

DORCHESTER SCHOOL DISTRICT TWO



PROJECT MANUAL

Track Replacement

**Ashley Ridge High School
9800 Delemar Highway
Summerville SC, 29485**



“Home of the Swamp Foxes”

03/23/2026

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	Dorchester School District Two Request for Proposal	Solicitation Number: 2526-010 Date: March 23, 2026 Procurement Official: Ashley Cash, CPPB Phone: (843)695-5398 E-Mail Address: ascash@dorchester2.k12.sc.us
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DESCRIPTION: Ashley Ridge High School (ARHS) Track Replacement

The Term "Offer" Means Your "Bid" or "Proposal".

SUBMIT OFFER BY **April 16, 2026 by 2:00 PM** See "Deadline for Submission of Offer" provision

QUESTIONS MUST BE RECEIVED BY: **April 6, 2026 by 5:00 PM** See "Questions from Offerors" provision

NUMBER OF COPIES TO BE SUBMITTED: See the Requirements in Section IV. **INFORMATION FOR OFFERORS TO SUBMIT**

Offers MUST be submitted in a sealed package. Solicitation Number MUST appear on package exterior.

SUBMIT A SEALED OFFER TO:

RFP # 2526-010

Dorchester School District Two

815 South Main Street

Summerville, SC 29483

Attention: Ashley Cash, Procurement Officer

See "Submitting Your Offer" provision

CONFERENCE TYPE: NON-MANDATORY DATE & TIME: March 30, 2026 at 10:00 AM	LOCATION: Ashley Ridge High School 9800 Delemar Highway Summerville, SC 29485
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AWARD & AMENDMENTS	Award will be posted at the Physical Address stated above on or before April 28, 2026 . This solicitation, and any amendments will be posted at the DD2 Solicitation and Awards page. It is the responsibility of the offeror to check this website for amendments and notices.
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You must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of sixty (60) calendar days after the Opening Date.		
NAME OF OFFEROR (Full legal name of business submitting the offer)	OFFEROR'S TYPE OF ENTITY: (Check one) ☐ Small (15 employees or less) ☐ Women ☐ Minority ☐ Other _____ (See "Signing Your Offer" provision.)	
AUTHORIZED SIGNATURE (Person signing must be authorized to submit binding offer to enter contract on behalf of Offeror named above.)		
TITLE (Business title of person signing above)		
PRINTED NAME (Printed name of person signing above)		
Instructions regarding Offeror's name: Any award issued will be issued to, and the contract will be formed with, the entity identified as the offeror above. An offer may be submitted by only one legal entity. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, <i>i.e.</i> , a separate corporation, partnership, sole proprietorship, etc.		
STATE OF INCORPORATION (If offeror is a corporation, identify the state of Incorporation.)		
TAXPAYER IDENTIFICATION NO.		

COVER PAGE DD2

PAGE TWO

(Return Page Two with Your Offer)

HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)	NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)			
	Area Code	Number	Extension	Facsimile
	E-mail Address			

PAYMENT ADDRESS (Address to which payments will be sent.)	ORDER ADDRESS (Address to which purchase orders will be sent)
☐ Payment Address same as Home Office Address ☐ Payment Address same as Notice Address (check only one)	☐ Order Address same as Home Office Address ☐ Order Address same as Notice Address (check only one)

ACKNOWLEDGMENT OF AMENDMENTS Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. See "Amendments to Solicitation" Provision	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date

MINORITY PARTICIPATION- Are you a Minority Business Enterprise: Yes ☐ No ☐ If yes, please include a copy of your certification.

