconsistencies, or ambiguities discovered to the Architect.
- 3.2.2 Bidders or Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least seven days prior to the date for receipt of Bids. Interpretations,

corrections and changes to the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes to the Bidding Documents made in any other manner shall not be binding.

3.2.3 The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specification compliance will be the responsibility of the Bidder.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all permits, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.2.5 The Owner will bear the costs for all impact and user fees associated with the project.

3.3 SUBSTITUTIONS

3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of quality, required function, dimension, and appearance to be met by any proposed substitution. The specification of a particular manufacturer or model number is not intended to be proprietary in any way. Substitutions of products for those named will be considered, providing that the Vendor certifies that the function, quality, and performance characteristics of the material offered is equal or superior to that specified. It shall be the Bidder's responsibility to assure that the proposed substitution will not affect the intent of the design, and to make any installation modifications required to accommodate the substitution.

3.3.2 Requests for substitutions shall be made in writing to the Architect at least ten days prior to the date of the Bid Opening. Such requests shall include a complete description of the proposed substitution, drawings, performance and test data, explanation of required installation modifications due the substitution, and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval shall be final. The Architect is to notify Owner prior to any approvals.

3.3.3 If the Architect approves a substitution prior to the receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding.

3.3.4 The Architect shall have no obligation to consider any substitutions after the Contract award.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the Architect to have received a complete set of the Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 No Addenda will be issued later than 4 days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of bids.

3.4.4 Each bidder shall ascertain prior to submitting his Bid that they have received all Addenda issued, and shall acknowledge their receipt in their Bid in the appropriate space. Not acknowledging an issued Addenda could be grounds for determining a bid to be non-responsive.

ARTICLE 4: BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- 4.1.1 Submit the bids on the Bid Forms included with the Bidding Documents.
- 4.1.2 Submit the original Bid Form for each bid. Bid Forms may be removed from the project manual for this purpose.
- 4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (typewriter or manually in ink).
- 4.1.4 Where so indicated by the makeup on the Bid Form, express sums in both words and figures, in case of discrepancy between the two, the written amount shall govern.
- 4.1.5 Interlineations, alterations or erasures must be initialed by the signer of the Bid.
- 4.1.6 BID ALL REQUESTED ALTERNATES AND UNIT PRICES, IF ANY. If there is no change in the Base Bid for an Alternate, enter "No Change". The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Work required by Addenda shall automatically become part of the Contract.
- 4.1.7 Make no additional stipulations on the Bid Form and do not qualify the Bid in any other manner.
- 4.1.8 Each copy of the Bid shall include the legal name of the Bidder and a statement whether the Bidder is a sole proprietor, a partnership, a corporation, or any legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current Power of Attorney attached, certifying agent's authority to bind the Bidder.
- 4.1.9 Bidder shall complete the Non-Collusion Statement form included with the Bid Forms and include it with their Bid.
- 4.1.10 In the construction of all Public Works projects for the State of Delaware or any agency thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State.
- 4.1.11 Each bidder shall include in their bid a copy of a valid Delaware Business License.'
- 4.1.12 Each bidder shall include signed Affidavit(s) for the Bidder and each listed Subcontractor certifying compliance with OMB Regulation 4104- "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects." "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.
- 4.2 BID SECURITY
 - 4.2.1 All bids shall be accompanied by a deposit of either a good and sufficient bond to the agency for the benefit of the agency, with corporate surety authorized to do business in this State, the form of the bond and the surety to be approved by the agency, or a security of the bidder assigned to the agency, for a sum equal to at least 10% of the bid plus all add alternates, or in lieu of the bid bond a security deposit in the form of a certified check, bank treasurer's check, cashier's check, money order, or other prior approved secured deposit assigned to the State. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. The Bid Bond form used shall be the standard OMB form (attached).
 - 4.2.2 The Agency has the right to retain the bid security of Bidders to whom an award is being considered until either a formal contract has been executed and bonds have been furnished or the specified time has elapsed so the Bids may be withdrawn or all Bids have been rejected.

4.2.3 In the event of any successful Bidder refusing or neglecting to execute a formal contract and bond within 20 days of the awarding of the contract, the bid bond or security deposited by the successful bidder shall be forfeited.

4.3 SUBCONTRACTOR LIST

4.3.1 As required by Delaware Code, Title 29, section 6962(d)(10)b, each Bidder shall submit with their Bid a completed List of Sub-Contractors included with the Bid Form. NAME ONLY ONE SUBCONTRACTOR FOR EACH TRADE. A Bid will be considered non-responsive unless the completed list is included.

4.3.2 Provide the Name and Address for each listed subcontractor. Addresses by City, Town or Locality, plus State, will be acceptable.

4.3.3 It is the responsibility of the Contractor to ensure that their Subcontractors are in compliance with the provisions of this law. Also, if a Contractor elects to list themselves as a Subcontractor for any category, they must specifically name themselves on the Bid Form and be able to document their capability to act as Subcontractor in that category in accordance with this law.

4.4 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

4.4.1 During the performance of this contract, the contractor agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.

B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

4.5 PREVAILING WAGE REQUIREMENT

4.5.1 Wage Provisions: In accordance with Delaware Code, Title 29, Section 6960, renovation projects whose total cost shall exceed \$45,000, and \$500,000 for new construction, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.

4.5.2 The prevailing wage shall be the wage paid to a majority of employees performing similar work as reported in the Department's annual prevailing wage survey or in the absence of a majority, the average paid to all employees reported.

4.5.3 The employer shall pay all mechanics and labors employed directly upon the site of work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.

4.5.4 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.

4.5.5 Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.

4.6 SUBMISSION OF BIDS

4.6.1 Enclose the Bid, the Bid Security, and any other documents required to be submitted with the Bid in a sealed opaque envelope. Address the envelope to the party receiving the Bids. Identify with the project name, project number, and the Bidder's name and address. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. The State is not responsible for the opening of bids prior to bid opening date and time that are not properly marked.

4.6.2 Deposit Bids at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids. Bids received after the time and date for receipt of bids will be marked "LATE BID" and returned.

4.6.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.

4.6.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.

4.6.5 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids, provided that they are then fully in compliance with these Instructions to Bidders.

4.7 MODIFICATION OR WITHDRAW OF BIDS

4.7.1 Prior to the closing date for receipt of Bids, a Bidder may withdraw a Bid by personal request and by showing proper identification to the Architect. A request for withdraw by letter or fax, if the Architect is notified in writing prior to receipt of fax, is acceptable. A fax directing a modification in the bid price will render the Bid informal, causing it to be ineligible for consideration of award. Telephone directives for modification of the bid price shall not be permitted and will have no bearing on the submitted proposal in any manner.

4.7.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.

4.7.3 A Bid may not be modified, withdrawn or canceled by the Bidder during a thirty (30) day period following the time and date designated for the receipt and opening of Bids, and Bidder so agrees in submitting their Bid. Bids shall be binding for 30 days after the date of the Bid opening.

ARTICLE 5: CONSIDERATION OF BIDS

5.1 OPENING/REJECTION OF BIDS

5.1.1 Unless otherwise stated, Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids will be made available to Bidders.

5.1.2 The Agency shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

5.1.3 If the Bids are rejected, it will be done within thirty (30) calendar day of the Bid opening.

5.2 COMPARISON OF BIDS

5.2.1 After the Bids have been opened and read, the bid prices will be compared and the result of such comparisons will be made available to the public. Comparisons of the Bids may be based on the Base

Bid plus desired Alternates. The Agency shall have the right to accept Alternates in any order or combination.

- 5.2.2 The Agency reserves the right to waive technicalities, to reject any or all Bids, or any portion thereof, to advertise for new Bids, to proceed to do the Work otherwise, or to abandon the Work, if in the judgment of the Agency or its agent(s), it is in the best interest of the State.
- 5.2.3 An increase or decrease in the quantity for any item is not sufficient grounds for an increase or decrease in the Unit Price.
- 5.2.4 The prices quoted are to be those for which the material will be furnished F.O.B. Job Site and include all charges that may be imposed during the period of the Contract.
- 5.2.5 No qualifying letter or statements in or attached to the Bid, or separate discounts will be considered in determining the low Bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into Unit Bid Price(s).

5.3 DISQUALIFICATION OF BIDDERS

- 5.3.1 An agency shall determine that each Bidder on any Public Works Contract is responsible before awarding the Contract. Factors to be considered in determining the responsibility of a Bidder include:
 - A. The Bidder's financial, physical, personnel or other resources including Subcontracts;
 - B. The Bidder's record of performance on past public or private construction projects, including, but not limited to, defaults and/or final adjudication or admission of violations of the Prevailing Wage Laws in Delaware or any other state;
 - C. The Bidder's written safety plan;
 - D. Whether the Bidder is qualified legally to contract with the State;
 - E. Whether the Bidder supplied all necessary information concerning its responsibility; and,
 - F. Any other specific criteria for a particular procurement, which an agency may establish; provided however, that, the criteria be set forth in the Invitation to Bid and is otherwise in conformity with State and/or Federal law.
- 5.3.2 If an agency determines that a Bidder is nonresponsive and/or nonresponsible, the determination shall be in writing and set forth the basis for the determination. A copy of the determination shall be sent to the affected Bidder within five (5) working days of said determination.
- 5.3.3 In addition, any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and the rejection of their Bid or Bids.
 - 5.3.3.1 More than one Bid for the same Contract from an individual, firm or corporation under the same or different names.
 - 5.3.3.2 Evidence of collusion among Bidders.
 - 5.3.3.3 Unsatisfactory performance record as evidenced by past experience.
 - 5.3.3.4 If the Unit Prices are obviously unbalanced either in excess or below reasonable cost analysis values.
 - 5.3.3.5 If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning.

5.3.3.6 If the Bid is not accompanied by the required Bid Security and other data required by the Bidding Documents.

5.3.3.7 If any exceptions or qualifications of the Bid are noted on the Bid Form.

5.4 ACCEPTANCE OF BID AND AWARD OF CONTRACT

5.4.1 A formal Contract shall be executed with the successful Bidder within twenty (20) calendar days after the award of the Contract.

5.4.2 Per Section 6962(d)(13) a., Title 29, Delaware Code, "The contracting agency shall award any public works contract within thirty (30) days of the bid opening to the lowest responsive and responsible Bidder, unless the Agency elects to award on the basis of best value, in which case the election to award on the basis of best value shall be stated in the Invitation To Bid."

1) As indicated in the Invitation to Bid, the basis of award for this contract shall be **BEST VALUE**, and bids will be evaluated based on a weighted average consisting of Price (70%), Technical Proposal (20%), and Schedule (10%). The bids shall be ranked according to the established criteria and awarded to the highest ranked bidder. Below is an outline of the scoring criteria and scoring methodology:

2) Total Score formula: (Price Rating Points x 0.7) + (Technical Proposal x 0.2) + (Schedule Rating Points x 0.2) = Total Score

3) Price Evaluation Formula:
$$100 - \left\{ 100 \times \frac{\text{Proposer Price Submittal} - \text{Lowest Price Submittal}}{\text{Lowest Price Submittal}} \right\}$$

4) Technical Proposal Score is determined utilizing a scoring matrix, which denotes specific point values related to an itemized listing of the requirements. The maximum number of points allocated in the Technical Proposal is 100.

5) Schedule Evaluation Formula:
$$100 - \left\{ 100 \times \frac{\text{Proposer Calendar Days} - \text{Least Calendar Days}}{\text{Least Calendar Days}} \right\}$$

Sample Calculation: Submitted bid reflects a bid price, including accepted alternates, of \$1,150,000.50, and a substantial completion on/before August 18, 2015. Based on this sample submission, the Price Rating Points received would be 80 and the Schedule Rating Points received would be 60. The total score would be as follows:

$$\begin{aligned} \text{Total Score} &= (80 \times 0.7) + (60 \times 0.3) \\ &= 56 + 18 \\ &= 74 \end{aligned}$$

5.4.3 Each Bid on any Public Works Contract must be deemed responsive by the Agency to be considered for award. A responsive Bid shall conform in all material respects to the requirements and criteria set forth in the Contract Documents and specifications.

5.4.4 The Agency shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid, plus accepted Alternates.

5.4.5 The successful Bidder shall execute a formal contract, submit the required Insurance Certificate, and furnish good and sufficient bonds, unless specifically waived in the General Requirements, in accordance with the General Requirement, within twenty (20) days of official notice of contract award. Bonds shall be for the benefit of the Agency with surety in the amount of 100% of the total contract award. Said Bonds shall be conditioned upon the faithful performance of the contract. Bonds shall remain in affect for period of one year after the date of substantial completion.

- 5.4.6 If the successful Bidder fails to execute the required Contract and Bond, as aforesaid, within twenty (20) calendar days after the date of official Notice of the Award of the Contract, their Bid guaranty shall immediately be taken and become the property of the State for the benefit of the Agency as liquidated damages, and not as a forfeiture or as a penalty. Award will then be made to the next lowest qualified Bidder of the Work or readvertised, as the Agency may decide.
- 5.4.7 Each bidder shall supply with its bid its taxpayer identification number (i.e., federal employer identification number or social security number) and a copy of its Delaware business license, and should the vendor be awarded a contract, such vendor shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.
- 5.4.8 The Bid Security shall be returned to the successful Bidder upon the execution of the formal contract. The Bid Securities of unsuccessful bidders shall be returned within thirty (30) calendar days after the opening of the Bids.

ARTICLE 6: POST-BID INFORMATION

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

- 6.1.1 Bidders to whom award of a Contract is under consideration shall, if requested by the Agency, submit a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a statement has been previously required and submitted.

6.2 BUSINESS DESIGNATION FORM

- 6.2.1 Successful bidder shall be required to accurately complete an Office of Management and Budget Business Designation Form for Subcontractors.

ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND

7.1 BOND REQUIREMENTS

- 7.1.1 The cost of furnishing the required Bonds, that are stipulated in the Bidding Documents, shall be included in the Bid.
- 7.1.2 If the Bidder is required by the Agency to secure a bond from other than the Bidder's usual sources, changes in cost will be adjusted as provide in the Contract Documents.
- 7.1.3 The Performance and Payment Bond forms used shall be the standard OMB forms (attached).

7.2 TIME OF DELIVERY AND FORM OF BONDS

- 7.2.1 The bonds shall be dated on or after the date of the Contract.
- 7.2.2 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix a certified and current copy of the power of attorney.

ARTICLE 8: FORM OF AGREEMENT BETWEEN AGENCY AND CONTRACTOR

8.1 Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum.

ARTICLE 9: LIQUIDATED DAMAGES

9.1 Schedule of Liquidated Damages:

Schedule of Liquidated Damages		
Awarded Contract Value		Daily Charge
For Greater Than	Up to and Including	Calendar Day
\$0.00	\$25,000.00	\$290.00
\$25,000.00	\$50,000.00	\$300.00
\$50,000.00	\$100,000.00	\$400.00
\$100,000.00	\$500,000.00	\$630.00
\$500,000.00	\$1,000,000.00	\$820.00
\$1,000,000.00	\$2,000,000.00	\$1,000.00
\$2,000,000.00	\$5,000,000.00	\$1,060.00
\$5,000,000.00	\$10,000,000.00	\$1,180.00
\$10,000,000.00	\$15,000,000.00	\$1,870.00
\$15,000,000.00	\$20,000,000.00	\$3,130.00
\$20,000,000.00	Over	\$4,360.00

9.2 For each calendar day or work day that work remains uncompleted after the Contract time has expired or beyond the completion date established by the Contract, the sum specified in paragraph 9.1 of this document, will be deducted from any money due the Contractor. This sum shall not be considered and treated as a penalty but as liquidated damages due the University by reason of inconvenience to the public, added cost of engineering and supervision, and other extra expenditures of public funds due to the Contractor's failure to complete the work on time. Any adjustment of the Contract time for completion of the work granted by the University will be considered in the assessment of liquidated damages.

END OF SECTION 00 21 13



BID FORM – BID PACKAGE A – FIELD SPORT SURFACING

Project: PC-18-006 – Alumni Stadium NCAA Track and Field Surfacing Replacement

Location: Delaware State University
Alumni Stadium
1200 N. DuPont Highway
Dover, Delaware

For Bids Due: March 16, 2018

To: Delaware State University
Facilities Management Building, Office 101
1200 N. DuPont Highway
Dover, DE 19901-2277
Attn: Zafar Chaudhry
AVP for Contracts and Data Administration

Name of Bidder: _____

Delaware Business License No.: _____ **Taxpayer ID No.:** _____
(A copy of Bidder’s Delaware Business License must be attached to this form.)

(Other License Nos.): _____

Phone No.: () _____ - _____ **Fax No.:** () _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ _____ (Written Out).

(\$ _____) (Figures).

[This price includes all allowances as documented within the project manual.]

A. ALTERNATES (Note: project is subject to prevailing wages)

1. Alternates: Alternate prices conform to applicable project specification section. Refer to the drawing specifications for a complete description of the following Alternates. An “ADD” or “DEDUCT” amount is indicated by the crossing out the part that does not apply.

a. **Alternate #A1:** Alternate Synthetic Field Sport Surfacing System (Section 32 18 23.29A) with Shock Pad (Section 32 18 23.30A) in lieu of Base Bid Surfacing System (Section 32 18 23.29).

- _____ (Figures).
- _____ (Written Out).
- Check only one: ADD DEDUCT

b. **Alternate #A2:** Contracting discount if Bidder is awarded both bid packages A & B.

- _____ (Figures).
- _____ (Written Out).
- Check only one: ~~ADD~~ DEDUCT

B. UNIT PRICES

1. Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

	<u>ADD</u>	<u>DEDUCT</u>
UNIT PRICE No. A1: <u>F&I GABC (CUYD)</u>	\$ _____	\$ _____

C. WORK SCHEDULE

1. We understand that this contract is governed by liquidated damages and that submission of this bid is acceptance of the proposed contract completion date. Our proposed detailed project schedule shows more fully the sequence of activities necessary to meet the specified schedule. The project schedule is a required attachment of a complete bid and **failure to submit a viable schedule will be a justifiable reason to deem the bid as incomplete**. Bid schedule shall be submitted in Gantt Chart format (Microsoft Project preferred) to be deemed as an adequate project schedule.
 - a. Schedule should be detailed by trade and show manpower, or provide narrative explaining planned crews.
 - b. Include milestones, phasing, critical path, etc.
 - c. Document any weather contingency built into schedule.

2. Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within _____ calendar days of the Notice to Proceed.

3. **Alternative Work Hours**
 Work during “regular hours” at this site is being performed on a single shift, eight hours per day, 7:30 AM to 4:30 PM, and five days per week, Monday through Friday. To meet the schedule established on the basis of Item 1 above, our proposed work hours will be _____ hours per day, _____ AM to _____ PM, and _____ days per week, _____ through _____ the cost of which is reflected in our lump sum price. Our lump sum price also includes any mandatory off-hours work required per special conditions.

D. SITE SUPERINTENDANT

We propose to use _____ as our site superintendent. A resume of his/her qualifications is attached.

We understand that DSU reserves the right to interview him/her prior to contract award/prior to start of work and to reject him/her if not considered acceptable. If rejected, we will propose alternate

personnel for the position who will be subject to the same review and acceptance procedure, at no increase in our lump sum proposal.

We also understand DSU reserves the right to reject our bid if we are unable to provide a site supervisor acceptable to DSU within thirty (30) calendar days after submission of this bid.