Solicitation Outline

- I. SCOPE OF SOLICITATION
 - A. ABOUT DORCHESTER SCHOOL DISTRICT TWO
 - B. PURPOSE AND SCOPE OF SOLICITATION
- II. INSTRUCTIONS TO OFFERORS
 - A. GENERAL INSTRUCTIONS
 - B. SPECIAL INSTRUCTIONS
- III. SCOPE OF WORK
- IV. INFORMATION FOR OFFERORS TO SUBMIT
- V. QUALIFICATIONS OF OFFEROR
- VI. EVALUATION CRITERIA AND AWARD
- VII. SPECIAL TERMS AND CONDITIONS
 - A. GENERAL TERMS AND CONDITIONS
 - B. SPECIAL TERMS AND CONDITIONS
- VIII. COST PROPOSAL
- IX. ATTACHMENTS TO SOLICITATION
 - A. MINORITY PARTICIPATION AFFIDAVIT

I. SCOPE OF SOLICITATION

ACQUIRE SERVICES & SUPPLIES / EQUIPMENT (JAN 2006): The purpose of this solicitation is to acquire services and supplies or equipment complying with the enclosed description and/or specifications and conditions.

MAXIMUM CONTRACT PERIOD — ESTIMATED: Start date: October 1, 2024. End date: September 30, 2029. Dates provided are estimates only. Any resulting contract will begin on the date specified in the notice of award. See clause entitled "Term of Contract - Effective Date/Initial Contract Period". [01-1040-1]

II. Instructions to Offerors

A. GENERAL INSTRUCTIONS

AMENDMENTS TO SOLICITATION (a) The Solicitation may be amended at any time prior to opening. All actual and prospective Offerors should monitor the District's [Solicitation and Awards](#) page, (b) Bidders shall acknowledge receipt of any Amendment to this solicitation (1) by signing and returning the Amendment, (2) by letter, or (3) by submitting a bid that indicates in some way that the bidder received the Amendment.

AWARD NOTIFICATION Notice regarding the District's intent to award a contract will be posted at the location specified on the Cover Page. The date and location of posting can be found in the Schedule and Activities section of the solicitation. If the contract resulting from this Solicitation has a total or potential value in excess of one hundred thousand dollars, such notice will be sent to all Offerors responding to the Solicitation. Unless a written notice of intent to protest is timely filed pursuant to Section 11-35-4210(1)(b) or the award is otherwise suspended or canceled, the award will be effective on the calendar day (including weekends and holidays) immediately following the seventh business day after such notice is given.

BID ACCEPTANCE PERIOD In order to withdraw your Offer after the minimum period specified on the Cover Page, you must notify the Procurement Official in writing.

BID IN ENGLISH & DOLLARS Offers submitted in response to this solicitation shall be in the English language and in US dollars, unless otherwise permitted by the solicitation.

BID FORMS Bid Forms are included for your use. Only these Bid Forms shall be used; no other form is acceptable. Please indicate your firm's name on the Bid Forms and have it signed by a person authorized to do so. A cover letter on your corporate stationery should include any comment and/or information you feel may be pertinent to the evaluation of your bid. The prices specified in your bid must be F.O.B. Destination with all freight charges prepaid and allowed, if applicable. On the Bid Forms, please indicate the delivery time, after receipt of an order, for the service or materials on which you have bid. No hidden or undisclosed prices will be acceptable.

BID / PROPOSAL AS OFFER TO CONTRACT By submitting the District a signed Bid and/or Proposal, you are offering to enter into a contract with Dorchester School District Two and agreeing to all terms and conditions provided herein. Your bid and/or proposal as well as the terms and conditions of this solicitation will become part of any contract created as a result of this solicitation. THEREFORE, ANY OBJECTION TO THE TERMS AND CONDITIONS CONTAINED HEREIN MUST BE ADDRESSED WITH THE DISTRICT PRIOR TO SUBMITTAL OF YOUR BID AND/OR PROPOSAL. SUCH OBJECTIONS MUST BE SUBMITTED IN WRITING AS DESCRIBED HEREIN FOR ANY INQUIRIES. Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror on the Cover Page. An Offer may be submitted by only one legal entity; "joint bids" are not allowed.

ENTERING INTO CONTRACT The District shall not enter into, or sign, any agreement, contract or other document that conflicts in any way with the District's Policies and Procedures, Procurement Code and Regulations, and General Terms and Conditions as well as the requirements of this solicitation. Proposers should submit for review any agreement, contract or other document that the firm wishes the District to sign, with the proposal. Submittal of such agreement, contract or other document does not constitute an acceptance of any terms and /or conditions contained in such document. Agreements, contracts or other documents that infringe upon the rights of the District or are not in the best interest of the District shall be determined to be non-responsive. The rights and authority of such determination is reserved solely by the staff of the District's Procurement Department. By Submitting a solicitation response, the proposer acknowledges that it has had the opportunity to inquire about the District's Procurement Code, this solicitation and other District policy.

BOARD AS PROCUREMENT AGENT (a) **Authorized Agent.** All authority regarding the conduct of this procurement is vested solely with the responsible Procurement Official. Unless specifically delegated in writing, the Procurement Official is the only District official authorized to bind the District with regard to this procurement. (b) **Purchasing Liability.** The Procurement Official acts on behalf of Dorchester School District Two pursuant to the Dorchester School District Two Procurement Code. Any purchase orders awarded as a result of this procurement are between the Vendor and the District. The Board is not a party to such purchase orders, unless and to the extent that the Board is a using District unit, and bears no liability for any party's losses arising out of or relating in any way to the purchase order.

CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS (a) (1) By submitting an Offer, Offeror certifies, to the best of its knowledge and belief, that (i) Offeror and/or any of its Principals (A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by a state or federal agency; (B) Have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (federal, state, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or destruction of records, making false statements, tax evasion, or receiving stolen property; and (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (A) (1) (i) (B) of this provision. (ii) Offeror has not, within a three-year period preceding this offer, had one or more contracts terminated for default by any public (federal, state, or local) entity. (2) 'Principals.' For the purpose of this certification, means Officials; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions). (b) Offeror shall provide immediate written notice to the Procurement Official if, at any time prior to contract award, Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. (c) If Offeror is unable to certify the representations stated in paragraphs (a) (1), Offeror must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Offeror's responsibility. Failure of the Offeror to furnish additional information as requested by the Procurement Official may render the Offeror non-responsive. (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings. (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the District, the Procurement Official may terminate the contract resulting from this solicitation for default.

CODE OF LAWS AVAILABLE The Dorchester School District Two Procurement Code is available [here](#).

COMPLETION OF FORMS / CORRECTION OF ERRORS All prices and notation should be printed in ink or typewritten. Errors should be crossed out, corrections entered and initialed by the person signing the bid. Do not modify the solicitation document itself (including bid schedule).

COVENANT AGAINST CONTINGENT FEES The vendor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the vendor for the purpose of securing business. For breach or violation of this warranty, DD2, shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

DEADLINE FOR SUBMISSION OF OFFER Any offer received after the Procurement Official or designee has declared that the time set for opening has arrived, shall be rejected unless the offer has been delivered to the designated purchasing office prior to the bid opening

DISCLOSURE OF CONFLICTS OF INTEREST OR UNFAIR COMPETITIVE ADVANTAGE (JUL 2023) You certify that, after reasonable inquiry, to the best of your knowledge and belief: (1) your offer identifies any services that relate to either this solicitation or the work and that have already been performed by you, a proposed subcontractor, or an affiliated business or consultant of either; and (2) there are no relevant facts or circumstances that may give rise to an actual or potential organizational conflict of interest, as defined in S.C. Code Ann. Reg. 19-445.2127, or that your offer identifies and explains any unfair competitive advantage you may have in competing for the proposed contract and any actual or potential conflicts of interest that may arise from your participation in this competition or your receipt of an award.

(b) If you, a proposed subcontractor, or an affiliated business or consultant of either, have an unfair competitive advantage or an actual or potential conflict of interest, the District may withhold award. Before withholding award on these grounds, the District will notify you of the concerns and provide a reasonable opportunity for you to respond. The District may consider efforts to avoid or mitigate such concerns, including restrictions on future activities.

(c) The certification in paragraph (a) of this provision is a material representation of fact upon which the District will rely when considering your offer for award.

DUTY TO INQUIRE Offeror, by submitting an Offer, represents that it has read and understands the Solicitation and that its Offer is made in compliance with the Solicitation. Offerors are expected to examine the Solicitation thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements in the Solicitation. Failure to do so will be at the Offeror's risk. Offeror assumes responsibility for any patent ambiguity in the Solicitation that Offeror does not bring to the District's attention.