E. REMARKS

1. I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.
2. This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.
3. The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.
4. This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.
5. Our Bid Price(s) are firm based on contract award within thirty (30) calendar days of the date of submittal of this bid.
6. I/We understand that we will not be compensated at a later date for claimed additional costs based on any information received during the bid period, but which is not identified in our proposal and subsequently accepted in writing by DSU.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
 (Individual's / General Partner's / Corporate Name)

 (State of Corporation)

Business Address: _____

Witness: _____ **By:** _____
 (SEAL) (Authorized Signature)

 (Title)
Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Security
- Construction Schedule
- Resume of Site Superintendent
- Technical Proposal
- (Others as Required by Project Manuals)

END OF SECTION 00 41 13



BID FORM – BID PACKAGE B – TRACK SURFACING

Project: PC-18-006 – Alumni Stadium NCAA Track and Field Surfacing Replacement

Location: Delaware State University
Alumni Stadium
1200 N. DuPont Highway
Dover, Delaware

For Bids Due: March 16, 2018

To: Delaware State University
Facilities Management Building, Office 101
1200 N. DuPont Highway
Dover, DE 19901-2277
Attn: Zafar Chaudhry
AVP for Contracts and Data Administration

Name of Bidder: _____

Delaware Business License No.: _____ **Taxpayer ID No.:** _____
(A copy of Bidder’s Delaware Business License must be attached to this form.)

(Other License Nos.): _____

Phone No.: () _____ - _____ **Fax No.:** () _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ _____ (Written Out).

(\$ _____) (Figures).

[This price includes all allowances as documented within the project manual.]

C. ALTERNATES (Note: project is subject to prevailing wages)

1. Alternates: Alternate prices conform to applicable project specification section. Refer to the drawing specifications for a complete description of the following Alternates. An “ADD” or “DEDUCT” amount is indicated by the crossing out the part that does not apply.

- a. **Alternate #B1:** Materials and Labor to pave existing vegetative areas.
 - _____ (Figures).
 - _____ (Written Out).
 - Check only one: ADD DEDUCT

- b. **Alternate #B2:** Materials and Labor to install sump basin in steeplechase water jump pit.
 - _____ (Figures).
 - _____ (Written Out).
 - Check only one: ADD DEDUCT

- c. **Alternate #B3:** Materials and Labor to install steeplechase water jump cover.
 - _____ (Figures).
 - _____ (Written Out).
 - Check only one: ADD DEDUCT

- d. **Alternate #B4:** Allowance for Materials and Labor to repair of existing chain link fencing system.
 - \$2,0000.00 _____ (Figures).
 - Two-thousand dollars _____ (Written Out).
 - Check only one: ADD DEDUCT

- e. **Alternate #B5:** Materials and Labor to apply bituminous surface treatment to existing asphalt pavement as indicated on drawings.
 - _____ (Figures).
 - _____ (Written Out).
 - Check only one: ADD DEDUCT

D. UNIT PRICES

1. Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

	<u>ADD</u>	<u>DEDUCT</u>
UNIT PRICE No. B1: <u>Mix Asphalt (CUYD)</u> _____	\$ _____	\$ _____
UNIT PRICE No. B2: <u>Crack Fill (LNFT)</u> _____	\$ _____	\$ _____
UNIT PRICE No. B3: <u>Excavation and Material Disposal (CUYD)</u> _____	\$ _____	\$ _____
UNIT PRICE No. B4: <u>F&I GABC (CUYD)</u> _____	\$ _____	\$ _____
UNIT PRICE No. B5: <u>F&I Type 'C' WMA (ton)</u> _____	\$ _____	\$ _____

C. WORK SCHEDULE

4. We understand that this contract is governed by liquidated damages and that submission of this bid is acceptance of the proposed contract completion date. Our proposed detailed project schedule shows more fully the sequence of activities necessary to meet the specified schedule. The project schedule is a required attachment of a complete bid and **failure to submit a viable schedule will be a justifiable reason to deem the bid as incomplete**. Bid schedule shall be submitted in Gantt Chart format (Microsoft Project preferred) to be deemed as an adequate project schedule.
 - a. Schedule should be detailed by trade and show manpower, or provide narrative explaining planned crews.
 - b. Include milestones, phasing, critical path, etc.
 - c. Document any weather contingency built into schedule.
5. Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within _____calendar days of the Notice to Proceed.
6. Alternative Work Hours
Work during “regular hours” at this site is being performed on a single shift, eight hours per day, 7:30 AM to 4:30 PM, and five days per week, Monday through Friday. To meet the schedule established on the basis of Item 1 above, our proposed work hours will be ____ hours per day, _____ AM to _____ PM, and _____ days per week, _____ through _____ the cost of which is reflected in our lump sum price. Our lump sum price also includes any mandatory off-hours work required per special conditions.

D. SITE SUPERINTENDANT

We propose to use _____ as our site superintendent. A resume of his/her qualifications is attached.

We understand that DSU reserves the right to interview him/her prior to contract award/prior to start of work and to reject him/her if not considered acceptable. If rejected, we will propose alternate personnel for the position who will be subject to the same review and acceptance procedure, at no increase in our lump sum proposal.

We also understand DSU reserves the right to reject our bid if we are unable to provide a site supervisor acceptable to DSU within thirty (30) calendar days after submission of this bid.

E. REMARKS

7. I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.
8. This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.
9. The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

10. This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.
11. Our Bid Price(s) are firm based on contract award within thirty (30) calendar days of the date of submittal of this bid.
12. I/We understand that we will not be compensated at a later date for claimed additional costs based on any information received during the bid period, but which is not identified in our proposal and subsequently accepted in writing by DSU.

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____
_____ of _____ in the County of _____
and State of _____ as **Principal**, and _____
_____ of _____ in the County of _____ and State of _____
as **Surety**, legally authorized to do business in the State of Delaware (“**State**”), are held and firmly unto the **State**
in the sum of _____ Dollars (\$_____),
or _____ percent not to exceed _____
_____ Dollars (\$_____) of amount of bid on Contract No. _____, to be
paid to the **State** for the use and benefit of _____ (*insert State agency
name*) for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors,
administrators, and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bonded **Principal** who has
submitted to the _____ (*insert State agency name*) a certain proposal to
enter into this contract for the furnishing of certain material and/or services within the **State**, shall be awarded this
Contract, and if said **Principal** shall well and truly enter into and execute this Contract as may be required by the
terms of this Contract and approved by the _____ (*insert State
agency name*) this Contract to be entered into within twenty days after the date of official notice of the award
thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in
full force and virtue.

Sealed with _____ seal and dated this _____ day of _____ in the year of our Lord two
thousand and _____ (20____).

SEALED, AND DELIVERED IN THE
Presence of

Name of Bidder (Organization)

Corporate
Seal

By:

Authorized Signature

Attest _____

Title

Name of Surety

Witness: _____

By:

Title

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

BIDDER'S QUALIFICATIONS (TECHNICAL PROPOSAL)

A bidders qualification package (technical proposal) shall be submitted with bid. The technical proposal shall be formatted to no more than 15 pages, and shall contain the following information in the order indicated herein. **Failure to a technical proposal with bid will be a justifiable reason to deem the bid as incomplete.**

1. **History of Claims/Lawsuits:** Please list any judgments, claims, lawsuits, suspensions, or disbarments / debarments that you have been involved with during the past (5) years and/or any that are currently pending. Please provide details and/or back-up of any that you list/provide.

Firm making this submittal:

- Parent Company Subsidiary Division Branch Office

Other: _____

Type of Company:

- Corporation Partnership Joint Venture Sole Proprietorship

Other: _____

2. **SAFETY**

- A. Please submit a Staging & Site Specific Safety Plan that includes, at a minimum, the following elements:
- Brief Introduction / Overview of Project
 - Site Description
 - Address site security, public access and safety, fencing, stored materials, and other related areas.
 - Logistics Plan
 - The Proposer is responsible for developing the final plan with the Owner.
 - For this portion of the Technical Proposal, the following should be understood: The Alumni Stadium is a secure complex and must be maintained as such throughout the construction timeframe.
 - Task Description and Evaluation of Hazards
 - At a minimum physical hazards, chemical hazards, biological hazards, and environmental hazards.
 - Required Personal Protective Equipment
 - Emergency Procedures
 - Contractor Disciplinary Policy for Safety Violations
 - Safety Inspection Procedures
- B. **OSHA Form 300:** Attach a copy of the company's OSHA Form 300 – Log and Summary of Occupational Injuries and Illnesses for the past two (2) calendar years.
- C. Please outline your company safety training program. What types of formal safety training do you require for your employees?
- D. Please list all individuals that have received an OSHA 30-hour card who may work on this project—please list name and position.
- E. Please describe your Company Safety philosophy.

- F. Please list your current EMR rating.
- G. Please list any safety citations received during the past (5) years.

2. Relevant Project Experience

- A. List a minimum of ten (10) synthetic turf replacement involving base remediation that your company has been awarded in the last five (5) years which were in the \$500k - \$1 million value range.

For each contract provide the following:

- Contract title.
- Owner.
- Geographic location.
- Owner contact name, title, **email** address, and phone number.
- Architect or Engineer contact name, title, **email** address, and phone number.
- Contract amount.
- Contract duration with dates.
- Identify the Diverse Business Enterprise participation percentage
- Provide a general description of the Scope of Work performed by your company.
- Subcontractors teamed with.

3. Project Management Team

- A. Provide an organizational chart indicating the functions, responsibilities and identities of your project management staff, including general manager, project managers, estimators, superintendents, and quality control personnel you intend to assign to this project. Provide a resume for each individual with their education, work experience, and indicate how long each individual has worked for your firm.
- B. Describe your firm's intent to self-perform the Work and in what specific trades, if any.
- C. Describe your firm's approach to punching-out and closing projects in a time efficient manner.
- D. Provide listing of subcontractors you intend to use for each prequalified trade. Please limit subcontractors to three (3) per trade category.

4. Quality Assurance / Quality Control

- A. Describe the specific qualifications of each member of your quality control staff. Indicate their levels of authority to redirect or put a stop to work and on what basis.
- B. Submit a site-specific quality control plan for this project.
- C. Outline any formal technical training given to your employees. Do you have any formal training requirements established?
- D. Provide proof of active certification per the following:
 - 1) Certified Field Builder – Synthetic Turf (CFB-S)
 - 2) American Sports Builders Association
9 Newport Drive, Suite 200

Forest Hill, MD 21050
866-501-2772

5. Product Information

E. Please submit the following information:

- 1) Synthetic Turf Vendor
- 2) Synthetic Turf Product
- 3) Pile Height (inches)
- 4) Face Weight (oz./square yard)
- 5) Total Fabric Weight (oz./square yard)
- 6) Primary Backing Weight (oz./square yard)
- 7) Secondary Coating Weight (oz./square yard)
- 8) Tuft Bind (lbs.)
- 9) Fabric Thickness (Primary/Secondary) (mils)
- 10) Fabric Width (feet)
- 11) Synthetic Turf Supplier
- 12) Synthetic Turf Pile Surface Material
- 13) Synthetic Turf Fiber
- 14) Synthetic Turf Backing Material
- 15) Turf Seams
- 16) Infill Material Type/Product Name

NOTE: Failure to submit all information may result in the rejection of bid.

END OF SECTION 00 45 13

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date *(to the Office of Management and Budget, Division of Facilities Management)*.

All the terms and conditions of *(Project or Contract Number)* have been thoroughly examined and are understood.

NAME OF BIDDER: _____

**AUTHORIZED REPRESENTATIVE
(TYPED):** _____

**AUTHORIZED REPRESENTATIVE
(SIGNATURE):** _____

TITLE: _____

ADDRESS OF BIDDER: _____

E-MAIL: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

OMB Regulation 4104 for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

For more information, please refer to the following link for the full regulation:
<http://regulations.delaware.gov/register/september2015/final/19%20DE%20Reg%20207%2009-01-15.pdf>

All the terms and conditions of *OMB Regulation 4104* have been thoroughly examined and are understood. We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

AN AFFIDAVIT SHALL BE PROVIDED BY THE BIDDER AND ALL SUBCONTRACTORS IDENTIFIED IN ATTACHED SUBCONTRACTOR LIST. STATEMENT(S) MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR A101-2007

The contract to be utilized on this project shall be the "Standard Form of Agreement Between Owner and Contractor" AIA Document A101-2007.

END OF SECTION 00 52 13

SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR A101-2007

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2007. Where a portion of the Standard Form of Agreement is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement shall remain in effect.

ARTICLE 5: PAYMENTS

5.1 PROGRESS PAYMENTS

5.1.3 Delete paragraph 5.1.3 in its entirety and replace with the following:

"Provided that a valid Application for Payment is received by the Architect that meets all requirements of the Contract, payment shall be made by the Owner not later than 30 days after the Owner receives the valid Application for Payment."

ARTICLE 8: MISCELLANEOUS PROVISIONS

8.2 Insert the following:

"Payments are due 30 days after receipt of a valid Application for Payment. After that 30 day period, interest may be charged at the rate of 1% per month not to exceed 12% per annum."

8.5 Delete paragraph 8.5 in its entirety and replace with the following:

"The Contractor's representative shall not be changed without ten days written notice to the Owner."

END OF SECTION 00 54 13

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

PERFORMANCE BOND

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal (“**Principal**”), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the _____ (“**Owner**”) (*insert State agency name*), in the amount of _____ (\$_____), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole, firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20__.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. _____ dated the _____ day of _____, 20__ (the “Contract”), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse **Owner** sufficient funds to pay the costs of completing the Contract that **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, hereby stipulates and agrees, if requested to do so by **Owner**, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause **Principal** fails or neglects to so fully perform and complete such work.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)

Name:
Title:

SURETY

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)

Name:
Title:

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

PAYMENT BOND

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal (“**Principal**”), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the _____ (“**Owner**”) (*insert State agency name*), in the amount of _____ (\$_____), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20__.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. _____ dated the _____ day of _____, 20__ (the “Contract”), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him, her, them or any of them, for all such materials, labor and service for which **Principal** is liable, shall make good and reimburse **Owner** sufficient funds to pay such costs in the completion of the Contract as **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

Surety hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)
Name:
Title:

SURETY

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)
Name:
Title:

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702

PAGE ONE OF

PAGES

TO OWNER: PROJECT: New Office & Warehouse
 Owner
 0000 4th Street
 Las Vegas, Nv. 00000
 FROM CONTRACTOR: VIA ARCHITECT:
 XYZ ELECTRIC Arhitects
 000 Las Vegas BLVD. 000 Tropicana Blvd.
 Las Vegas, Nv. 00000 Las Vegas, Nv. 00000
 CONTRACT FOR: Elect. Systems VIA GENERAL CONTRACTOR: Burke And Associates

APPLICATION NO: 4
 PERIOD TO: 12/31/99
 PROJECT NOS: NV000
 CONTRACT DATE: 08/13/99

Distribution to:
 OWNER
 ARCHITECT
 CONTRACTOR
 GENERAL CONTRACTOR

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
 Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

1. ORIGINAL CONTRACT SUM	\$	<u>120,693.00</u>
2. Net change by Change Orders	\$	<u>832.16</u>
3. CONTRACT SUM TO DATE (Line 1 ± 2)	\$	<u>121,525.16</u>
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$	<u>53,064.30</u>
5. RETAINAGE:		
a. % of Completed Work (Column D + E on G703)	\$	<u>5,069.73</u>
b. % of Stored Material (Column F on G703)	\$	<u>236.70</u>
Total Retainage (Lines 5a + 5b or Total in Column I of G703)	\$	<u>5,306.43</u>
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)	\$	<u>47,757.87</u>
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)	\$	<u>21,970.80</u>
8. CURRENT PAYMENT DUE	\$	<u>25,787.07</u>
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	\$	<u>73,767.29</u>

CONTRACTOR: XYZ ELECTRIC

By: _____ Date: 12/31/99
 President
 State of: _____ County of: _____
 day of _____
 Notary Public:
 My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, on observation of the Work comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work progressed as indicated, the amount of the Work in accordance with the Contract Documents, and the Contractor is entitled to payment of the amount certified.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
 ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	
Total approved this Month	\$832.16	
TOTALS	\$832.16	\$0.00
NET CHANGES by Change Order	\$832.16	

GENERAL CONDITIONS
TO THE
CONTRACT

The General Conditions of this Contract are as stated in the American Institute of Architects Document AIA A201 (2007 Edition) entitled General Conditions of the Contract for Construction and is part of this project manual as if herein written in full.

END OF SECTION 00 72 13

SUPPLEMENTARY GENERAL CONDITIONS A201-2007

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201-2007. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

ARTICLE 1: GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Delete the last sentence in its entirety and replace with the following:

“The Contract Documents also include Advertisement for Bid, Instructions to Bidder, sample forms, the Bid Form, the Contractor’s completed Bid and the Award Letter.”

Add the following Paragraph:

1.1.1.1 In the event of conflict or discrepancies among the Contract Documents, the Documents prepared by the State of Delaware, Division of Facilities Management shall take precedence over all other documents.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Paragraphs:

1.2.4 In the case of an inconsistency between the Drawings and the Specifications, or within either document not clarified by addendum, the better quality or greater quantity of work shall be provided in accordance with the Architect’s interpretation.

1.2.5 The word “PROVIDE” as used in the Contract Documents shall mean “FURNISH AND INSTALL” and shall include, without limitation, all labor, materials, equipment, transportation, services and other items required to complete the Work.

1.2.6 The word “PRODUCT” as used in the Contract Documents means all materials, systems and equipment.

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Delete Paragraph 1.5.1 in its entirety and replace with the following:

“All pre-design studies, drawings, specifications and other documents, including those in electronic form, prepared by the Architect under this Agreement are, and shall remain, the property of the Owner whether the Project for which they are made is executed or not. Such documents may be used by the Owner to construct one or more like Projects without the approval of, or additional compensation to, the Architect. The Contractor, Subcontractors, Sub-subcontractors and Material or Equipment Suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect’s consultants appropriate to and for use in the execution of their Work under the Contract Documents. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or Material and Equipment Supplier on other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and Architect’s consultants.

The Architect shall not be liable for injury or damage resulting from the re-use of drawings and specifications if the Architect is not involved in the re-use Project. Prior to re-use of construction documents for a Project in which the Architect is not also involved, the Owner will remove from such documents all identification of the original Architect, including name, address and professional seal or stamp.”

Delete Paragraph 1.5.2 in its entirety.

ARTICLE 2: OWNER

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

To Subparagraph 2.2.3 – Add the following sentence:

“The Contractor, at their expense shall bear the costs to accurately identify the location of all underground utilities in the area of their excavation and shall bear all cost for any repairs required, out of failure to accurately identify said utilities.”

Delete Subparagraph 2.2.5 in its entirety and substitute the following:

2.2.5 The Contractor shall be furnished free of charge up to five (5) sets of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

ARTICLE 3: CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Amend Paragraph 3.2.2 to state that any errors, inconsistencies or omissions discovered shall be reported to the Architect and Owner immediately.

Delete the third sentence in Paragraph 3.2.3.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Paragraphs:

3.3.2.1 The Contractor shall immediately remove from the Work, whenever requested to do so by the Owner, any person who is considered by the Owner or Architect to be incompetent or disposed to be so disorderly, or who for any reason is not satisfactory to the Owner, and that person shall not again be employed on the Work without the consent of the Owner or the Architect.

3.3.4 The Contractor must provide suitable storage facilities at the Site for the proper protection and safe storage of their materials. Consult the Owner and the Architect before storing any materials.