DEFINITIONS Except as otherwise provided herein, the following definitions are applicable to all parts of the solicitation. For additional definitions, see the terms and conditions below.

1. **Amendment** - means a document issued to supplement the original solicitation document.
2. **Board** - means the Dorchester School District Two Board of Trustees.
3. **Buyer** - means the Procurement Official.
4. **Change Order** - means any written alteration in specification, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of any contract accomplished by mutual agreement of the parties of the contract.
5. **Contract Modification** - means a written order signed by the Procurement Official, directing the contractor to make changes which the changes clause of the contract authorizes the Procurement Official to order without the consent of the contractor.
6. **Contractor** - means the Offeror receiving an award as a result of this solicitation.
7. **Cover Page** - means the top page of the original solicitation on which the solicitation is identified by number. Offerors are cautioned that Amendments may modify information provided on the Cover Page.
8. **District** - means Dorchester School District Two, or DD2.
9. **Offer** - means the bid, or proposal submitted in response to this solicitation. The terms "Bid" and "Proposal" are used interchangeably with the term "Offer."
10. **Offeror** - means the single legal entity submitting the offer. The term "Bidder" is used interchangeably with the term "Offeror." See bidding provisions entitled "Signing Your Offer" and "Bid/Proposal As Offer To Contract."
11. **Page two** - means the second page of the original solicitation, which is label Page Two.
12. **Procurement Official** - means the person, or designee, identified as such on the Cover Page.
13. **Solicitation** - means this document, including all its parts, attachments, and any Amendments.
14. **Subcontractor** - means any person having a contract to perform work or render service to Contractor as a part of the Contractor's agreement arising from this solicitation
15. **You And Your** - means Offeror.
16. **Work** - means all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract.

DRUG FREE WORK PLACE CERTIFICATION By submitting an Offer, Contractor certifies that, if awarded a contract, Contractor will comply with all applicable provisions of the Drug-Free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

ETHICS ACT By submitting an Offer, you certify that you are in compliance with South Carolina's Ethics, Government Accountability, and Campaign Reform Act of 1991, as amended. The following statutes require special attention: (a) Offering, giving, soliciting, or receiving anything of value to influence action of public employee-Section 8-13-790, (b) Recovery of Kickbacks-Section 8-13-790m (c) Offering, soliciting, or receiving money for advice or assistance of public official - Section 8-13-720, (d) Use or disclosure of confidential Information-Section 8-1 3-725, and (e) Persons hired to assist in the preparation of specifications or evaluation of bids Section 8-1 3-1 150

GOVERNING TERMS AND CONDITIONS Bids shall be submitted subject to the indicated Terms and Conditions, Bidder's terms and conditions of sale will not be considered. Bidder shall be deemed to have accepted DD2 Terms and Conditions by the submittal of a bid or proposal.

GUARANTEE The vendor shall supply a guarantee for all workmanship for the equipment he/she is furnishing for a period comparable to the standards in the industry. When defects or faulty materials are discovered during the guarantee period, the vendor shall, immediately, upon notification by the District, process at his/her own expense, to repair or replace the same.

MATERIALS REQUIRED Materials required must be in conformity with the specifications and shall be subject to inspection and approval after delivery, and shall comply in quality and type of material and method of manufacture with all applicable local or state laws pertaining thereto. The right is reserved to reject and return at the risk and expense of the vendor such portions of any shipment that may be defective or fail to comply with specifications and without validating the reminder of the order.

NOTICES All contact should be directed to the Procurement Officer listed on the cover page. No company should contact District staff directly. All questions should be directed in writing to Procurement Officer via the email provided on the cover page. Answers to any questions submitted will be communicated to all companies via a posted solicitation amendment.

OFFICE CLOSING If an emergency or unanticipated event interrupts normal District processes so that offers cannot be received at the District office designated for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal District's processes resume. In lieu of an automatic extension, an amendment may be issued to reschedule bid opening. If District offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an amendment will be issued to reschedule the conference.