3.3.5 When any room is used as a shop, storeroom, office, etc., by the Contractor or Subcontractor(s) during the construction of the Work, the Contractor making use of these areas will be held responsible for any repairs, patching or cleaning arising from such use.

3.4 LABOR AND MATERIALS

Add the Following Paragraphs:

3.4.4 Before starting the Work, each Contractor shall carefully examine all preparatory Work that has been executed to receive their Work. Check carefully, by whatever means are required, to insure that its Work and adjacent, related Work, will finish to proper contours, planes and levels. Promptly notify the General Contractor/Construction Manager of any defects or imperfections in preparatory Work which will in any way affect satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects will not be recognized.

3.4.5 Under no circumstances shall the Contractor's Work proceed prior to preparatory Work proceed prior to preparatory Work having been completely cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with the Contractor responsible for that Work, who shall maintain coordination at all times.

3.5 WARRANTY

Add the following Paragraphs:

3.5.1 The Contractor will guarantee all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of guarantee.

3.5.2 Defects appearing during the period of guarantee will be made good by the Contractor at his expense upon demand of the Owner, it being required that all work will be in perfect condition when the period of guarantee will have elapsed.

3.5.3 In addition to the General Guarantee there are other guarantees required for certain items for different periods of time than the two years as above, and are particularly so stated in that part of the specifications referring to same. The said guarantees will commence at the same time as the General Guarantee.

3.5.4 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor's expense.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Paragraphs:

3.11.1 During the course of the Work, the Contractor shall maintain a record set of drawings on which the Contractor shall mark the actual physical location of all piping, valves, equipment, conduit, outlets, access panels, controls, actuators, including all appurtenances that will be concealed once construction is complete, etc., including all invert elevations.

3.11.2 At the completion of the project, the Contractor shall obtain a set of reproducible drawings from the Architect, and neatly transfer all information outlined in 3.11.1 to provide a complete record of the as-built conditions.

3.11.3 The Contractor shall provide two (2) prints of the as-built conditions, along with the reproducible drawings themselves, to the Owner and one (1) set to the Architect. In addition, attach one complete set to each of the Operating and Maintenance Instructions/Manuals.

3.17 In the second sentence of the paragraph, insert "indemnify" between "shall" and "hold".

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 ADMINISTRATION OF THE CONTRACT

Delete the first sentence of Paragraph 4.2.7 and replace with the following:

The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Delete the second sentence of Paragraph 4.2.7 and replace with the following:

The Architect's action will be taken with such reasonable promptness as to cause no delay in the Work in the activities of the Owner, Contractor or separate Contractors, while allowing sufficient time in the Owner's professional judgment to permit adequate review.

Add the following Paragraph:

4.2.10.1 There will be no full-time project representative provided by the Owner or Architect on this project.

Add to Paragraph 4.2.13 "and in compliance with all local requirements." to the end of the sentence

ARTICLE 5: SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Paragraph 5.2.3 in its entirety and replace with the following:

5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection, subject to the statutory requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4.

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

Delete Paragraph 6.1.4 in its entirety.

6.2 MUTUAL RESPONSIBILITY

6.2.3 In the second sentence, strike the word "shall" and insert the word "may".

ARTICLE 7: CHANGES IN THE WORK

(SEE ARTICLE 7: CHANGES IN WORK IN THE GENERAL REQUIREMENTS)

ARTICLE 8: TIME

8.2 PROGRESS AND COMPLETION

Add the following Paragraphs:

8.2.1.1 Refer to Specification Section SUMMARY OF WORK for Contract time requirements.

8.2.4 If the Work falls behind the Progress Schedule as submitted by the Contractor, the Contractor shall employ additional labor and/or equipment necessary to bring the Work into compliance with the Progress Schedule at no additional cost to the Owner.

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 Strike "arbitration" and insert "remedies at law or in equity".

Add the following Paragraph:

8.3.2.1 The Contractor shall update the status of the suspension, delay, or interruption of the Work with each Application for Payment. (The Contractor shall report the termination of such cause immediately upon the termination thereof.) Failure to comply with this procedure shall constitute a waiver for any claim for adjustment of time or price based upon said cause.

Delete Paragraph 8.3.3 in its entirety and replace with the following:

8.3.3 Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Paragraph 8.3.1 shall be the Contractor's sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.

Add the following Paragraph:

8.3.4 By permitting the Contractor to work after the expired time for completion of the project, the Owner does not waive their rights under the Contract.

ARTICLE 9: PAYMENTS AND COMPLETION

9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

9.2.1 The Schedule of Values shall be submitted using AIA Document G702, Continuation Sheet to G703.

9.2.2 The Schedule of Values is to include a line item for Project Closeout Document Submittal. The value of this item is to be no less than 1% of the initial contract amount.

9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

9.3.1.3 Application for Payment shall be submitted on AIA Document G702 "Application and Certificate for Payment", supported by AIA Document G703 "Continuation Sheet". Said Applications shall be fully executed and notarized.

Add the following Paragraphs:

9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.

9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following to 9.5.1:

- .8 failure to provide a current Progress Schedule;
- .9 a lien or attachment is filed;
- .10 failure to comply with mandatory requirements for maintaining Record Documents.

9.6 PROGRESS PAYMENTS

Delete Paragraph 9.6.1 in its entirety and replace with the following:

- 9.6.1 After the Architect has approved and issued a Certificate for Payment, payment shall be made by the Owner within 30 days after Owner's receipt of the Certificate for Payment.

9.7 FAILURE OF PAYMENT

In first sentence, strike "seven" and insert "thirty (30)". Also strike "binding dispute resolution" and insert "remedies at law or in equity".

9.8 SUBSTANTIAL COMPLETION

To Subparagraph 9.8.3 - Add the following sentence:

"If the Architect is required to make more than 2 inspections of the same portion of work, the Contractor shall be responsible for all costs associated with subsequent inspections including but not limited to any Architect's fees."

- 9.8.5 In the second sentence, strike "shall" and insert "may".

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Paragraphs:

- 10.1.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner and Architect prior to the commencement of that Contractor's Work.
- 10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full time basis. If deemed necessary by the Owner or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Paragraph:

- 10.2.4.1 As required in the Hazardous Chemical Act of June 1984, all vendors supplying any material that may be defined as hazardous must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a caution warning on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in foreseeable emergency situations. Material Safety Data Sheets shall be provided directly to the Owner, along with the shipping slips that include those products.

10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

Delete Paragraph 10.3.6 in its entirety.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.4 Strike "the Owner" immediately following "(1)" and strike "and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations."

11.2 OWNER'S LIABILITY INSURANCE

Delete Paragraph 11.2 in its entirety.

11.3 PROPERTY INSURANCE

Delete Paragraph 11.3 in its entirety and replace with the following:

11.3 The State will not provide Builder's All Risk Insurance for the Project. The Contractor and all Subcontractors shall provide property coverage for their tools and equipment, as necessary. Any mandatory deductible required by the Contractor's Insurance shall be the responsibility of the Contractor.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 Add the following sentence: "The bonds will conform to those forms approved by the Office of Management and Budget."

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.2.2 AFTER SUBSTANTIAL COMPLETION

Add the following Paragraph:

12.2.2.1.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as it considers justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

12.2.2.1 Strike "one" and insert "two".

12.2.2.2 Strike "one" and insert "two".

12.2.2.3 Strike "one" and insert "two".

12.2.5 In second sentence, strike "one" and insert "two".

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Strike "except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4."

13.6 INTEREST

Strike "the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located." Insert "30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month.

13.7 TIME LIMITS ON CLAIMS

Strike the last sentence.

Add the following Paragraph:

13.8 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

13.8.1 If any provision, specifications or requirement of the Contract Documents conflict or is inconsistent with any statute, law or regulation of the government of the United State of America, the Contractor shall notify the Architect and Owner immediately upon discovery.

Add the following Paragraph:

13.9 CLOUD-BASED PROJECT MANAGEMENT SYSTEM

13.9.1 The Contractor is responsible for communicating to the Owner and the Architect using the University's Cloud-Based Project Management System for the duration of the contract. The Owner will administer the site and shall provide login credentials to the Contractor following contract award.

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Delete Paragraph 14.4.3 in its entirety and replace with the following:

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and cost incurred by reason of such termination along with reasonable overhead.

ARTICLE 15: CLAIMS AND DISPUTES

15.1.2 Throughout the Paragraph strike "21" and insert "45".

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete Paragraph 15.1.6 in its entirety.

15.2 INITIAL DECISION

Delete Paragraph 15.2.5 in its entirety and replace with the following:

15.2.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefore and shall notify the parties of any change in the Contract Sum or

Contract Time or both. The approval or rejection of a Claim by the Architect shall be subject to mediation and other remedies at law or in equity.

Delete Paragraph 15.2.6 and its subparagraphs in their entirety.

15.3 MEDIATION

15.3.1 Strike "binding dispute resolution" and insert "any or all remedies at law or in equity".

15.3.2 In the first sentence, delete "administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement," Strike "binding dispute resolution" and insert "remedies at law and in equity".

15.4 ARBITRATION

Delete Paragraph 15.4 and its sub-sections in its entirety.

END OF SECTION 00 73 13

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 761-8200

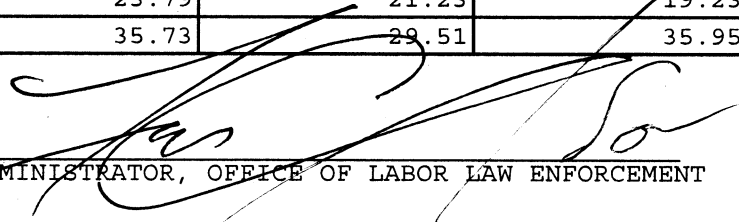
Mailing Address:
4425 North Market St. 3rd FL
Wilmington, DE 19802

Located at:
4425 North Market St. 3rd FL
Wilmington, DE 19802

PREVAILING WAGES FOR HIGHWAY CONSTRUCTION EFFECTIVE MARCH 15, 2017

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
BRICKLAYERS	51.99	51.99	15.17
CARPENTERS	53.48	53.81	42.77
CEMENT FINISHERS	33.91	34.12	27.13
ELECTRICAL LINE WORKERS	23.52	45.39	22.22
ELECTRICIANS	66.85	66.85	66.85
IRON WORKERS	62.35	24.95	26.50
LABORERS	43.30	39.85	39.12
MILLWRIGHTS	16.84	16.34	14.11
PAINTERS	67.07	67.07	67.07
PILEDRIERS	69.44	24.83	28.17
POWER EQUIPMENT OPERATORS	42.91	41.41	37.92
SHEET METAL WORKERS	23.79	21.23	19.23
TRUCK DRIVERS	35.73	29.51	35.95

CERTIFIED: 02/08/2018

BY: 
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: PC-18-006 DSU Alumni Stadium Track and Field Resurfacing Bid Packs A and B, Kent County

GENERAL REQUIREMENTS

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

ARTICLE 1: GENERAL

1.1 CONTRACT DOCUMENTS

1.1.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to an extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.1.2 Work including material purchases shall not begin until the Contractor is in receipt of a bonafide State of Delaware Purchase Order. Any work performed or material purchases prior to the issuance of the Purchase Order is done at the Contractor's own risk and cost.

1.2 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

1.2.1 For Public Works Projects financed in whole or in part by state appropriation the Contractor agrees that during the performance of this contract:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

ARTICLE 2: OWNER

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

ARTICLE 3: CONTRACTOR

3.1 Schedule of Values: The successful Bidder shall within twenty (20) days after receiving notice to proceed with the work, furnish to the Owner a complete schedule of values on the various items comprising the work.

3.2 Subcontracts: Upon approval of Subcontractors, the Contractor shall award their Subcontracts as soon as possible after the signing of their own contract and see that all material, their own and those of their Subcontractors, are promptly ordered so that the work will not be delayed by failure of materials to arrive on time.

3.3 Before commencing any work or construction, the General Contractor is to consult with the Owner as to matters in connection with access to the site and the allocation of Ground Areas for the various features of hauling, storage, etc.

- 3.4 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions.
- 3.5 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 3.6 The Contractor warrants to the Owner that materials and equipment furnished will be new and of good quality, unless otherwise permitted, and that the work will be free from defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved, may be considered defective. If required by the Owner, the Contractor shall furnish evidence as to the kind and quality of materials and equipment provided.
- 3.7 Unless otherwise provided, the Contractor shall pay all sales, consumer, use and other similar taxes, and shall secure and pay for required permits, fees, licenses, and inspections necessary for proper execution of the Work.
- 3.8 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the Owner if the Drawings and Specifications are observed to be at variance therewith.
- 3.9 The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under contract with the Contractor.
- 3.10 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged areas to their original conditions.
- 3.11 STATE LICENSE AND TAX REQUIREMENTS
- 3.11.1 Each Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay all fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the Delaware Department of Finance within ten (10) days after entering into any contract with a contractor or subcontractor not a resident of this State, a statement of total value of such contract or contracts together with the names and addresses of the contracting parties."
- 3.12. The Contractor shall comply with all requirements set forth in Section 6962, Chapter 69, Title 29 of the Delaware Code.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

- 4.1 CONTRACT SURETY
- 4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND
- 4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.
- 4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the

proposal, plans, specifications, and bid documents thereof. Each term and condition shall be met at the time and in the manner prescribed by the Contract, Bid documents and the specifications, including the payment in full to every person furnishing material or performing labor in the performance of the Contract, of all sums of money due the person for such labor and material. (The bond shall also contain the successful bidder's guarantee to indemnify and save harmless the State and the agency from all costs, damages and expenses growing out of or by reason of the Contract in accordance with the Contract.)

- 4.1.4 Invoking a Performance Bond – The agency may, when it considers that the interest of the State so require, cause judgement to be confessed upon the bond.
- 4.1.5 Within twenty (20) days after the date of notice of award of contract, the Bidder to whom the award is made shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the full amount of the Contract price to guarantee the faithful performance of all terms, covenants and conditions of the same. The bonds are to be issued by an acceptable Bonding Company licensed to do business in the State of Delaware and shall be issued in duplicate.
- 4.1.6 Performance and Payment Bonds shall be maintained in full force (warranty bond) for a period of two (2) years after the date of the Certificate for Final Payment. The Performance Bond shall guarantee the satisfactory completion of the Project and that the Contractor will make good any faults or defects in his work which may develop during the period of said guarantees as a result of improper or defective workmanship, material or apparatus, whether furnished by themselves or their Sub-Contractors. The Payment Bond shall guarantee that the Contractor shall pay in full all persons, firms or corporations who furnish labor or material or both labor and material for, or on account of, the work included herein. The bonds shall be paid for by this Contractor. The Owner shall have the right to demand that the proof parties signing the bonds are duly authorized to do so.

4.2 FAILURE TO COMPLY WITH CONTRACT

- 4.2.1 If any firm entering into a contract with the State, or Agency that neglects or refuses to perform or fails to comply with the terms thereof, the Agency which signed the Contract may terminate the Contract and proceed to award a new contract in accordance with this Chapter 69, Title 29 of the Delaware Code or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond. Nothing herein shall preclude the Agency from pursuing additional remedies as otherwise provided by law.

4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY

- 4.3.1 In addition to the bond requirements stated in the Bid Documents, each successful Bidder shall purchase adequate insurance for the performance of the Contract and, by submission of a Bid, agrees to indemnify and save harmless and to defend all legal or equitable actions brought against the State, any Agency, officer and/or employee of the State, for and from all claims of liability which is or may be the result of the successful Bidder's actions during the performance of the Contract.
- 4.3.2 The purchase or nonpurchase of such insurance or the involvement of the successful Bidder in any legal or equitable defense of any action brought against the successful Bidder based upon work performed pursuant to the Contract will not waive any defense which the State, its agencies and their respective officers, employees and agents might otherwise have against such claims, specifically including the defense of sovereign immunity, where applicable, and by the terms of this section, the State and all agencies, officers and employees thereof shall not be financially responsible for the consequences of work performed, pursuant to said contract.

4.4 RIGHT TO AUDIT RECORDS

- 4.4.1 The Owner shall have the right to audit the books and records of a Contractor or any Subcontractor under any Contract or Subcontract to the extent that the books and records relate to the performance of the Contract or Subcontract.
- 4.4.2 Said books and records shall be maintained by the Contractor for a period of seven (7) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of seven (7) years from the date of final payment under the Subcontract.

ARTICLE 5: SUBCONTRACTORS

5.1 SUBCONTRACTING REQUIREMENTS

- 5.1.1 All contracts for the construction, reconstruction, alteration or repair of any public building (not a road, street or highway) shall be subject to the following provisions:
 - 1. A contract shall be awarded only to a Bidder whose Bid is accompanied by a statement containing, for each Subcontractor category, the name and address (city or town and State only – street number and P.O. Box addresses not required) of the subcontractor whose services the Bidder intends to use in performing the Work and providing the material for such Subcontractor category.
 - 2. A Bid will not be accepted nor will an award of any Contract be made to any Bidder which, as the Prime Contractor, has listed itself as the Subcontractor for any Subcontractor unless:
 - A. It has been established to the satisfaction of the awarding Agency that the Bidder has customarily performed the specialty work of such Subcontractor category by artisans regularly employed by the Bidder's firm;
 - B. That the Bidder is duly licensed by the State to engage in such specialty work, if the State requires licenses; and
 - C. That the Bidder is recognized in the industry as a bona fide Subcontractor or Contractor in such specialty work and Subcontractor category.
- 5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.
- 5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.
- 5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:
 - A. Is unqualified to perform the work required;
 - B. Has failed to execute a timely reasonable Subcontract;
 - C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
 - D. Is no longer engaged in such business.

5.1.5 Should a Bidder be awarded a contract, such successful Bidder shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS

5.2.1 Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount*). The Agency may determine to deduct payments of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the contractor shall be reverted to the State.

*one (1) percent of contract amount not to exceed \$10,000

5.3 ASBESTOS ABATEMENT

5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.

5.4 STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED

5.4.1 All Contracts shall conform with the standard established by the Delaware Architectural Accessibility Board unless otherwise exempted by the Board.

5.5 CONTRACT PERFORMANCE

5.5.1 Any firm entering into a Public Works Contract that neglects or refuses to perform or fails to comply with its terms, the Agency may terminate the Contract and proceed to award a new Contract or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond.

ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS

6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.

6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

ARTICLE 7: CHANGES IN THE WORK

- 7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.
- 7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.
- 7.3 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.
- 7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes direct salary plus customary fringe benefits (prevailing wage rates) and documented statutory costs such as workman's compensation insurance, Social Security/Medicare, and unemployment insurance (a maximum multiplier of 1.35 times DPE).
- 7.3.2 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.
- 7.3.3 In addition to the above, the General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the General Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-ups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

ARTICLE 8: TIME

- 8.1 Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame.
- 8.2 If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.
- 8.3 Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.
- 8.4 **SUSPENSION AND DEBARMENT**
- 8.4.1 Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the

Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project.”

8.4.2 “Upon such failure for any of the above stated reasons, the Agency that contracted for the public works project may petition the Director of the Office of Management and Budget for Suspension or Debarment of the Contractor. The Agency shall send a copy of the petition to the Contractor within three (3) working days of filing with the Director. If the Director concludes that the petition has merit, the Director shall schedule and hold a hearing to determine whether to suspend the Contractor, debar the Contractor or deny the petition. The Agency shall have the burden of proving, by a preponderance of the evidence, that the Contractor failed to perform or complete the public works project within the time schedule established by the Agency and failed to do so for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the project. Upon a finding in favor of the Agency, the Director may suspend a Contractor from Bidding on any project funded, in whole or in part, with public funds for up to 1 year for a first offense, up to 3 years for a second offense and permanently debar the Contractor for a third offense. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. Such decision may be appealed to the Superior Court within thirty (30) days for a review on the record.”

8.5 RETAINAGE

8.5.1 Per Section 6962(d)(5) a.3, Title 29, Delaware Code: The Agency may at the beginning of each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion date due to the Contractor's failure to meet their responsibilities, the Agency may forfeit, at its discretion, all or part of the Contractor's retainage.

8.5.2 This forfeiture of retainage also applies to the timely completion of the punchlist. A punchlist will only be prepared upon the mutual agreement of the Owner, Architect and Contractor. Once the punchlist is prepared, all three parties will by mutual agreement, establish a schedule for its completion. Should completion of the punchlist be delayed beyond the established date due to the Contractor's failure to meet their responsibilities, the Agency may hold permanently, at its discretion, all or part of the Contractor's retainage.

ARTICLE 9: PAYMENTS AND COMPLETION

9.1 APPLICATION FOR PAYMENT

9.1.1 Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.

9.1.2 A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.

9.1.3 Section 6516, Title 29 of the Delaware Code annualized interest is not to exceed 12% per annum beginning thirty (30) days after the “presentment” (as opposed to the date) of the invoice.

9.2 PARTIAL PAYMENTS

9.2.1 Any public works Contract executed by any Agency may provide for partial payments at the option of the Owner with respect to materials placed along or upon the sites or stored at secured locations, which are suitable for use in the performance of the contract.

- 9.2.2 When approved by the agency, partial payment may include the values of tested and acceptable materials of a nonperishable or noncontaminative nature which have been produced or furnished for incorporation as a permanent part of the work yet to be completed, provided acceptable provisions have been made for storage.
- 9.2.2.1 Any allowance made for materials on hand will not exceed the delivered cost of the materials as verified by invoices furnished by the Contractor, nor will it exceed the contract bid price for the material complete in place.
- 9.2.3 If requested by the Agency, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.
- 9.3 SUBSTANTIAL COMPLETION
- 9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.
- 9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.
- 9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.
- 9.4 FINAL PAYMENT
- 9.4.1 Final payment, including the five percent (5%) retainage if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):
 - 9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid,
 - 9.4.1.2 An acceptable RELEASE OF LIENS,
 - 9.4.1.3 Copies of all applicable warranties,
 - 9.4.1.4 As-built drawings,
 - 9.4.1.5 Operations and Maintenance Manuals,
 - 9.4.1.6 Instruction Manuals,
 - 9.4.1.7 Consent of Surety to final payment.
- 9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

- 10.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take all reasonable precautions to prevent damage, injury or loss to: workers, persons nearby who may be affected, the Work, materials and equipment to be incorporated, and existing property at the site or adjacent thereto. The Contractor shall give notices and comply with applicable laws ordinances, rules regulations, and lawful orders of public authorities bearing on the safety of persons and property and their protection from injury, damage, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.
- 10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.
- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

ARTICLE 11: INSURANCE AND BONDS

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance coverage as they desire on their own property such as a field office, storage sheds or other structures erected upon the project site that belong to them and for their own use. The Subcontractors involved with this project shall carry whatever insurance protection they consider necessary to cover the loss of any of their personal property, etc.
- 11.2 Upon being awarded the Contract, the Contractor shall obtain a minimum of two (2) copies of all required insurance certificates called for herein, and submit one (1) copy of each certificate, to the Owner, within 20 days of contract award.
- 11.3 Bodily Injury Liability and Property Damage Liability Insurance shall, in addition to the coverage included herein, include coverage for injury to or destruction of any property arising out of the collapse of or structural injury to any building or structure due to demolition work and evidence of these coverages shall be filed with and approved by the Owner.
- 11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.
- 11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, shall not be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this

contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.

11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.

11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$2,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$2,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$2,000,000	aggregate
Property Damage	\$500,000	for each occurrence
	\$500,000	aggregate

11.7.3 Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each person
	\$1,000,000	for each occurrence
Property Damage	\$500,000	per accident

11.7.4 Prime Contractor's and Subcontractors' policies shall include contingent and contractual liability coverage in the same minimum amounts as 11.7.1 above.

11.7.5 Workmen's Compensation (including Employer's Liability):

11.7.5.1 Minimum Limit on employer's liability to be as required by law.

11.7.5.2 Minimum Limit for all employees working at one site.

11.7.6 Certificates of Insurance must be filed with the Owner guaranteeing fifteen (15) days prior notice of cancellation, non-renewal, or any change in coverages and limits of liability shown as included on certificates.

11.7.7 Social Security Liability

- 11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.
- 11.7.7.2 Upon request, the Contractor shall furnish Owner such information on payrolls or employment records as may be necessary to enable it to fully comply with the law imposing the aforesaid contributions or taxes.
- 11.7.7.3 If the Owner is required by law to and does pay any and/or all of the aforesaid contributions or taxes, the Contractor shall forthwith reimburse the Owner for the entire amount so paid by the Owner.

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

- 12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.
- 12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option, shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

ARTICLE 13: MISCELLANEOUS PROVISIONS

- 13.1 CUTTING AND PATCHING
 - 13.1.1 The Contractor shall be responsible for all cutting and patching. The Contractor shall coordinate the work of the various trades involved.
- 13.2 DIMENSIONS
 - 13.2.1 All dimensions shown shall be verified by the Contractor by actual measurements at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for adjustment before any work affected thereby has been performed.
- 13.3 LABORATORY TESTS
 - 13.3.1 Any specified laboratory tests of material and finished articles to be incorporated in the work shall be made by bureaus, laboratories or agencies approved by the Owner and reports of such tests shall be submitted to the Owner. The cost of the testing shall be paid for by the Contractor.
 - 13.3.2 The Contractor shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by the Owner.
- 13.4 ARCHAEOLOGICAL EVIDENCE
 - 13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the Delaware Archaeological Board and suspend work in the immediate area for a reasonable time to permit those

authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation in the State Museum.

13.5 GLASS REPLACEMENT AND CLEANING

13.5.1 The General Contractor shall replace without expense to the Owner all glass broken during the construction of the project. If job conditions warrant, at completion of the job the General Contractor shall have all glass cleaned and polished.

13.6 WARRANTY

13.6.1 For a period of two (2) years from the date of substantial completion, as evidenced by the date of final acceptance of the work, the contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or workmanship performed by the contractor or any of his subcontractors or suppliers. However, manufacturer's warranties and guarantees, if for a period longer than two (2) years, shall take precedence over the above warranties. The contractor shall remedy, at his own expense, any such failure to conform or any such defect. The protection of this warranty shall be included in the Contractor's Performance Bond.

ARTICLE 14: TERMINATION OF CONTRACT

14.1 If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.

14.2 "If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement."

END OF SECTION 00 81 13

EMPLOYEE DRUG TESTING REPORT FORM

Period Ending: _____

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds submit Testing Report Forms to the Owner no less than quarterly.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Number of employees who worked on the jobsite during the report period: _____

Number of employees subject to random testing during the report period: _____

Number of Negative Results _____ Number of Positive Results _____

Action taken on employee(s) in response to a failed or positive random test:

Authorized Representative of Contractor/Subcontractor: _____
(typed or printed)

Authorized Representative of Contractor/Subcontractor: _____
(signature)

Date: _____

EMPLOYEE DRUG TESTING
REPORT OF POSITIVE RESULTS

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds to notify the Owner in writing of a positive random drug test.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Name of employee with positive test result: _____

Last 4 digits of employee SSN: _____

Date test results received: _____

Action taken on employee in response to a positive test result:

Authorized Representative of Contractor/Subcontractor: _____
(typed or printed)

Authorized Representative of Contractor/Subcontractor: _____
(signature)

Date: _____

This form shall be sent by mail to the Owner within 24 hours of receipt of test results.

Enclose this test results form in a sealed envelope with the notation "Drug Testing Form – DO NOT OPEN" on the face thereof and place in a separate mailing envelope.

SECTION 01 23 00
ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing handling and processing allowances.
 - a. Selected materials and equipment, and in some cases, their installation, are shown and specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. Additional requirements, if necessary, will be issued by change order.
 - b. Allowances can be used in lieu of metering for temporary construction site utility services or funds to be returned to the Owner by deductive change order.
 - c. The allowance amounts listed in the specifications shall be included in the base bid.
- B. Measurement and Payment
 - a. Any amount not fully consumed shall be adjusted by change order.
 - i. The Contractor will be credited for his actual cost of labor, materials, and other actual costs WITHOUT mark-up.
 - ii. Any unused allowances shall be returned to the Trustees using a credit change order for the full amount of the value unused plus 6 percent.
 - iii. Should the Contractor's actual costs exceed the specified allowance, the Contractor's contract amount will be adjusted by change order in accordance with Contract General Conditions, Article 6.00.
- C. Schedule: A "Schedule of Allowances" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate.
 - 1. Include as part of each allowance, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

Schedule of Allowances:

Bid Pack A:

- a) **Allowance No. A1** – Field Grading and Drainage Base Repairs \$15,000.00

Bid Pack B:

- a) **Alternate No. B1** – Asphalt Repair Allowance \$5,000.00

END OF SECTION 01 21 00

SECTION 01 22 00
UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for unit prices.
 - 1. A unit price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
 - 2. Unit prices include all necessary material, labor, overhead, profit and applicable taxes.
 - 3. Refer to individual Specification Sections for construction activities requiring the establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- B. Schedule: A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods described under each unit price.
 - 1. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.

PART 2 - PRODUCTS

(Not Applicable).

PART 3 - EXECUTION

3.1 UNIT PRICE SCHEDULE

Schedule of Unit Prices:

Bid Pack A:

- a) **Unit Price No. A1** – Furnish and install GABC (US Dollars/cubic yard)

Bid Pack B:

- a) **Unit Price No. B1** – Mill Asphalt (US Dollars/cubic yard)
- b) **Unit Price No. B2** – Furnish and install crack fill existing asphalt (US Dollars/linear foot)
- c) **Unit Price No. B3** – Excavation and material disposal (US Dollars/cubic yard)
- d) **Unit Price No. B4** – Furnish and install GABC (US Dollars/cubic yard)

- e) **Unit Price B5** – Furnish and install Type 'C' warm-mix asphalt (US Dollars/ton)

END OF SECTION 01 22 00

**SECTION 01 23 00
ALTERNATES**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for Alternates.
- B. Definition: An Alternate is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the bidding requirements that may be added to or deducted from Base Bid amount if the Owner decides to accept the corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems or installation methods described in Contract Documents.
- C. Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted Alternate is complete and fully integrated into the project.
- D. Notification: Immediately following the award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected or deferred for consideration at a later date. Include a complete description of negotiated modifications to Alternates.
- E. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate.
 - 1. Include as part of each Alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

Schedule of Alternates:

Bid Pack A:

- a) **Alternate No. A1** – Alternate Synthetic Field Sport Surfacing System (Section 32 18 23.29A) with Shock Pad (Section 32 18 23.30A) in lieu of Base Bid Surfacing System (Section 32 18 23.29).
- b) **Alternate No. A2** – Contracting discount if Bidder is awarded both bid packages A & B.

Bid Pack B:

- a) **Alternate No. B1** – Materials and Labor to pave existing vegetative areas.
- b) **Alternate No. B2** – Materials and Labor to install sump basin in steeplechase water jump pit.

- c) **Alternate No. B3** – Materials and Labor to install steeples chase water jump cover.
- d) **Alternate No. B4** – Allowance for Materials and Labor to repair of existing chain link fencing system.
- e) **Alternate No. B5** – Materials and Labor to apply bituminous surface treatment to existing asphalt pavement as indicated on drawings.

END OF SECTION 01 23 00

SECTION 01 33 00
SUBMITTAL REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedures.
- B. Construction Progress Schedules.
- C. Schedule of Values.
- D. Shop Drawings.
- E. Product Data.
- F. Samples.
- G. Manufacturers' Instructions.
- H. Manufacturers' Certificates.

PROCEDURES

- A. Deliver submittals to Delaware State University, 1200 North DuPont Highway, Dover, DE 19901-2277.
- B. Transmit each item under a transmittal. Identify Project, Contractor, subcontractor, major supplier; identify pertinent Drawing sheet and detail number, and Specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for Contractor and Engineer review stamps. Allow 2 weeks for Engineer's initial processing of submittals requiring review and return. Submittals will be returned without action when received indirectly (not through the Contractor).
- C. Submit initial progress schedules and schedule of values in duplicate within fourteen (14) days after award of Contract. After review by Engineer, revise and resubmit as required. Submit revised schedules reflecting changes since previous submittal.
- D. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- E. After Engineer's review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- F. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
- G. Submit a complete schedule of submittals in duplicate within (20) days after award of Contract. After review by Engineer, revise and resubmit as required. Submit revised schedules reflecting changes since previous submittal.

1.03 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit horizontal bar chart with separate bar for each major trade or operation identifying first work day of each week.

1.04 SCHEDULE OF VALUES

- A. Submit typed schedule of AIA Form G703. Contractor's standard form or media-driven printout will be considered on request.

- B. Format: Table of Contents of this Project Manual. Identify each line item with number and title of the major Specification sections.
- C. Include in each line item amount of Allowances specified in Section 01005. For unit cost Allowances, give quantities measured from Contract Documents multiplied by the unit cost equal to the total for the item.
- D. Include in each line item a directly proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list change orders, for each application for payment.

1.05 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus four (4) copies which will be retained by Engineer.

1.06 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work. Include manufacturers' installation instructions when required by the Specification section.
- B. Submit the number of copies which Contractor requires, plus four (4) copies which will be retained by Engineer.

1.07 MANUFACTURERS' INSTRUCTIONS

- A. When required in individual Specification Section, submit manufacturer's printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for product data.

1.08 SAMPLES

- A. Submit full range of manufacturers' standard color, textures, and patterns for Architect's selection. Submit samples for selection of finishes within thirty (30) days after date of Contract.
- B. Submit Samples to illustrate functional characteristics of the Product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.
- C. Include identification of each Sample, giving full information.
- D. Submit the number specified in respective Specification section; one will be retained by Engineer. Reviewed Samples which may be used in the Work are indicated in the Specification section.

1.09 FIELD SAMPLES

- A. Provide field samples of finishes at Project as required by individual Specifications section. Install sample complete and finished. Acceptable samples in place may be retained in completed Work.

1.10 ITEMS TO BE SUBMITTED AT CONTRACT SIGNING

- A. Performance and Labor and Material Payment Bonds: One (1) copy of each bond for each copy of the agreement, submit simultaneously with the signed agreement.
- B. Policies or Certificates of Insurance: One (1) copy of each policy or certificate for each copy of the agreement, submit simultaneously with the signed agreement.

1.11 COLOR SELECTION

- A. Submit all items requiring color selection together (at one time) to facilitate color coordination by Architect.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 33 00

**SECTION 01 45 00
QUALITY CONTROL**

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Mock-ups.
- F. Manufacturers' Field Services.
- G. Testing Laboratory Services.

1.02 RELATED REQUIREMENTS

- A. Section 00100 - General Conditions: Inspection and testing required by governing authorities.

1.03 QUALITY CONTROL, GENERAL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.04 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.05 MANUFACTURER'S INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with contract documents, request clarification from architect before proceeding.

1.06 MANUFACTURERS' CERTIFICATES

- A. When required by individual specifications section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

1.07 MOCK-UPS

- A. None Required.

1.08 MANUFACTURERS' FIELD SERVICES

- A. When specified in respective specification sections, require manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to make appropriate recommendations.
- B. Representative shall submit written report to owner listing observations and recommendations.

1.09 TESTING LABORATORY SERVICES

- A. Contractor shall employ and pay for services of an Independent Testing Laboratory to perform inspections, tests, and other services required by various specification sections.
- B. Services will be performed in accordance with requirements of governing authorities and with specified standards.
- C. Reports will be submitted to owner in triplicate giving observations and results of tests, indicating compliance or noncompliance with specified standards and with contract documents.
- D. Contractor shall cooperate with Testing Laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify owner and Testing Laboratory 24 hours prior to expected time for operations requiring testing services.
 - 2. Make arrangements with Testing Laboratory and pay for additional samples and tests for contractor's convenience.
- E. Any item found unsatisfactory by the testing agency shall be removed, replaced and retested at no additional cost to the Owner.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 45 00

**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Closeout Procedures.
- B. Final Cleaning.
- C. Warranties and Bonds.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
 - 1. Fiscal provisions, legal submittals, and other administrative requirements.
- B. P&P Bonds, Certificates and Administrative Forms (AIA Documents), applies to this Section.

1.03 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Conditions of the Contract for issuance of Certificate of Substantial Completion.
- B. When Contractor considers work has reached final completion, submit written certification that contract documents have been reviewed, work has been inspected, and that work is complete in accordance with contract documents and ready for owner's inspection.
- C. In addition to submittals required by the conditions of the contract, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted contract sum, previous payments, and sum remaining due.
- D. Owner will issue a final change order reflecting approved adjustments to contract sum not previously made by change order.

1.04 FINAL CLEANING

- A. Execute prior to final inspection.
- B. Remove waste and surplus materials, rubbish, and construction facilities from the project and from the site. Provide final cleaning.

1.05 OPERATION AND MAINTENANCE DATA

- A. Provide data for:
 - 1. Synthetic Running Track Surfacing System
 - 2. Synthetic Field Sport Surfacing System
- B. Submit three (3) sets prior to final inspection, bound in 8-1/2 x 11 inch (216 x 279 mm) three-ring side binders with durable plastic covers + (1) digital set in Portable Document Format (.pdf).
- C. Provide a separate volume for each system, with a table of contents and index tabs for each volume.

- D. Part 1: Directory, listing names, addresses, and telephone number of: Suppliers and Contractor.
- E. Part 2: Operation and maintenance instructions, arranged by specification division. For each specification give names, addresses, and telephone number of subcontractors and suppliers. List:
 - 1. Appropriate design criteria.
 - 2. List of equipment.
 - 3. Parts list.
 - 4. Operating instructions.
 - 5. Maintenance instructions, equipment.
 - 6. Maintenance instructions, finishes.
 - 7. Shop Drawings and Product Data.
 - 8. Warranties

1.06 WARRANTIES AND BONDS

- A. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble documents executed by subcontractors, suppliers, and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
- B. Submit material prior to final application for payment. For equipment put into use with Owner's written permission during construction, submit within seven (7) days after first operation. For items of work delayed materially beyond date of substantial completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of work. Coordinate with owner, deliver to project site and obtain receipt prior to final payment.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 77 00

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the owner one (1) record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Engineer field orders or written instructions.
 - 6. Approved shop drawings, product data and samples.
 - 7. Field test records.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by owner's representative.

1.03 MARKING DEVICES

- A. All recorded as-builts will be provided electronically in format suitable to the owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
 - 1. Do not conceal any work until required information is recorded.
- C. Drawings: Legibly mark to record actual construction:
 - 1. Depths of various elements of foundation in relation to finish first floor datum.
 - 2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Change Order.
 - 6. Details not on original contract drawings.
- D. Specifications and Addenda: Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by Change Order.