OMIT TAXES FROM PRICE Do not include any sales or use taxes in Your price that the District may be required to pay.

OPEN TRADE REPRESENTATION (JUN 2015): By submitting an Offer, Offeror represents that Offeror is not currently engaged in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300.

PRICING (MAR 2024): (a) Fixed Price. If a fixed price is required, award will not be made on an Offer if the total possible price to the State cannot be determined. (b) Price Reasonableness: Any offer may be rejected if the Procurement Officer determines in writing that it is unreasonable as to price. (c) Unbalanced Pricing. The State will analyze all offers with separately priced line items or subline items to determine if the prices are unbalanced. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more line items is significantly over or understated. The responsible procurement officer may reject an offer as unreasonably priced if she determines that unbalanced pricing increases performance risk (e.g., it is so unbalanced as to be tantamount to allowing an advance payment) or could result in payment of unreasonably high prices. S.C. Code Ann. Reg. 19-445.2122C.

PROPOSER'S QUALIFICATIONS Offers shall be considered only from qualified firms who are regularly established in the business called for and who in the judgment of the District are financially responsible and able to show evidence of their reliability, ability, experience, to render prompt and satisfactory service in the volume called for under this contract

PROTESTS: If you are aggrieved in connection with the solicitation or award of the contract, you may be entitled to protest, but only as provided in Section 11-35-4210. To protest a solicitation, you must submit a protest within fifteen days of the date the applicable solicitation document is issued. To protest an award, you must (i) submit notice of your intent to protest within seven business days of the date the award notice is posted, and (ii) submit your actual protest within fifteen days of the date the award notice is posted. Days are calculated as provided in Section 11-35-310(13). Both protests and notices of intent to protest must be in writing and must be received by the appropriate Chief Business Official within the time provided. See clause entitled "Protest- Chief Financial Officer". The grounds of the protest and the relief requested must be set forth with enough particularity to give notice of the issues to be decided. The rights and remedies mentioned above are not available for contracts with an actual or potential value of up to fifty thousand dollars.[02-2A085-2]

PROHIBITED COMMUNICATIONS AND DONATIONS Violation of these restrictions may result in disqualification of your offer, suspension or debarment, and may constitute a violation of law. (a) During the period between publication of the solicitation and final award, you must not communicate, directly or indirectly, with any District employees, agents or officials regarding any aspect of this procurement activity, unless otherwise approved in writing by the Procurement Officer. All communications must be solely with the Procurement Officer. [R. 19-445.2010] (b) You are advised to familiarize yourself with Regulation 19-445.2165, which restricts donations to a governmental entity with whom you have or seek to have a contract. You represent that your offer discloses any gifts made, directly or through an intermediary, by you or your named subcontractors to or for the benefit of the District during the period beginning eighteen months prior to the Opening Date. [R. 19-445.2165] [02-2A087-1]

PUBLIC OPENING Offers will be publicly opened at the date / time and at the location identified on the Cover Page, or last Amendment, whichever is applicable. No prices will be divulged at opening.

QUESTIONS FROM OFFERORS All questions must be emailed to the Procurement Officer at [the address provided on the cover page of this document](#), (a) Any prospective Offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing. The Procurement Official must receive questions no later than five (5) days prior to opening, **unless otherwise stated on the Cover Page**. Oral explanations or instructions will not be binding. Any information given a prospective Offeror concerning a solicitation will be furnished promptly to all other prospective Offerors as a written Amendment to the solicitation, if that information is necessary for submitting offers or if the lack of it would be prejudicial to other prospective Offerors. (b) The District seeks to permit maximum practicable competition. Offerors are urged to advise the Procurement Official, as soon as possible, regarding any aspect of this procurement, including any aspect of the Solicitation that unnecessarily or inappropriately limits full and open competition. (c) Offerors must not contact any employee of the District for additional information relating to this RFP. (d) Questions will be responded to in the form of an Amendment or Addendum to the RFP and posted to DD2's [Solicitation and Awards](#) page.

REJECTION/CANCELLATION The District may cancel this solicitation in whole or in part. The District may reject any or all proposals in whole or in part.