1.05 SUBMITTAL

- A. Prior to contract close-out, contractor shall submit record documents as specified for owner's review and acceptance, contractor shall submit a set of reproducible sepias for Owner's use.
- B. Accompany submittal with transmittal letter in duplicate, containing:
 1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each record document.
 5. Signature of contractor or his authorized representative.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 78 39

SECTION 11 68 33.43
TRACK AND FIELD EQUIPMENT

PART 1 – GENERAL

1.1 SUMMARY

- A. This section may include, but is not limited to the following track & field equipment:
 - 1. Track Curbing
 - 2. Steeplechase Water Jump Cover
- B. Provide all equipment and materials, and do all work necessary to furnish and install the Track & Field Equipment, as indicated on the drawings and as specified herein.

1.2 RELATED SECTIONS

- A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
 - 1. Section 01 22 00 Unit Prices
 - 2. Section 01 23 00 Alternates
 - 3. Section 01 33 00 Submittal Requirements
 - 4. Section 01 45 00 Quality Control
 - 5. Section 01 77 00 Contract Closeout
 - 6. Section 01 78 39 Project Record Documents
 - 7. Section 32 18 23.33 Synthetic Running Track Surfacing

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern:
 - 1. Manufacturers Data and Recommended Installation Requirements.
 - 2. International Association of Athletics Federations' (IAAF) Track and Field Facilities Manual (Current Edition)
 - 3. 2017/2018 NCAA Men's and Women's Track and Field and Cross Country Rules
 - 4. Delaware Interscholastic Athletic Association (DIAA) sanctioned high school events in accordance with rules and guidelines of the National Federation of State High School Associations (NFHS).

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product literature, technical specifications, and other data required to demonstrate compliance with specified requirements for all athletic equipment.
- B. Shop Drawings
 - 1. Provide drawings of manufacturers recommended installation and foundation requirements prior to actual field installation work for Architect or Owner's Representative review.

1.03 QUALITY ASSURANCE

- A. Fabrication and installation of site improvements by experienced craftsmen with excellent record of performance on completed projects of comparable size, scope, and quality.
- B. All materials, hardware and furnishings shall be new, first quality.
- C. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.04 FIELD MEASUREMENTS

- A. Contractor shall verify position and layout of track and field equipment. Verify dimensions by field measurements.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Materials delivered to the site shall be examined for concealed damage or defects in shipping. Any defects shall be noted and reported to the Owner's Representative.
- B. Replacements, if necessary, shall be immediately re-ordered, to minimize any conflict with the construction schedule.

- C. Sound materials shall be stored above the ground under protective cover or indoors so as to provide proper protection.

PART 2 - PRODUCTS

2.01 TRACK AND FIELD EQUIPMENT

- A. General: Provide equipment complying with applicable references.
- B. Outdoor Aluminum Track Curbing:
 - 1. Basis of Design
 - a. Manufacturer: AAE (Aluminum Athletic Equipment Co.); 1000 Enterprise Drive, Royersford, PA 19468; Toll Free (800) 523-5471.
 - b. Model: # 3AC, Interlocking 2" square curbing with rounded corners. ½" welded aluminum drain pad sits on track surface. Hexagonal positioning stud threads into ¾" dia. Aluminum ground sleeve. Sections of 20'. Silver mill finish.
- C. Steeplechase Water Jump Cover – Flush
 - 1. Basis of Design:
 - a. Manufacturer: UCS Inc., 511 Hoffman Rd, Lincolnton, NC 28092. Contact: Michael Chappell, Ph. (704) 732-9922. Fax: (704) 732-9559. Michaelc@ucsspirit.com (E-Mail)
 - b. Model Numbers:506-5421. Flush Fitting 9 ½" x 1 ¾" extruded aluminum tongue and groove interlocking connector with a double leg supported aluminum. Framed with 2 ½ " x 1 ½ " x 1/4 " angle
 - i. Contractor shall verify and customize fit to existing pit
 - ii. (5) Aluminum 4" x 2" x ½" support beams for safety and precise fit
 - iii. Mill finish
 - iv. Each panel has 4 flush mount handles and shall be installed with recess to receive 10mm track surfacing.
- D. Sump Basin
 - 1. Basis of Design
 - a. Manufacturer: AK Industries Inc.. 1919 Jim Neu Dr. P.O. Box 640, Plymouth, IN 46563, Phone: 574-936-2542, Fax: 574-936-2298, Website: <http://www.akindustries.com>
 - 2. Model: AKP35000
 - a. Specifications:
 - i. High Density Polyethylene.
 - ii. 18" Diameter
 - iii. Capacity: 22 gallon
 - iv. Wall thickness: 0.188"
 - v. Provide removable, interlocking lid.
- E. Substitutions:
 - 1. Substitutions:
 - a. Request for deviations or substitutions from the specifications must be made in writing seven days prior to the bid due date. Complete product data including specifications, application rates, mixing instructions and a sample shall be sent with the request to the owner for an evaluation.
 - 1). Submit three (3) sets of manufacturer's product data sheets including installation guidelines and maintenance guidelines.
 - 2). Submit three (3) representative track samples in the color of surfacing to be installed.
 - 3). Submit Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for all individual components of the product being installed.
 - 4). Submit evidence that the synthetic surfacing contractor is a member of the American Sports Builders Association (ASBA).
 - ii. Alternative systems that are approved will be documented by addendum.

PART 3: EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions where equipment and systems are to be installed and notify the contractor of conditions detrimental to the proper and timely installation and completion of the work.
- B. Do not proceed with the work until unsatisfactory conditions have been corrected by the contractor in a manner acceptable and to the satisfaction of the Architect/Engineer or Owner's Representative.

3.02 INSTALLATION

- A. All athletic equipment shall be installed as recommended by manufacturer's written directions, and as indicated on the drawings.
- B. All athletic equipment shall be installed as indicated on approved submittals as recommended and in strict accordance with manufacturer's written directions and as indicated on the drawings and specified herein.
- C. All concrete footings for athletic equipment shall be installed as indicated on the drawings and in accordance with Section 03300, Cast-in-Place Concrete.
- D. All sleeves required for athletic equipment installation shall be set plumb and true to line and grade in concrete as indicated on the drawings and per manufacturer's recommendation.
- E. All athletic equipment shall be installed in strict accordance with the latest rules, regulations and specifications governing that sport or event for which it is being installed.

3.03 TESTING, ADJUSTMENT AND OPERATION

- A. All athletic equipment requiring testing, adjustments and operation shall be tested for proper operation and adjusted to conform to specified standards.
- B. Provide certifications as required, indicating that equipment has been tested and adjusted to conform to specified standards.
- C. Provide operating and maintenance instructions and manuals to Owner -designated personnel for the proper operation and care of equipment after equipment has been tested and adjusted to conform to specified standards.

3.04 CLEANING

- A. Upon completion of work in any given area, remove all trash and debris from the work area and leave in clean condition.

END OF SECTION 11 68 33.43

SECTION 32 18 23.33
SYNTHETIC RUNNING TRACKSURFACING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Synthetic running track surfaces.
- B. Line markings.

1.2 RELATED REQUIREMENTS

- A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
 - 1. Section 01 22 00 Unit Prices
 - 2. Section 01 23 00 Alternates
 - 3. Section 01 33 00 Submittal Requirements
 - 4. Section 01 45 00 Quality Control
 - 5. Section 01 77 00 Contract Closeout
 - 6. Section 01 78 39 Project Record Documents
 - 7. Section 11 68 33.43 Track and Field Equipment

1.3 REFERENCE STANDARDS

- A. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015.
- B. IAAF/NCAA - Performance Specification for Synthetic-Surfaced Athletics Tracks (Outdoor); 1999.
- C. DIN 18035 6 - Sporting Grounds Part 6-Synthetic Surfaces; 2008.
- D. International Association of Athletics Federations' (IAAF) Track and Field Facilities Manual (Current Edition)
- E. 2017/2018 NCAA Men's and Women's Track and Field and Cross Country Rules

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to start of work of this section; require attendance by all affected installers.

1.5 SUBMITTALS

- A. See Section 01 33 00 – Submittal Requirements, for submittal procedures.
- B. Product Data: Manufacturer's product data including standard specifications, installation guidelines and maintenance instructions.
 - 1. Submit documentation that synthetic running track surfacing material is free of toxic or hazardous substances that exceed the limits set forth by the U.S. Environmental Protection Agency.
- C. Shop Drawings: Show location and color of lane lines, start lines, finish lines, and related markings for Owner to review a minimum of 4 weeks prior to application.
- D. Samples: Three 12 inch by 12 inch samples of the full-depth system in the color(s) indicated on the contract documents.

- E. Certifications:
 - 1. Submit installer's certification that the installer has reviewed the asphalt or concrete base drawings and specifications and accepts the asphalt or concrete base will be suitable if constructed as indicated and specified.
 - 2. Submit installer's certification that in-place concrete or asphalt substrate is acceptable as installed.
 - 3. Submit certification from registered engineer or land surveyor that synthetic running track surface layout and dimensions are as shown on the drawings.
- F. Test Reports: Reports of field quality control testing.
- G. Manufacturer's Instructions: Submit copies of manufacturer's written installation instructions and other recommendations
- H. Manufacturer's Qualification Statement.
- I. Installer's Qualification Statement.
- J. Maintenance Data.
- K. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- L. Project Record Documents: Record actual locations of installed synthetic running track surfaces.
- M. Track Surveying:
 - 1. As required by the NCAA, track shall be surveyed and all measurements certified after demolition and after resurfacing by a professional land surveyor, licensed in the State of Delaware. A professional land surveyor's written certification shall list the exact measurements for the following:
 - a. Levels of the track, runways, approaches and landing surfaces;
 - b. Permanent track, runway, approach and landing surface measurements;
 - c. Start and finish lines;
 - d. Track lanes;
 - e. Baton-passing zones;
 - f. Steeplechase water-jump pit;
 - g. Hurdle placements; and
 - h. Throwing surfaces — the shot put, hammer and discus circles.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. The manufacturer has produced surfacing materials for not less than ten similar projects that have been in successful use for more than five years.
 - 2. The manufacturer must offer a minimum of four (4) IAAF approved track systems.
- B. All material components must be procured and manufactured from a single source as a tested and complete system.
- C. All polyurethanes used must be manufactured by an ISO 9001 and ISO 14001 Certified Company. Manufacturer's ISO 9001 and ISO 14001 certificate must accompany bid.
- D. Installer Qualifications: Minimum ten years experience in successful installation of surfacing systems of type specified herein.
 - 1. Submit manufacturer's certification that installing company is qualified to install the products specified.
 - 2. Submit installing company's certification that the company is a member of American Sports Builders Association (ASBA).
 - 3. Submit certification that installer employs at least one ASBA "Certified Track Builder" (CTB) on installation team for project.

4. The supervisor, of the installing company, must have ten (10) years' experience in surfacing with the specified system. A letter of certification must accompany the bid proposal.
5. The supervisor of the installing company, must have installed a minimum of ten (10) IAAF track system, within the last three years. A letter of certification from the manufacturer must accompany the bid proposal.

1.7 DELIVERY STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store in weathertight location and protect from damage during delivery, storage and handling.

1.8 WARRANTY

- A. See Section **01 77 00 – Contract Closeout**, for additional warranty requirements.
- B. Correct defective work within a two year period after date of Substantial Completion.
- C. Provide five year manufacturer warranty for synthetic running track surface system.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Manufacturer:
 1. Advanced Polymer Technology
109 Conica Lane / PO Box 160
Harmony, PA 16037
Phone: 724-452-1330

2.2 SYNTHETIC RUNNING TRACK SURFACING

- A. Basis of Design (BOD):
 1. Rekortan G-10 Fast Track – Rekortan® G-10 Fast Track, is a 2-layer, 10 mm, impermeable full pour system. The first application is a 6 mm self-leveling, force reduction layer of polyurethane that is approximately 76% renewable. The final layer has a self-leveling full-pour, flood and chip topcoat of polyurethane that is embedded EPDM rubber granules with an encapsulated top.
 - a. System Materials include:
 - 1) Compatible polyurethane primer; Qualipur Primer
 - 2) SBR Spray Rubber - Rubber (Black SBR Spray): The rubber in the base layer shall be specifically graded Styrene Butadiene Rubber (SBR). SBR is to be dried to no less than 2.5% moisture and sealed in bags.
 - 3) EPDM Rubber - Colored Rubber (EPDM): Must be Melos rubber. Unless specified, black rubber is not allowed in the wearing course. Color: Selected by owner.
 - 4) Full Pour Polyurethane - Full Pour Polyurethane: The full pour polyurethanes shall be a renewable, gel polyurethane compound and a full pour top layer, with no solvents or fillers added. The specified products are Qualipur 5052 (A&B) in the base layer and Qualipur 5050 (A&B) in the top layer.
 - 5) Two Component Aliphatic - Aliphatic Coating: Qualipur 6510, or approved equal, pigmented two component aliphatic elastomeric top coating. Color: Selected by owner.
- B. Substitutions:
 1. Request for deviations or substitutions from the specifications must be made in writing seven days prior to the bid due date. Complete product data including specifications, application rates, mixing instructions and a sample shall be sent with the request to the owner for an evaluation.
 - 1) Submit three (3) sets of manufacturer's product data sheets including installation guidelines and maintenance guidelines.
 - 2) Submit three (3) representative track samples in the color of surfacing to be installed.

- 3) Submit Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for all individual components of the product being installed.
 - 4) Submit evidence that the synthetic surfacing contractor is a member of the American Sports Builders Association (ASBA).
- b. Alternative systems that are approved will be documented by addendum.

2.3 ACCESSORIES

- A. Track and Event Line Marking Paint: Polyurethane paint formulated for exterior service environments in striping applications in color as specified for line markings.
1. Thickness: 12 mils dry film thickness (DFT).
 2. Multiple coats to achieve thickness as required by paint manufacturer.
 3. Prime surface to achieve adhesion characteristics of paint.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.
1. Do not proceed until unsatisfactory conditions have been corrected.
 2. Substrate tolerances:
 - a. Planarity: Not to exceed 1/4 inch in 10 feet, non-cumulative.
 - b. Levelness: Not to exceed 0.1 percent in running direction.
 - c. Concrete Curbs: Ensure top elevations of continuous concrete curbs are at constant elevation.
- B. The General Contractor shall verify that all asphalt / concrete paving meets all dimensional accuracy, strength, and compaction. Notify owner of any deficiencies. Recommended compaction of asphalt and sub base is 95%.
- C. The General Contractor shall verify that all asphalt / concrete work meets all required tolerances. Immediately notify owner of any deficiencies.

3.2 PREPARATION

- A. Protection: Protect surfaces adjacent to track surfacing operations from polyurethane liquids.
- B. Surface Preparation: Verify substrate is fully cured and free from excess surface oils and chemicals that would impair track surface installation.
1. Concrete: Cure concrete for not less than 28 days. Test cured concrete substrate and provide documentation that moisture content is within limits defined by manufacturer.
 2. Asphalt: Cure asphalt for no less than 14 days. Test cured asphalt and provide documentation that volatiles and latent asphalt content are within limits defined by manufacturer.
- C. Ensure that asphalt compaction tests indicate compaction of 95 percent or greater. Check asphalt with 10 foot straightedge in all directions. Repair areas not in conformance or replace with new materials, recompact, and recheck surfaces.
- D. Upon completion of paving, it is the responsibility of the paving contractor to water flood the surface with the use of a water truck. If after 30 minutes on a 70°F day, 'bird bathes' are evident in a depth more than 1/8" the paving contractor, track surfacing contractor and the owner's representative will determine the best method of correction.
- E. Entire surface shall be clean and free of all dirt, oil, grease or any other foreign residue. It is the responsibility of the General Contractor to ensure that the surface is thoroughly clean in all areas of the new and/or existing asphalt or concrete base as necessary to ensure adhesion of the track surface.
- F. Beginning installation stipulates track installer "accepts" existing conditions. Adhesion to the existing surface is the surfacing contractor's responsibility.

3.1 INSTALLATION

- A. General:
 - 1. Comply with manufacturer's recommendations.
 - 2. Prime areas to be surfaced.
 - 3. Make substrate surface repairs and minor planarity corrections with repair compound.
 - 4. Install track surface as specified to achieve track surface performance and physical dimensions within tolerances.
- B. Site Conditions:
 - 1. Weather: Surfacing shall not begin if rain is imminent, if gusting winds are occurring or when the threat of freezing exists within 24 hours.
 - 2. Site: During any surfacing and striping, sprinkler systems must be shut off or controlled so that no water falls on the track or event area surfaces. Other trades and school district personnel must stay off the wet or curing surface.
 - 3. Only mix and apply when meeting manufactures recommended guidelines.

3.2 INSTALLATION OF FULL-POUR SYNTHETIC TRACK SURFACE

- A. The entire surface shall be clean and free of dirt, oil, grease or any other residue upon arrival of the installation team. Any dirt, etc. shall be pressure washed off the base by the general contractor.
- B. If needed prime entire surface area with a compatible Qualipur polyurethane primer. Mask and protect adjacent structures as required. After primer has become tack free, but no longer than 24 hours, apply base layer. The consumption rate is 0.29 lbs/sy (0.16 kgs/sm).
- C. Base Layer: After primer and/or any detail applications have cured to tack- free, but no longer than 24 hours, mix Qualipur 5052 (A&B) resin, add 20% spray rubber to mixture, blend until thoroughly mixed, and apply using a notched trowel or squeegee. Do not overwork material; this can cause excessive trapped air. Before the base resin sets, blow onto the surface a fine layer of black SBR rubber, to create a texture. The consumption rate of the Qualipur 5052 is 7.63 lbs/sy (4.14 kg/sm). The consumption of the rubber is 1.88 lbs/sy (1.02 kg/sm).
- D. Broadcast Layer: After base layer has cured, but no longer than 24 hours. Mix the Qualipur 5050 coating and apply using a notched trowel or squeegee, to achieve an even wet coat. The consumption rate of the Qualipur 5050 is 5.51 lbs/sy (2.99 kgs/sm). Broadcast to excess with .5-2.0 mm colored EPDM granules, using a flat shovel or machine spreader ensuring all of the coating is covered. The consumption rate for the EPDM granules is 8.8 lbs/sy (4.82 kgs/sm).
- E. Allow broadcast layer to cure, and reclaim all excess rubber by means of a mechanical sweeper.
- F. Encapsulate Topcoat: After broadcast layer has cured, apply two coats of the Qualipur 6510 aliphatic top coating, using specialized spray equipment. Apply at a total consumption of 1.12 lbs/sy (0.61 kgs/sm). After initial cure of first coat, apply the second coat in an opposite direction as to the first. Allow top coating to cure before application of striping.

3.3 TRACK AND EVENT LINE MARKING

- A. Track and Event Line Markings shall comply with the requirements of the referenced IAAF Track and Field Facilities Manual and as defined in Rule 1 of the 2017/2018 NCAA Men's and Women's Track and Field and Cross Country Rules.
- B. Provide IAAF / NCAA standard markings for the following track and field events:
 - 1. 100 m.
 - 2. 200 m.
 - 3. 400 m.
 - 4. 800 m.
 - 5. 1000 m.
 - 6. 1500 m.
 - 7. 1 mile.
 - 8. 2000 m.

9. 3000 m steeplechase.
10. 100 m hurdles.
11. 110 m hurdles.
12. 400 m hurdles (men and women).
13. 4 by 100 m relay.
14. 4 by 200 m relay (completed in lanes).
15. 4 by 400 m relay.
16. 4 by 800 m relay.
17. 4 by 1500 m relay.
18. 50m markings around the entire track for training purposes.
19. Delaware Interscholastic Athletic Association (DIAA) sanctioned high school events in accordance with rules and guidelines of the National Federation of State High School Associations (NFHS).

3.4 TOLERANCES

- A. Percent Granules: Variation of plus or minus 2 percent.
- B. Surface Thickness, variation: Variation of minus 0.0 inch to plus 1/8 inch.
- C. Color Deviation: 5 Delta E (Hunter) units maximum allowed.
- D. Slopes: Must comply with all requirements of the referenced IAAF Track and Field Facilities Manual and as defined in Rule 1 of the 2017/2018 NCAA Men's and Women's Track and Field and Cross Country Rules.

3.5 FIELD QUALITY CONTROL

- A. See Section 01 45 00 - Quality Control for additional information.
- B. Tests: Perform thickness, hardness and deformation tests. Employ an Independent Testing Laboratory for the purpose. Submit reports.
 1. Conduct 60 thickness test spaced throughout the track surface.
 2. Conduct 5 hardness and deformation tests.
- C. Layout:
 1. Employ professional land surveyor to document pre & post construction conditions and to verify compliance of in-place work with the contract documents and the referenced standards.
 2. Submit reports.

3.6 CLEANING

- A. Leave surfacing in clean condition and free of surface defects.
- B. Reapply and touch up paint striping once during the warranty period at no additional cost to the owner. Warranty claim corrections shall not be deemed as the additional striping.

3.7 PROTECTION

- A. Protect installed surfacing from damage during the balance of construction activity.
- B. Protect all existing surfaces and substrates for the duration of the construction activity. Protection measures shall be assumed included in bid. Contractor shall be responsible for corrective work associated with a lack of protection to existing surfaces.
- C. The General Contractor shall provide temporary barriers as required to prevent public entry to construction area and to protect adjacent properties from damage during construction operation.

END OF SECTION 32 18 23.33

END OF SECTION 32 18 23.33

SECTION 32 18 23.29 – SYNTHETIC FIELD SPORT SURFACING (BASE BID)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 RELATED SECTIONS

- A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
 - a. Section 01 22 00 Unit Prices
 - b. Section 01 23 00 Alternates
 - c. Section 01 33 00 Submittal Requirements
 - d. Section 01 45 00 Quality Control
 - e. Section 01 77 00 Contract Closeout
 - f. Section 01 78 39 Project Record Documents

1.3 SUMMARY

- A. The work under this section shall consist of furnishing all labor, materials, and equipment necessary to install, in place, all synthetic turf and other materials as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with these specifications, the manufacturer's instructions and in accordance with all details and shop drawings.

1.4 SUBMITTALS

- A. All submittals shall be provided within 14 days after the Notice to Proceed.
- B. Product Data: For each type of product indicated.
 - a. Submit catalog cuts, material safety data sheets (MSDS), brochures, specifications, preparation and installation instructions and recommendations for both the turf and the pad.
 - b. All supplied and installed materials and products will meet or exceed the minimum specifications designated in this section. Sufficient data must be submitted to indicate compliance with the Contract Documents.
 - c. Submit manufacturer's installation instructions.
- C. Samples: The contractor shall provide the following samples of the artificial turf system for this project:
 - a. A 12-inch x 12-inch minimum infilled sample of the exact synthetic turf system that conforms to this specification (Section 2.1 Materials) with a texturized thatch layer and blended polyethylene tall fibers.
 - b. Infill mix in accordance with product specifications.
 - c. A 12-inch x 12-inch non-infilled sample of the exact synthetic turf specification that conforms to this specification.
- D. Shop Drawings: Show fabrication and installation details for synthetic turf including, but not limited to:
 - a. Proposed locations of all seams in fabric surfacing.
 - b. Field lining and marking - Submit a complete scale and dimensional drawing of inlaid or tufted-in field lines and marking boundaries. Include graphics for end zones and center logo artwork for approval as well.
 - c. This shall be submitted prior to field fabrication for approval.
- E. Maintenance and Operations Data: At the completion of the project submit 3 complete sets, in manual form, of all the manufacturer's recommended procedures and materials for, but not limited to general maintenance, line/marketing installation, small repair procedures, cleaning, etc.
- F. Pre-fabrication – Must show the ability & experience of at least 10 fields that were pre- fabricated, meaning all permanent sport lines will be either inlaid or tufted prior to shipment to the job-site. No on-site addition of lines is acceptable.

- G. The following items **must be submitted within the bid submission:**
- a. Manufacturer Certificates: Certified list of twenty-five (25) existing installations of a synthetic turf and infill system that meets the specification for this project in the last three years, including Owner Representative and telephone number, attesting compliance with quality assurance information. These fields must fully comply with the materials section of this specification (Section 2.1). All must be located within the continental United States.
 - b. Qualification Data: The turf contractor/manufacturer must have 100 full-sized fields that have been in use for a minimum of three years all being located in the Continental United States in locations similar in climate to the Northeast United States.
 - c. Sample Warranty & Sample 3rd Party Insurance Policy: Provide a sample pre-paid third party insured warranty & sample manufacturer's warranty with the bid. Policy must be in force at the time of bid. Submission must comply with Section 1.5 Warranties.
 - d. Proof that the Turf Provider/Installer is a member, in good standing, of the Synthetic Turf Council.
 - e. Turf provider must attest that their submitted products infringe on no known patents.
 - f. Sample Warranty: Provide a sample pre-paid third party insured warranty with the bid. Policy must be in force at the time of the bid.
 - i. The Contractor shall provide a warranty to the Owner that covers defects in materials and installation workmanship of the turf for a period of eight (8) years from the date of substantial completion. The turf provider must verify that their representative has inspected the installation and that the work conforms to the turf provider's requirements and any written directives. The warranty shall include general wear and damage caused from UV degradation. Other items that must be addressed include the following:
 1. Acceptable uses for the field
 2. Fading
 3. Color match within specifications
 4. Excessive fiber wear
 5. Wrinkling and panel movement
 6. Shock absorbency (Gmax)
 7. Seam integrity
 8. Drainage (through the turf only)
 - ii. Exclusions shall include the following:
 1. Vandalism
 2. Acts of God
 - iii. The warranty shall be fully third party insured for the entire 8-Year term and be non-prorated. Warranties that include language which pro-rates benefits shall cause the provider's bid to be rejected. Prior to final payment for the synthetic turf, the Contractor shall submit to the Owner, this policy guaranteeing the warranty to the Owner. Insurance must reflect the following values:
 1. \$5,000,000.00 per each insured warranty
 2. \$15Million dollar annual aggregate for all warranties issued during each 12 month period of the 8-Year warranty
 3. Policies that are backed by a Letter of Credit are not acceptable
 4. Policy must be issued by an A- rated or greater A.M. Best Rating
 5. Policies that include self-insurance or self retention clauses shall not be considered. Policy can not include any form of deductible amount. Policy must be in force at the time of the bid.

1.5 QUALITY ASSURANCE

- A. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, should be able to withstand full climatic exposure in the Northeast USA, be resistant to insect infestation, rot, fungus and mildew; to ultra-violet light and heat degradation, and shall have the basic characteristic of flow-through drainage allowing free movement of surface run-off through the turf and directly into prepared granular base and into the field drainage system.

- B. The synthetic turf and components shall be of national reputation with previous use at all levels of competition, including professional and collegiate levels of football and soccer and shall have been in use for a period of not less than three years. The turf fabric shall be produced by the manufacturer and installed by factory-authorized distributors directly employing the installation crew.
- C. Turf Provider Qualifications
 - 1. Shall be experienced in the installation of synthetic infill grass for a minimum of five (5) years.
 - 2. Shall have a minimum of 200 full sized tall fiber infilled type field installations. Field size to be a minimum of 65,000 square feet to qualify. This list is to be provided with the bid.
 - 3. Shall provide third party certification confirming compliance with referenced standards.
- D. Installer Qualifications:
 - 1. Installation team shall be an established, insured installation firm experienced as a premium turf installer with suitable equipment and supervisory personnel, with a minimum of five years experience with 15 foot wide tufted materials.
 - 2. Installation team shall be trained and certified, in writing, by the turf provider, as competent in the installation of the specified material, including seaming and proper installation of the infill mixture.
 - 3. Site superintendent shall have at least 10 installations similar to this type.
- E. Synthetic turf system shall be approved as ADA Handicap accessible as determined by Test Method ASTM 1951-99 (Standard Specification for determination of accessibility of surface under and around playground equipment).
- F. All components of the synthetic turf system must indicate detection levels below those levels established in Table 1A - Residential Direct Contact Health Based Criteria and Soil Remediation Standards (mg/kg) N.J.A.C. 7:26D (Remediation Standards).

1.6 WARRANTIES

- A. The Contractor shall provide a manufacturer's warranty to the Owner that covers defects in materials and installation workmanship of the turf for a period of ten (10) years from the date of substantial completion. The turf manufacturer must verify that their representative has inspected the installation and that the work conforms to the manufacturer's requirements and any written directives. The manufacturer's warranty shall include general wear and damage caused from UV degradation. Other items that must be addressed include the following:
 - 1. Acceptable uses for the field
 - 2. Fading
 - 3. Color match within specifications
 - 4. Excessive fiber wear
 - 5. Wrinkling and panel movement
 - 6. Shock absorbency (Gmax), 155 maximum.
 - 7. Seam integrity
 - 8. Drainage (through the turf only)
- B. The manufacturer's warranty shall be fully third party insured, through a pre-paid policy of 8 years and be non-prorated. Warranties that include language which pro-rates benefits shall cause the provider's bid to be rejected. Prior to final payment for the synthetic turf, the Contractor shall submit to the Owner, this policy guaranteeing the warranty to the Owner. Insurance must reflect the following values:
 - 1. Must provide coverage for \$5 million dollars per claim of total installed turf for removal, disposal and replacement of new synthetic turf.
 - 2. Must have a minimum of a \$15 million dollar annual aggregate towards repairs/replacements in a given policy year. The annual aggregate shall be applied only to policies executed in the 12 month policy window. Every annual policy year, another \$15 million worth of annual aggregate shall be set aside for the policies executed in that policy year.

3. Policy must be in-force at time of bid.
4. Policy must be issued by an A-rated or greater A.M. Best Rating
5. Must be pre-paid for the entire 8 years.
6. Policies that include self-insurance or self-retention clauses shall not be considered.
7. Sample copy of this policy must be provided with the bid detailing compliance with policy limits as described.

1.7 TRAINING

- A. Turf Installation Contractor shall train maintenance staff and/or contracted maintenance staff in the use of the recommended maintenance equipment and provide maintenance guidelines to the facility maintenance staff.

1.8 ATTIC STOCK

- A. The contractor shall provide the following attic stock at the completion of the project:
 1. Infill Material: 1/2 ton silica sand infill.
 2. Infill Material: 1/2 ton SBR rubber infill.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Manufacturer:
 1. AstroTurf Corporation
2680 Abutment Road, SE
Dalton, GA 30721
Dan Driscoll - (484) 995-7626 or (706) 277-8873
- B. Alternative Approved Manufacturers:
 1. A-Turf, Inc.,
PO Box 157, Williamsville, NY 14231
Phone: 888-777-6910
Fax: 716-204-0189
Email: info@aturf.com
 2. Shaw Sports Turf
185 South Industrial Boulevard, Calhoun, Georgia, 30701 US
Phone: 1-866-703-4004
Email: info@shawsportsturf.com

2.2 BASIS OF DESIGN

- A. AstroTurf® 3D
AstroTurf Corporation
- B. Alternate products will be considered however, said products must meet and/or be equivalent to all listed requirements, qualifications and specifications. It is the responsibility of the bidder to prove that the product substitution is equal to or greater than the product specified.
 - a. Request for deviations or substitutions from the specifications must be made in writing seven days prior to the bid due date. Submit alternate products with product data along with items identified in paragraphs in 1.4.A, 1.4.B, 1.4.D, 1.4.E, 1.4.F, 1.4.G, 1.4.H, of this section.
 - b. Alternative systems that are approved will be documented accordingly by addendum.

2.2 TURF MATERIALS

- A. Synthetic Turf System: A complete synthetic turf system consisting of a combination of high micron thickness monofilament polyethylene fibers and 10,000 denier XP Plus parallel slit film fibers along with an extruded nylon monofilament RootZone™. Pile height shall be nominal 2". Fibers shall be tufted to a primary backing and a mechanically applied adhesive secondary backing.
 1. The tufted fiber shall not weigh less than 60 ounces per square yard. The tufted rows of fiber are to be spaced no more than 3/8" apart. ASTM tests proving the fiber meets these

- qualifications must be provided with the bid. Turf systems that do not meet this specification will be disqualified.
2. The carpet's primary backing shall be comprised of three layers (18 pic polypropylene, 13 pic polypropylene, reinforced by a non-woven PET cap fiber layer). This backing is to have a minimum weight of 8 oz per square yard. The carpet shall then be coated with a secondary backing of Biocel™ Polyurethane synthetic coating material with a minimum application rate of 20 ounces per square yard and then perforated for adequate drainage. Carpets that are not perforated for adequate drainage shall not be acceptable.
 3. The carpet shall be delivered in 15' wide rolls. The rolls shall be of sufficient length to go from sideline to sideline.
 4. The pile surface shall provide good traction in all types of weather with the use of conventional sneaker type shoes, composition sole athletic shoes, baseball spikes and screw-on football spikes.
 5. The pile surface shall be suitable for both temporary and permanent line markings using acrylic paint, as per the manufacturer's recommendations.
 6. All synthetic turf seams shall be glued.
 7. All adhesives used in bonding the seams shall be resistant to moisture, freeze/thaw, bacteria and fungus attacks, and resistant to ultraviolet radiation. The adhesive shall be made especially for the adhesion of synthetic turf seams.
 8. Pre-fabricated Line, Logo & Lettering Markings
 - a. Inlaid markings, logo's, lettering shall be pre-fabricated at the manufacturing plant prior to the shipment to the field installation.
 - b. Any lines not tufted into the field shall be installed through laying out at an indoor facility that is climate controller prior to shipment to the job-site.
 - c. The lines shall be inlaid with hot melt fusion & seaming tape, no lines will be allowed to be sheared.
 - d. No markings shall be added once shipped to the job-site.
 9. As an add alternate, the entire turf system shall be protected with a factory-applied antimicrobial treatment.

B. TURF FABRIC SURFACE

1. The pile surface shall resemble freshly mown natural grass in appearance, texture and color.
2. The pile surface shall be nominally uniform in length.
3. The pile fiber angle shall be 90 degrees + 15 degrees, measured from the horizontal after installation of the infill material.
4. The entire system shall be resistant to weather, insects, rot, mildew and fungus growth and will be non-allergic and non-toxic.
5. The synthetic turf system shall have a nominal fiber length of 2".
6. Each roll shall be minimum 15' wide.
7. The entire system shall be constructed for porous standards as specified. Synthetic turf system shall be perforated at 4 – 6" on center. Systems that are not perforated for maximum drainage shall not be acceptable.

C. PRODUCT SPECIFICATIONS

1. Yarn shall be proved athletic quality yarn designed specifically for outdoor use and stabilized to resist the effects of ultraviolet degradation, heat, foot traffic, water and airborne pollutants. The fabric shall possess the following minimum physical characteristics. ASTM testing shall be provided with the bid and any products not meeting the minimum characteristics will be rejected.
 - a. Monofilament Polyethylene Yarn Denier (minimum) 12,000
 - b. Slit-Film Polyethylene Yarn Denier (minimum) 10,000
 - c. Nylon Texturized Yarn Denier (minimum) 5,000
 - d. Pile Height (nominal) 2"
 - e. Pile Ribbon Face Weight 60 oz/sy

f. Tufting Gauge	3/8" maximum
g. Primary Backing Weight	8 oz/sy
h. Secondary Backing Weight	20 oz/sy
i. Total System Weight	88 oz/sy
j. Tuft Bind	8 lbs minimum
k. Carpet Percolation Rate	>30 in/hr
l. Grab Tear Strength	>200 lbs/force

D. TURF MARKINGS

1. All markings shall be tufted in-place, inlaid or glued.
2. The turf shall be shipped with factory-fabricated striping and markings meeting all NCAA regulations for the following intercollegiate playing surfaces:
 - a. Football
 - b. Women's Soccer
 - c. Women's Lacrosse
3. The turf shall be shipped with factory-fabricated logos for the following:
 - a. (2) Mid-Atlantic Athletic Conference Logos
 - b. Custom end zone graphics including University logo and established text
 - c. University Logo at 50-yard line.
4. All football yard identification numbers shall be shadowed.

2.4 INFILL MATERIAL

- A. Infill composition shall consist of a ballast layer of silica sand topped by ambient SBR rubber performance infill in a 70% rubber / 30% sand ratio.
- B. Silica sand infill:
 1. Must be clean, sub-angular silica sand
 2. Must be a 20-40 sieve size.
- C. SBR infill:
 1. Must be ambient SBR Rubber
 2. Must be a 10-20 sieve size.
- D. Immediately after infill layers are installed, infill depth must be measured per testing protocol detailed in Section 1.3 C. 2 above to ensure that infill layer is at least 1.4" deep.

2.6 SYSTEM PERFORMANCE REQUIREMENTS

1. Shock Absorption:
 - a. Performance Requirement: When tested in accordance with the procedures and requirements described in section 2.6.1.b, below, g-max performance shall be as follows:
 - i. Prior to acceptance and/or use by the owner, the average g-max at each test point shall be less than 125 g-max.
 - ii. Subsequent to acceptance and while the field is under warranty, the average g-max at each test point shall be less than 155 g-max.
 - iii. Subsequent to acceptance and while the field is under warranty, if the field fails to satisfy the requirement(s) of section 2.6.1.a.ii., the contractor/manufacturer and the owner will cooperate to determine the cause of the failure. If the failure is attributable to defective materials or improper installation, the contractor/manufacturer shall be responsible for bringing the field into compliance. If the failure is due to improper or inadequate maintenance by the owner, or factors beyond the control of the contractor/manufacturer, the owner shall be responsible for bringing the field into compliance.

b. Testing Requirements:

- i. All g-max testing shall be performed by an independent testing service and in accordance with ASTM Standard Specification F1936 and ASTM Standard Test Method F355 (Procedure A).
- ii. Prior to acceptance and/or use by the owner, the contractor/manufacturer will have the field tested, as needed, to satisfy the requirement(s) of section 2.6.1.a.i., above.
- iii. Subsequent to acceptance, for the remainder of the time the field is under warranty, the contractor/manufacturer will have the field tested no less often than bi-annually, to demonstrate that the field complies with the requirement(s) of section 2.6.1.a.ii., above.
- iv. If, during the warranty period, the field is tested and found not to comply with the requirement(s) of section 2.6.1.a.ii, and the contractor/manufacturer is required to bring the field into compliance, the owner may require the contractor/manufacturer to have the field retested to verify compliance.
- v. Copies of all g-max test reports shall be furnished to the Athletic Director and University Legal Counsel.