RESPONSIVENESS / IMPROPER OFFERS (a) Bid as Specified. Offers for supplies or services other than those specified will not be considered unless authorized by the Solicitation.

(b) Multiple Offers. Offerors may submit more than one Offer, provided that each Offer has significant differences other than price. Each separate Offer must satisfy all Solicitation requirements. While multiple Offers may be submitted as one document, Offeror is responsible for clearly differentiating between each separate Offer. If this solicitation is a Request for Proposals, each separate Offer must include a separate cost proposal.

(c) Responsiveness. Any Offer that fails to conform to the material requirements of the Solicitation may be rejected as non-responsive. Offers that impose conditions that modify material requirements of the Solicitation may be rejected. If a fixed price is required, an Offer will be rejected if the total possible cost to the District cannot be determined. Offerors will not be given an opportunity to correct any material nonconformity. Any deficiency resulting from a minor informality may be cured or waived at the sole discretion of the Procurement Official.

(d) Unbalanced Bidding. The District may reject an Offer as non-responsive if the prices bid are materially unbalanced between line items or sub-line items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the District even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

RESTRICTIONS APPLICABLE TO OFFERORS Violation of these restrictions may result in disqualification of your offer, suspension or debarment, and may constitute a violation of the State Ethics Act. (a) After issuance of the solicitation, **You agree not to discuss this procurement activity in any way with any District employees, its agents or officials.** All communications must be solely with the Procurement Official. This restriction expires once a purchase order has been formed and may be lifted by express written permission from the Procurement Official. (b) **Unless otherwise approved in writing by the Procurement Officer, You agree not to give anything to any District employee, agent or official prior to award.**

SIGNING YOUR OFFER Every Offer must be signed by an individual with actual authority to bind the Offeror. (a) If the Offeror is an individual, the Offer must be signed by that individual. If the Offeror is an individual doing business as a firm, the Offer must be submitted in the firm name, signed by the individual, and state that the individual is doing business as a firm. (b) If the Offeror is a partnership, the Offer must be submitted in the partnership name, followed by the words "by its Partner," and signed by a general partner. (c) If the Offeror is a corporation, the Offer must be submitted in the corporate name, followed by the signature and title of the person authorized to sign. (d) An Offer may be submitted by a joint venture involving any combination of individuals, partnerships, or corporations. If the Offeror is a joint venture, the Offer must be submitted in the name of the joint venture and signed by every participant in the joint venture in the manner prescribed in paragraphs (a) through (c) above for each type of participant. (e) If an Offer is signed by an agent, other than as stated in subparagraphs (a) through (d) above, the Offer must state that it is and has been signed by an Agent. Upon request, Offeror must provide proof of the agent's authorization to bind the principal.

STATEMENT OF COMPLIANCE AND ASSURANCES By submitting a bid and signing the bid schedule, vendors are providing written assurance of non-collusion and understanding and acceptance of all general and special conditions stated in this contract. It will be assumed that the service or materials you propose to provide conform(s) with all the provisions of the indicated specifications, unless you specifically note otherwise. In addition, this signature certifies that the firm or agency represented in the bid submitted complies with all applicable federal and state laws and regulations.

SUBMITTING CONFIDENTIAL INFORMATION For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Offeror contend contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged and confidential, as that phrase is used in Section 11-35-410. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Offeror contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "PROTECTED" every page, or portion thereof, that Offeror contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire response (bid, proposal, quote, etc.) as confidential, trade secret, or protected! If your response or any part thereof, is improperly marked as confidential or trade secret or protected, the District may, in its sole discretion, determine it non-responsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation or request, Offeror (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, and documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, and (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the District will detrimentally rely on Offeror's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Offeror agrees to defend, indemnify and hold harmless the District, its Officials and employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the District withholding information that Offeror marked as "confidential" or "trade secret" or "PROTECTED". (All references to S.C. Code of Laws.) To facilitate the protection of confidential information, a USB containing a PDF version of the Original proposal and a Redacted copy must be submitted with the solicitation response.