2. Impact Attenuation:

- a. Performance Requirement: When tested in accordance with the procedures and requirements described in section 2.6.2.b, below, head impact criteria (HIC) performance shall be as follows:
 - i. Prior to acceptance and/or use by the owner, the average HIC at each test point shall be greater than 1.5m.
 - ii. Subsequent to acceptance and while the field is under warranty, the average HIC at each test point shall be greater than 1.3m.
 - iii. Subsequent to acceptance and while the field is under warranty, if the field fails to satisfy the requirement(s) of section 2.6.2.a.ii., the contractor/manufacturer and the owner will cooperate to determine the cause of the failure. If the failure is attributable to defective materials or improper installation, the contractor/manufacturer shall be responsible for bringing the field into compliance. If the failure is due to improper or inadequate maintenance by the owner, or factors beyond the control of the contractor/manufacturer, the owner shall be responsible for bringing the field into compliance.

b. Testing Requirements:

- i. All HIC testing shall be performed by an independent testing service and in accordance with ASTM Standard Specification F1936 and ASTM Standard Test Method F355 (Procedure A).
- ii. Prior to acceptance and/or use by the owner, the contractor/manufacturer will have the field tested, as needed, to satisfy the requirement(s) of section 2.6.2.a.i., above.
- iii. Subsequent to acceptance, for the remainder of the time the field is under warranty, the contractor/manufacturer will have the field tested no less often than bi-annually, to demonstrate that the field complies with the requirement(s) of section 2.6.2.a.ii., above.

- iv. If, during the warranty period, the field is tested and found not to comply with the requirement(s) of section 2.6.2.a.ii., and the contractor/manufacturer is required to bring the field into compliance, the owner may require the contractor/manufacturer to have the field retested to verify compliance.
- v. Copies of all HIC test reports shall be furnished to the Athletic Director and University Legal Counsel.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of work. Proceed with installation only after satisfactory conditions have been corrected.
- B. Certification of prior work: The synthetic turf manufacturer and/or installation contractor shall perform an inspection of the field base onto which the synthetic turf system is to be installed and to examine the finished surface for required compaction, permeability and grade tolerances (through string line testing). After any discrepancies between the required materials, application and tolerance requirements noted have been corrected, the synthetic turf installer should submit a written certification of acceptance of the base for installation of the synthetic turf system.
- C. Installation of all materials shall be performed in full compliance with approved project shop drawings. Only factory trained technicians skilled in the installation of athletic caliber synthetic turf systems, working under the direct supervision of the manufacturer's supervisors, shall undertake the placement of the turf system. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer as competent in the installation of these materials, including proper seaming and proper installation of the infill mixture. The manufacturer shall certify the installation and warranty compliance, prior to substantial completion.

3.2 PREPARATION

- A. Inspect delivered field surface fabric and components immediately prior to installation. Any damaged or defective items shall be rejected. Installed artificial system shall be inspected for, but not limited to, the following:
 - i. Uniformity of product and color.
 - ii. Surface bubbles.
 - iii. Field markings.
 - iv. Field Edge installation.
 - v. Pile height of each roll shall be measured. Any material(s) that does not meet minimum height and thickness specifications shall be rejected.
 - vi. Pile height shall be measured in its finished positions.
- B. Environmental Conditions: Weather conditions are important for the successful installation of the systems. No work under this section will proceed when:
 - a. Ambient temperatures are below 45 degrees F.
 - b. Material temperatures are below 45 degrees F.
 - c. Surfaces are wet or damp.
 - d. Rain is imminent or falling.
 - e. Conditions exist or are imminent, which will be unsuitable to installation requirements of the systems specified herein. Humidity levels will be inside the limits recommended by the adhesive manufacturer to obtain optimum bonding characteristics of the surfaces.
- C. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit synthetic turf work to be performed according to turf manufacturer's written instructions and warranty requirements.

3.3 INSTALLATION OF THE SYNTHETIC TURF

- A. The carpet rolls are to be installed directly over the properly prepared base stone. Extreme care should be taken to avoid disturbing the base stone both in regard to compaction and planarity. A 2-5 ton static roller shall be on site and available to repair and properly compact any disturbed areas of the base stone.
- B. The full width rolls shall be laid out across the field. Utilizing standard state of the art gluing procedures, each roll shall be attached to the next. Each seam will be glued. When all of the rolls of the playing surface have been installed, the sideline areas will be installed at right angles to the playing field turf. All work shall be such that seams shall remain as required for the duration of the warranty period at a minimum. All seam widths are to be held to a minimum and shall be traverse to the field direction. Seams shall be flat, tight and permanent, with no separation or fraying.
- C. The perimeter of the field shall be firmly secured to the existing concrete curb for the life of the warranty and in accordance to project details.
- D. Resilient Infill: The infill material shall be spread evenly with a large spreader (minimum 5-foot wide). Between applications the infill area shall be brushed with a motorized rotary texturized broom.
 - i. The sand ballast infill material shall be spot inspected and tested for conformance to sieve specifications.
 - ii. Sand ballast Infill must be placed in such a way as to minimize fiber entrapment.
 - iii. The rubber infill must be uniformly applied so as to ensure uniform, predictable surface.
 - iv. After infill layers are installed, infill depth must be measured to ensure that infill depth is at least 1.4" deep.

3.4 FIELD LINING AND MARKINGS

- A. General: A complete field "Lining, Marking and Field Boundary" system will be provided with the installation of the surfacing system specified herein. All markings shall be installed in accordance with prior approved project Shop Drawings.
- B. Inlays shall conform to the turf provider's specifications, directions and recommendations for the best results.
- C. Striping layouts shall be accurately surveyed by the Contractor before installation of inlaid field markings
- D. Install inlays only when the surface is completely dry. Adhere all inlays securely into place. Never loose-lay and sew an inlay into place.

3.5 FIELD QUALITY CONTROL

- A. Contractor shall be responsible for ensuring installation meets or exceeds the system performance requirements outlined herein and shall provide all necessary corrective action and re-evaluations of the system performance prior to final acceptance.

3.6 FINAL ACCEPTANCE

- A. Prior to final acceptance, the Contractor shall submit to the Owner three (3) copies of Maintenance Manual, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.
- B. The Contractor shall provide evidence, to the satisfaction of the owner, that the turf can be plowed with conventional rubber bladed snow removal equipment.

- C. The finished playing surface shall appear as mowed grass with no irregularities and shall afford excellent traction for conventional athletic shoes for all types. The finished surface shall resist abrasion and cutting from normal use.

3.4 CLEANING

- A. Contractor shall provide the labor, supplies and equipment as necessary for final cleaning of surfaces and installed items. All usable remnants of new material shall become the property of the Owner, unless directed otherwise. The Contractor shall keep the area clean throughout the project and clear of debris. Surfaces, recesses, enclosures, etc. shall be cleaned, as necessary, to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

END OF SECTION 32 18 23.29

SECTION 32 18 23.29A – SYNTHETIC FIELD SPORT SURFACING (ALTERNATE #1)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.

1.2 RELATED SECTIONS

- A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
 - a. Section 01 22 00 Unit Prices
 - b. Section 01 23 00 Alternates
 - c. Section 01 33 00 Submittal Requirements
 - d. Section 01 45 00 Quality Control
 - e. Section 01 77 00 Contract Closeout
 - f. Section 01 78 39 Project Record Documents
 - g. Section 32 18 23.30A Synthetic Base Material and Performance

1.3 SUMMARY

- A. The work under this section shall consist of furnishing all labor, materials, and equipment necessary to install, in place, all synthetic turf and other materials as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with these specifications, the manufacturer's instructions and in accordance with all details and shop drawings.

1.4 SUBMITTALS

- A. All submittals shall be provided within 14 days after the Notice to Proceed.
- B. Product Data: For each type of product indicated.
 - a. Submit catalog cuts, material safety data sheets (MSDS), brochures, specifications, preparation and installation instructions and recommendations for both the turf and the pad.
 - b. All supplied and installed materials and products will meet or exceed the minimum specifications designated in this section. Sufficient data must be submitted to indicate compliance with the Contract Documents.
 - c. Submit manufacturer's installation instructions.
- C. Samples: The contractor shall provide the following samples of the artificial turf system for this project:
 - a. A 12-inch x 12-inch minimum infilled sample of the exact synthetic turf system that conforms to this specification (Section 2.1 Materials) with a texturized thatch layer and blended polyethylene tall fibers.
 - b. Infill mix in accordance with product specifications.
 - c. A 12-inch x 12-inch non-infilled sample of the exact synthetic turf specification that conforms to this specification.
- D. Shop Drawings: Show fabrication and installation details for synthetic turf including, but not limited to:
 - a. Proposed locations of all seams in fabric surfacing.
 - b. Field lining and marking - Submit a complete scale and dimensional drawing of inlaid or tufted-in field lines and marking boundaries. Include graphics for end zones and center logo artwork for approval as well.
 - c. This shall be submitted prior to field fabrication for approval.
- E. Maintenance and Operations Data: At the completion of the project submit 3 complete sets, in manual form, of all the manufacturer's recommended procedures and materials for, but not limited to general maintenance, line/markings installation, small repair procedures, cleaning, etc.
- F. Pre-fabrication – Must show the ability & experience of at least 10 fields that were pre-fabricated, meaning all permanent sport lines will be either inlaid or tufted prior to shipment to the job-site. No on-site addition of lines is acceptable.

- G. The following items **must be submitted within the bid submission:**
- a. Manufacturer Certificates: Certified list of twenty-five (25) existing installations of a synthetic turf and infill system that meets the specification for this project in the last three years, including Owner Representative and telephone number, attesting compliance with quality assurance information. These fields must fully comply with the materials section of this specification (Section 2.1). All must be located within the continental United States.
 - b. Qualification Data: The turf contractor/manufacturer must have 100 full-sized fields that have been in use for a minimum of three years all being located in the Continental United States in locations similar in climate to the Northeast United States.
 - c. Sample Warranty & Sample 3rd Party Insurance Policy: Provide a sample pre-paid third party insured warranty & sample manufacturer's warranty with the bid. Policy must be in force at the time of bid. Submission must comply with Section 1.5 Warranties.
 - d. Proof that the Turf Provider/Installer is a member, in good standing, of the Synthetic Turf Council.
 - e. Turf provider must attest that their submitted products infringe on no known patents.
 - f. Sample Warranty: Provide a sample pre-paid third party insured warranty with the bid. Policy must be in force at the time of the bid.
 - i. The Contractor shall provide a warranty to the Owner that covers defects in materials and installation workmanship of the turf for a period of eight (8) years from the date of substantial completion. The turf provider must verify that their representative has inspected the installation and that the work conforms to the turf provider's requirements and any written directives. The warranty shall include general wear and damage caused from UV degradation. Other items that must be addressed include the following:
 1. Acceptable uses for the field
 2. Fading
 3. Color match within specifications
 4. Excessive fiber wear
 5. Wrinkling and panel movement
 6. Shock absorbency (Gmax)
 7. Seam integrity
 8. Drainage (through the turf only)
 - ii. Exclusions shall include the following:
 1. Vandalism
 2. Acts of God
 - iii. The warranty shall be fully third party insured for the entire 8-Year term and be non-prorated. Warranties that include language which pro-rates benefits shall cause the provider's bid to be rejected. Prior to final payment for the synthetic turf, the Contractor shall submit to the Owner, this policy guaranteeing the warranty to the Owner. Insurance must reflect the following values:
 1. \$5,000,000.00 per each insured warranty
 2. \$15Million dollar annual aggregate for all warranties issued during each 12 month period of the 8-Year warranty
 3. Policies that are backed by a Letter of Credit are not acceptable
 4. Policy must be issued by an A- rated or greater A.M. Best Rating
 5. Policies that include self-insurance or self retention clauses shall not be considered. Policy can not include any form of deductible amount. Policy must be in force at the time of the bid.

1.5 QUALITY ASSURANCE

- A. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, should be able to withstand full climatic exposure in the Northeast USA, be resistant to insect infestation, rot, fungus and mildew; to ultra-violet light and heat degradation, and shall have the basic characteristic of flow-through drainage allowing free movement of surface run-off through the turf and directly into prepared granular base and into the field drainage system.

- B. The synthetic turf and components shall be of national reputation with previous use at all levels of competition, including professional and collegiate levels of football and soccer and shall have been in use for a period of not less than three years. The turf fabric shall be produced by the manufacturer and installed by factory-authorized distributors directly employing the installation crew.
- C. Turf Provider Qualifications
 - 1. Shall be experienced in the installation of synthetic infill grass for a minimum of five (5) years.
 - 2. Shall have a minimum of 200 full sized tall fiber infilled type field installations. Field size to be a minimum of 65,000 square feet to qualify. This list is to be provided with the bid.
 - 3. Shall provide third party certification confirming compliance with referenced standards.
- D. Installer Qualifications:
 - 1. Installation team shall be an established, insured installation firm experienced as a premium turf installer with suitable equipment and supervisory personnel, with a minimum of five years experience with 15 foot wide tufted materials.
 - 2. Installation team shall be trained and certified, in writing, by the turf provider, as competent in the installation of the specified material, including seaming and proper installation of the infill mixture.
 - 3. Site superintendent shall have at least 10 installations similar to this type.
- E. Synthetic turf system shall be approved as ADA Handicap accessible as determined by Test Method ASTM 1951-99 (Standard Specification for determination of accessibility of surface under and around playground equipment).
- F. All components of the synthetic turf system must indicate detection levels below those levels established in Table 1A - Residential Direct Contact Health Based Criteria and Soil Remediation Standards (mg/kg) N.J.A.C. 7:26D (Remediation Standards).

1.6 WARRANTY

- A. The Contractor shall provide a manufacturer's warranty to the Owner that covers defects in materials and installation workmanship of the turf for a period of ten (10) years from the date of substantial completion. The turf manufacturer must verify that their representative has inspected the installation and that the work conforms to the manufacturer's requirements and any written directives. The manufacturer's warranty shall include general wear and damage caused from UV degradation. Other items that must be addressed include the following:
 - 1. Acceptable uses for the field
 - 2. Fading
 - 3. Color match within specifications
 - 4. Excessive fiber wear
 - 5. Wrinkling and panel movement
 - 6. Shock absorbency (Gmax), 155 maximum.
 - 7. Seam integrity
 - 8. Drainage (through the turf only)
- B. The manufacturer's warranty shall be fully third party insured, through a pre-paid policy of 8 years and be non-prorated. Warranties that include language which pro-rates benefits shall cause the provider's bid to be rejected. Prior to final payment for the synthetic turf, the Contractor shall submit to the Owner, this policy guaranteeing the warranty to the Owner. Insurance must reflect the following values:
 - 1. Must provide coverage for \$5 million dollars per claim of total installed turf for removal, disposal and replacement of new synthetic turf.
 - 2. Must have a minimum of a \$15 million dollar annual aggregate towards repairs/replacements in a given policy year. The annual aggregate shall be applied only to policies executed in the 12 month policy window. Every annual policy year, another \$15 million worth of annual aggregate shall be set aside for the policies executed in that policy year.
 - 3. Policy must be in-force at time of bid.

4. Policy must be issued by an A-rated or greater A.M. Best Rating
5. Must be pre-paid for the entire 8 years.
6. Policies that include self-insurance or self-retention clauses shall not be considered.
7. Sample copy of this policy must be provided with the bid detailing compliance with policy limits as described.

1.7 TRAINING

- A. Turf Installation Contractor shall train maintenance staff and/or contracted maintenance staff in the use of the recommended maintenance equipment and provide maintenance guidelines to the facility maintenance staff.

1.8 ATTIC STOCK

- A. The contractor shall provide the following attic stock at the completion of the project:
 1. Infill Material: 1/2 ton silica sand infill.
 2. Infill Material: 1/2 ton SBR rubber infill.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Manufacturer:
 1. AstroTurf Corporation
2680 Abutment Road, SE
Dalton, GA 30721
Dan Driscoll - (484) 995-7626 or (706) 277-8873
- B. Alternative Approved Manufacturers:
 1. A-Turf, Inc.,
PO Box 157, Williamsville, NY 14231
Phone: 888-777-6910
Fax: 716-204-0189
Email: info@aturf.com
 2. Shaw Sports Turf
185 South Industrial Boulevard, Calhoun, Georgia, 30701 US
Phone: 1-866-703-4004
Email: info@shawsportsturf.com

2.2 BASIS OF DESIGN

- A. AstroTurf® RootZone 3D3 Blend HD
AstroTurf Corporation
- B. Alternate products will be considered however, said products must meet and/or be equivalent to all listed requirements, qualifications and specifications.
 - a. Request for deviations or substitutions from the specifications must be made in writing seven days prior to the bid due date. Submit alternate products with product data along with items identified in paragraphs in 1.4.A, 1.4.B, 1.4.D, 1.4.E, 1.4.F, 1.4.G, 1.4.H, of this section.
 - b. Alternative systems that are approved will be documented accordingly by addendum.

2.2 TURF MATERIALS

- A. Synthetic Turf System: A complete synthetic turf system consisting of 10,000 denier parallel slit film fibers and 12,000 denier high micron monofilament fibers, along with an extruded monofilament RootZone®. Pile height shall be nominal 1.5". Fibers shall be tufted to a primary backing and a mechanically applied adhesive secondary backing.
 1. The tufted fiber shall not weigh less than 60 ounces per square yard. The tufted rows of fiber are to be spaced no more than 3/8" apart. ASTM tests proving the fiber meets these qualifications must be provided with the bid. Turf systems that do not meet this specification will be disqualified.

2. The carpet's primary backing shall be comprised of three layers (18 pic polypropylene, 13 pic polypropylene, reinforced by a non-woven PET cap fiber layer). This backing is to have a minimum weight of 8 oz per square yard. The carpet shall then be coated with a secondary backing of Polyurethane synthetic coating material with a minimum application rate of 20 ounces per square yard and then perforated for adequate drainage. Carpets that are not perforated for adequate drainage shall not be acceptable.
3. The carpet shall be delivered in 15' wide rolls. The rolls shall be of sufficient length to go from sideline to sideline. Head seams, other than at sidelines, will not be acceptable.
4. The pile surface shall provide good traction in all types of weather with the use of conventional sneaker type shoes, composition mold sole athletic shoes, baseball spikes and screw-on football spikes.
5. The pile surface shall be suitable for both temporary and permanent line markings using acrylic paint, as per the turf provider's recommendations.
6. All synthetic turf seams shall be sewn.
7. Pre-fabricated Line, Logo & Lettering Markings
 - a. Inlaid markings, logo's, lettering shall be pre-fabricated at the manufacturing plant prior to the shipment to the field installation.
 - b. Any lines not tufted into the field shall be installed through laying out at an indoor facility that is climate controller prior to shipment to the job-site.
 - c. The lines shall be inlaid with hot melt fusion & seaming tape, no lines will be allowed to be sheared.
 - d. No markings shall be added once shipped to the job-site.
8. As an add alternate, the entire turf system shall be protected with a factory-applied antimicrobial treatment.

B. TURF FABRIC SURFACE

1. The pile surface shall resemble freshly mown natural grass in appearance, texture and color.
2. The pile surface shall be nominally uniform in length.
3. The pile fiber angle shall be 90 degrees ± 15 degrees, measured from the horizontal after installation of the infill material.
4. The entire system shall be resistant to weather, insects, rot, mildew and fungus growth and will be non-allergic and non-toxic.
5. The synthetic turf system shall have a nominal fiber length of 1.5".
6. Each roll shall be minimum 15' wide.
7. The entire system shall be constructed for porous standards as specified. Synthetic turf system shall be perforated at 4 – 6" on center. Systems that are not perforated for maximum drainage shall not be acceptable.

C. TURF PRODUCT SPECIFICATIONS – TURF

1. Face yarns shall be a combination of:
 - a. A proven athletic quality, outdoor stabilized blend of non-texturized parallel slit film polyethylene fibers
 - b. A proven athletic quality, outdoor stabilized, non-texturized high micron monofilament fibers
 - c. A texturized monofilament RootZone designed specifically for outdoor use, to best resist the effects of ultraviolet degradation, heat, foot traffic, water and airborne pollutants.
2. The fabric shall possess the following minimum physical characteristics. ASTM testing shall be provided with the bid and any products not meeting the minimum physical characteristics will be rejected:

Average Pile Yarn Weight	ASTM D	60 oz/square yard
Average Total Weight	ASTM D	88 oz/square yard
Secondary Backing Weight	ASTM D	20 oz/square yard

Primary Backing	ASTM D	8 oz/square yard
Average Tuft Length	ASTM D 5823	2.00"
Tufting Gauge	ASTM D 5793	3/8" maximum
Tuft Bind	ASTM D 1335	> 10 lbs
Yarn Denier (slit film fiber)	ASTM D 1577	10,000
Yarn Denier (monofilament fiber)	ASTM D 1577	12,000
Yarn Denier (secondary fiber)	ASTM D 1577	5,000/8
Fiber Thickness(slit film fiber)	ASTM D 3218	100 microns
Fiber Thickness(monofilament fiber)	ASTM D 3218	330 microns min.
Surface Flammability	ASTM D 2859	8 of 8 PASS
Permeability	ASTM F 1551	>30
Melt Point	ASTM D 789	248 degrees Fahrenheit
Gmax System (American Football)	ASTM F 355	<125 at installation
		< 175 over life of warranty

- D. **TURF MARKINGS**
1. All markings shall be tufted in-place, inlaid or glued.
 2. The turf shall be shipped with factory-fabricated striping and markings meeting all NCAA regulations for the following intercollegiate playing surfaces:
 - a. Football
 - b. Women’s Soccer
 - c. Women’s Lacrosse
 3. The turf shall be shipped with factory-fabricated logos for the following:
 - a. (2) Mid-Atlantic Athletic Conference Logos
 - b. Custom end zone graphics including University logo and established text
 - c. University Logo at 50-yard line.
 4. All football yard identification numbers shall be shadowed.

2.3 SUB-BASE DRAINAGE MATERIAL

- A. An impact energy absorbing sub-base drainage material designed specifically for use with synthetic turf is required as part of the synthetic turf system specified herein. The specified material must have both impact absorption and drainage properties that performance requirements indicated in referenced specification.
- B. Shock pad must be approved by turf provider for use under the specified turf system.

2.6 INFILL MATERIAL

- A. Infill composition shall consist of a ballast layer of silica sand topped by ambient SBR rubber performance infill in a 50% rubber / 50% sand ratio.
- B. Silica sand infill:
 1. Must be clean, sub-angular silica sand
 2. Must be a 20-40 sieve size.
- C. SBR infill:
 1. Must be ambient SBR Rubber
 2. Must be a 10-20 sieve size.

- D. Immediately after infill layers are installed, infill depth must be measured per testing protocol detailed in Section 1.3 C. 2 above to ensure that infill layer is at least 1.1" deep.

2.7 SYSTEM PERFORMANCE REQUIREMENTS

1. Shock Absorption:
 - a. Performance Requirement: When tested in accordance with the procedures and requirements described in section 2.7.1.b, below, g-max performance shall be as follows:
 - i. Prior to acceptance and/or use by the owner, the average g-max at each test point shall be less than 125 g-max.
 - ii. Subsequent to acceptance and while the field is under warranty, the average g-max at each test point shall be less than 155 g-max.
 - iii. Subsequent to acceptance and while the field is under warranty, if the field fails to satisfy the requirement(s) of section 2.7.1.a.ii., the contractor/manufacturer and the owner will cooperate to determine the cause of the failure. If the failure is attributable to defective materials or improper installation, the contractor/manufacturer shall be responsible for bringing the field into compliance. If the failure is due to improper or inadequate maintenance by the owner, or factors beyond the control of the contractor/manufacturer, the owner shall be responsible for bringing the field into compliance.
 - b. Testing Requirements:
 - i. All g-max testing shall be performed by an independent testing service and in accordance with ASTM Standard Specification F1936 and ASTM Standard Test Method F355 (Procedure A).
 - ii. Prior to acceptance and/or use by the owner, the contractor/manufacturer will have the field tested, as needed, to satisfy the requirement(s) of section 2.7.1.a.i., above.
 - iii. Subsequent to acceptance, for the remainder of the time the field is under warranty, the contractor/manufacturer will have the field tested no less often than bi-annually, to demonstrate that the field complies with the requirement(s) of section 2.7.1.a.ii., above.
 - iv. If, during the warranty period, the field is tested and found not to comply with the requirement(s) of section 2.7.1.a.ii, and the contractor/manufacturer is required to bring the field into compliance, the owner may require the contractor/manufacturer to have the field retested to verify compliance.
 - v. Copies of all g-max test reports shall be furnished to the Athletic Director and University Legal Counsel.
2. Impact Attenuation:
 - a. Performance Requirement: When tested in accordance with the procedures and requirements described in section 2.7.2.b, below, head impact criteria (HIC) performance shall be as follows:
 - i. Prior to acceptance and/or use by the owner, the average HIC at each test point shall be greater than 1.5m.
 - ii. Subsequent to acceptance and while the field is under warranty, the average HIC at each test point shall be greater than 1.3m.

- iii. Subsequent to acceptance and while the field is under warranty, if the field fails to satisfy the requirement(s) of section 2.7.2.a.ii., the contractor/manufacturer and the owner will cooperate to determine the cause of the failure. If the failure is attributable to defective materials or improper installation, the contractor/manufacturer shall be responsible for bringing the field into compliance. If the failure is due to improper or inadequate maintenance by the owner, or factors beyond the control of the contractor/manufacturer, the owner shall be responsible for bringing the field into compliance.
- b. Testing Requirements:
- i. All HIC testing shall be performed by an independent testing service and in accordance with ASTM Standard Specification F1936 and ASTM Standard Test Method F355 (Procedure A).
 - ii. Prior to acceptance and/or use by the owner, the contractor/manufacturer will have the field tested, as needed, to satisfy the requirement(s) of section 2.7.2.a.i., above.
 - iii. Subsequent to acceptance, for the remainder of the time the field is under warranty, the contractor/manufacturer will have the field tested no less often than bi-annually, to demonstrate that the field complies with the requirement(s) of section 2.7.2.a.ii., above.
 - iv. If, during the warranty period, the field is tested and found not to comply with the requirement(s) of section 2.7.2.a.ii., and the contractor/manufacturer is required to bring the field into compliance, the owner may require the contractor/manufacturer to have the field retested to verify compliance.
 - v. Copies of all HIC test reports shall be furnished to the Athletic Director and University Legal Counsel.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of work. Proceed with installation only after satisfactory conditions have been corrected.
- B. Certification of prior work: The synthetic turf manufacturer and/or installation contractor shall perform an inspection of the field base onto which the synthetic turf system is to be installed and to examine the finished surface for required compaction, permeability and grade tolerances (through string line testing). After any discrepancies between the required materials, application and tolerance requirements noted have been corrected, the synthetic turf installer should submit a written certification of acceptance of the base for installation of the synthetic turf system.
- C. Installation of all materials shall be performed in full compliance with approved project shop drawings. Only factory trained technicians skilled in the installation of athletic caliber synthetic turf systems, working under the direct supervision of the turf provider's supervisors, shall undertake the placement of the turf system. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer as competent in the installation of these materials, including proper seaming and proper installation of the infill mixture. The turf provider shall certify the installation and warranty compliance, prior to substantial completion.

3.2 PREPARATION

- A. Inspect delivered field surface fabric and components immediately prior to installation. Any damaged or defective items shall be rejected. Installed artificial system shall be inspected for, but not limited to, the following:
 - 1. Uniformity of product and color
 - 2. Surface bubbles
 - 3. Field markings
 - 4. Field Edge installation
 - 5. Pile height of each roll shall be measured. Any material(s) that does not meet minimum height and thickness specifications shall be rejected.
 - 6. Pile height shall be measured in its finished positions.
- B. Environmental Conditions: Weather conditions are important for the successful installation of the systems. No work under this section will proceed when:
 - 1. Ambient temperatures are below 45 degrees F.
 - 2. Material temperatures are below 45 degrees F.
 - 3. Surfaces are wet or damp
 - 4. Rain is imminent or falling.
 - 5. Conditions exist or are imminent, which will be unsuitable to installation requirements of the systems specified herein. Humidity levels will be inside the limits recommended by the adhesive manufacturer to obtain optimal bonding characteristics of the surfaces.
- C. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit synthetic turf work to be performed according to turf manufacturer's written instructions and warranty requirements.

3.3 INSTALLATION OF SUB-BASE DRAINAGE MATERIAL

- A. Installation of sub-base drainage material shall be completed in accordance with manufacturer's recommendations – contractor shall obtain written installation instructions and procedures from the pad manufacturer.

3.4 INSTALLATION OF THE SYNTHETIC TURF

- A. The carpet rolls are to be installed directly over the specified sub-base drainage material.
- B. The full width rolls shall be laid out across the field. When all of the rolls of the playing surface have been installed, the sideline areas will be installed at right angles to the playing field turf. All work shall be such that the seams shall remain as required for the duration of the warranty period at a minimum. All seam widths are to be held to a minimum and shall be traverse to the field direction. Seams shall be flat, tight and permanent with no separation or fraying.
- C. The perimeter of the field shall be firmly secured to the existing concrete curb for the life of the warranty and in accordance to project details.
- D. Resilient Infill
 - 1. The sand ballast infill material shall be spot inspected and tested for conformance to sieve specifications.
 - 2. Sand ballast Infill must be placed in such a way as to minimize fiber entrapment.
 - 3. The rubber infill must be uniformly applied so as to ensure uniform, predictable surface.
 - 4. After infill layers are installed, infill depth must be measured to ensure that infill depth is at least 1.1" deep.

3.5 FIELD LINING AND MARKINGS

- A. General: A complete field "Lining, Marking and Field Boundary" system will be provided with the installation of the surfacing system specified herein. All markings shall be installed in accordance with prior approved project Shop Drawings.
- B. Inlays shall conform to the turf provider's specifications, directions and recommendations for the best results.

- C. Striping layouts shall be accurately surveyed by the Contractor before installation of inlaid field markings
- D. Install inlays only when the surface is completely dry. Adhere all inlays securely into place. Never loose-lay and sew an inlay into place.

3.6 FIELD QUALITY CONTROL

- A. Contractor shall be responsible for ensuring installation meets or exceeds the system performance requirements outlined herein and shall provide all necessary corrective action and re-evaluations of the system performance prior to final acceptance.

3.7 FINAL ACCEPTANCE

- A. Prior to final acceptance, the Contractor shall submit to the Owner three (3) copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.
- B. The Contractor shall provide evidence, to the satisfaction of the owner, that the turf can be plowed with conventional rubber bladed snow removal equipment.
- C. The finished playing surface shall appear as mowed grass with no irregularities and shall afford excellent traction for conventional athletic shoes of all types. The finished surface shall resist abrasion and cutting from normal use.

3.8 CLEANING

- A. Contractor shall provide the labor, supplies and equipment as necessary for final cleaning of surfaces and installed items. All usable remnants of new material shall become the property of the Owner, unless directed otherwise. The Contractor shall keep the area clean throughout the project and clear of debris. Surfaces, recesses, enclosures, etc. shall be cleaned, as necessary, to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

END OF SECTION 32 18 23.29A

SECTION 32 18 23.30A – SYNTHETIC BASE MATERIAL AND PERFORMANCE (ALTERNATE #1)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.

1.2 RELATED SECTIONS

- A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
 - a. Section 01 22 00 Unit Prices
 - b. Section 01 23 00 Alternates
 - c. Section 01 33 00 Submittal Requirements
 - d. Section 01 45 00 Quality Control
 - e. Section 01 77 00 Contract Closeout
 - f. Section 01 78 39 Project Record Documents
 - g. Section 32 18 23.29A Synthetic Field Sport Surfacing (Alternate #1)

1.3 SUMMARY

- A. This specification defines requirements for the installation and operating performance of an athletic field shock pad material needed for a professional-grade synthetic turf field. Defined are the primary system requirements for insuring optimum safety of the playing surface (impact attenuation/surface playability) of the installed playing field.
- B. Specifications listed are defined per applicable ASTM standard test methods, or other internationally recognized testing standards. All other specifications and tolerances listed shall be defined under standard ANSI and/or ISO drawing and specification rules.

1.4 TESTING REFERENCES

- A. American Society for Testing and Materials (ASTM), International Standards Organization (ISO) and European Committee for Standardization (EN):
 - a. EN12616 Water Infiltration Rate
 - b. ASTM D696-03 Cellular plastics -- Determination of the coefficient of linear thermal expansion
 - c. ASTM 3575-08 Standard Specification for Flexible Materials-Tensile Strength and Tensile Elongation
 - d. ASTM F355 Standard Test Method for Shock-Absorbing Properties of Playing Surface Systems and Materials
 - e. ASTM D3575-08; ISO 25619-1:2008 Flexible cellular polymeric materials -- Determination of compression set
 - f. ASTM G22-76 Determining the Resistance of Plastics to Bacteria
 - g. ASTM G21-96 Determining Resistance of Synthetic Materials to Fungi
 - h. ASTM F925 Test Method for Resistance to Chemicals of Resilient Flooring

1.4 SUBMITTALS

- A. All submittals shall be provided within 14 days after the Notice to Proceed.
- B. General: Bidding contractor must identify shock pad system with bid package. If a non-specified product is identified, the proposed alternate product must be submitted and pre-approved by the design architect/engineer 10 days prior to the bid opening. If bidding contractor does not identify a manufacturer, the Township/School District will assume that the specified product is included in the bid package and will not consider substitutions.
- C. Product Data: Submit 8" x 8" product sample and technical data sheet.

- D. Shop Drawings: Submit cross-sectional view showing product installation in relation to sub-base and synthetic turf (including edge attachment).
- E. Test Data: Submit listing of all applicable test data for compliance to specifications. All testing to be performed by independent sources following applicable ASTM or other internationally recognized standards and procedures.
- F. Installation: Submit copy of product installation instructions. Submit copy turf installation recommendations.
- G. Warranty: Submit copy of product 16 -Year warranty coverage.

1.5 QUALITY ASSURANCE

- A. The sub-base (underlayment) material is to be manufactured in an ISO-9000 certified facility. No exceptions allowed.
- B. Company must demonstrate successful installations in the United States for at least 5 million sq feet of manufacturer's material.
- C. Use only newly-manufactured materials shipped for the specific installation. No used, previously installed materials are to be installed. Material can contain up to 23% of pre-consumer or post-consumer recycled content. Manufacturer must provide documentation of material content and MSDS sheet for submittal package.
- D. Product to be shipped as flat panels on prepackaged pallets. Pallets to be wrapped with heavy-duty barrier for protection from moisture and UV exposure.
- E. Seams should be mechanically locked into place by hand without use of additional materials, glue, fasteners or secondary processes and equipment.
- F. Material must be installed using manufacturers guidelines, without exception.
- G. Manufacturer must provide written procedures to selected turf supplier for the installation of turf on top of underlayment.
- H. General Contractor must send G-Max test results to Underlayment manufacturer once completed.
- I. Manufacturer of shock pad must have its own technical support personnel on site during turf installation upon request.
- J. The Manufacturer must provide a guarantee that the G-Max of the synthetic turf field under which their product is installed will not exceed a field G-Max average of 135 G's for the warranty of the turf.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Contact Information:
Brock International
2840 Wilderness Place
Boulder, CO 80301
Telephone: (303) 544-5800
Fax: 866-850-9421
www.brock-international.com
- B. Manufacturing/Ordering Information:
Brock International
2840 Wilderness Place
Boulder, CO 80301
Telephone: (303) 544-5800
Fax: 866-850-9421
www.brock-international.com

2.2 PRODUCT DATA

- A. Description: Resilient Polypropylene Shock Pad Material Model #SP14
- B. Manufacturer: Brock International or approved equal
- C. Product format:

Size: approximately 44 x 57 inches interlocking panels. (112 cm x 145 cm) overall dimensions
Area: Net coverage per panel 15.9 ft² (1.48 m²)
Thickness: 0.55" (14mm) +/- 1.3 mm
Panel Weight: approximately 2.8 lbs. / panel

- D. Alternate products will be considered however, said products must meet and/or be equivalent to all listed requirements, qualifications and specifications. It is the responsibility of the bidder to prove that the product substitution is equal to or greater than the product specified.
- a. Request for deviations or substitutions from the specifications must be made in writing seven days prior to the bid due date.
 - b. Alternative systems that are approved will be documented accordingly by addendum.

2.3 PRODUCT PERFORMANCE REQUIREMENTS

- A. General Requirements – An impact energy absorbing sub-base drainage material designed specifically for use with synthetic turf is required. The specified material must have both impact absorption and drainage properties that meet the following typical performance requirements. All material used in the artificial system must meet environmental and human health standards established in this specification.
- i. Vertical drainage - 300" per hour minimum (ASTM D3574)
 - ii. Tensile Elongation >10% (ASTM 3575-08)
 - iii. Coefficient of linear thermal expansion < 0.12 mm /m /° C, (ASTM D696)
 - iv. Provide maximum average g-max of field of 100 upon initial testing (ASTM F355; System test under infilled turf).
 - v. Must provide field G-Max below 135 for life of product warranty.
 - vi. System must provide a minimum critical fall height of 1.3 meters at installation.
 - vii. Vertical Deformation of less than 4 mm for sub-base without turf overlay when tested with Deltec Club Field Tester
 - viii. Material thickness tolerance must be within +/- 1.3 mm
 - ix. Material must demonstrate 100% closed loop recyclability potential by manufacturer, recycling for energy not acceptable.
 - x. Product must be made in United States of America.
 - xi. Material must contain a minimum of 55 % virgin Code 5 food grade expanded Polypropylene by volume
 - xii. Material must not absorb water. Open cell foams not acceptable.
 - xiii. Compression set Dynamic load minimum 10,000 cycles at 95 psi <9%
 - xiv. Compression set static load 25% strain <12% (ASTM D3575-08)
 - xv. Acceptable resistance to Bacteria (ASTM G22-76), fungus (ASTM G21-96) and chemicals – ASTM F925
 - xvi. Supplier must provide documentation that product meets human health screening levels and total threshold limit concentration using EPA Method 3052 and Title 22 (CAM 17) metals using EPA Method 6020/7471A and for hexavalent chromium using EPA Method 7196A.
 - xvii. Manufacturer must prove absence of heavy metals in production material, and a controlled chain of custody for all materials used

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of work. Proceed with installation only after satisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Per manufacturer's recommendation - obtain written installation instructions and procedures from the manufacturer.

- B. Manufacturer of shock pad must have its own technical support personnel on site during turf installation upon request.

3.4 PROJECT COMPLETION

- A. Upon completion of installation, a walk-through will be conducted to inspect the quality of work and ensure all details meet specifications.
- B. A punch list of unacceptable or incomplete items will be documented and agreed upon for completion prior to final project closeout and acceptance.

3.5 APPROVALS

- A. Finished shock pad installation workmanship must be approved in advance by the turf manufacturer. Approvals to be based on a physical inspection performed at the site prior to installation of any synthetic turf material.
- B. Any approvals sought after turf installation will be declined. Any associated repair or replacement costs associated with rework of the synthetic base will be the responsibility of the turf supplier/installer.

END OF SECTION 32 18 23.30A