SUBMITTING YOUR OFFER OR MODIFICATION (a) Offers and offer modifications shall be submitted in sealed envelopes or packages (unless submitted by approved electronic means) - (1) Addressed to the office specified in the Solicitation; and (2) Showing the time and date specified for opening, the solicitation number, and the name and address of the bidder. (b) Each Offeror must submit the number of copies indicated on the Cover Page. (c) Offerors using commercial carrier services shall ensure that the Offer is addressed and marked on the outermost envelope or wrapper as prescribed in paragraphs (a)(1) and (2) of this provision when delivered to the office specified in the Solicitation. (d) Facsimile Offers, modifications, or withdrawals, will not be considered unless authorized by the Solicitation. (e) Offers submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation.

TAXES Do not include any taxes in the bid price shown that the District may be required to pay. Upon submission of a bid, the Procurement Official will compute appropriate sales/use tax to the bids when applicable (service/labor excluded) to determine the low bidder. This procedure is required by SC Tax Commission Sales and Use Tax Regulation 117-174-.95.

WITHDRAWAL OR CORRECTION OF OFFER Offers may be withdrawn by written notice received at any time before the exact time set for opening. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for opening. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

B. SPECIAL INSTRUCTIONS

BOARD APPROVAL REQUIRED: Any award is subject to prior approval by the DD2 Board.

DELIVERY / PERFORMANCE LOCATION – PURCHASE ORDER: After award, all deliveries shall be made and all services provided to the location specified on the Dorchester School District Two purchase order, or notice to proceed.

DISCUSSION WITH BIDDERS: After opening, discussions *may* be conducted with apparent responsive bidders for the purpose of clarification to assure full understanding of the requirements of the invitation for bids. All bids, in the Procurement Official's sole judgment, needing clarification must be accorded that opportunity.

OPENING PROPOSALS – PRICES NOT DIVULGED: In competitive sealed proposals, prices will not be divulged at opening.

SCHEDULE OF ACTIVITIES: Listed below are the planned activities/milestones/dates/times pertaining to this solicitation. All information is subject to change. Changes will be communicated to prospective Offerors via an Amendment to the solicitation as necessary.

EVENT	DATES
Issuance of Request for Proposal	03/23/2026
Non-Mandatory Site Visit	03/30/2026 at 10:00 AM
Deadline for Questions	04/06/2026 by 5:00 PM
Issue Responses to Questions (anticipated)	04/09/2026
Deadline to Submit Proposal	04/16/2026 at 2:00 PM
Issue Notice of Award Statement (anticipated)	04/28/2026

III. SCOPE OF WORK

ABOUT DORCHESTER SCHOOL DISTRICT TWO

Dorchester School District Two currently serves more than 26,000 students. Our District has 15 elementary schools, seven (7) middle schools, three (3) high schools and Alternative and Adult Education programs currently serving the suburban community of Summerville, SC. In addition to these schools, the District operates an Administrative Office as well as other miscellaneous departments to include Facilities, Special Services, Transportation, and Educational Technology Services.

The goal of this RFP is to secure the most advantageous contractor to replace the running track facility at Ashley Ridge High School, 9800 Delemar Highway, Summerville, SC 29485, including the base and the synthetic resilient surface.

Offerors are advised that the District reserves the right to reject, based on the procurement official's sole determination, any Proposal that does not fully conform to the requirements of this RFP and does not clearly demonstrate the Offeror's capability of providing all the equipment, services, support, and work required herein. An Offeror's past performance with this District will be heavily considered during proposal evaluations. Offerors with an unsatisfactory performance record with the District may be disqualified outright from this process for responsibility reasons. Offers (proposals) that do not provide all of the information requested herein may be disqualified outright from this process for being non-responsive.

DESIGN: Project is a delegated design. The District has not engaged an engineer to design this project. Any instances of the word “Engineer” in these specifications are to be interpreted as the Owner.

CONTRACT: Upon award of this contract, the District will execute AIA contract documents with the successful Offeror. These contracts will include the District’s standard modifications and the terms & conditions herein.

BONDS: Performance and Payment bonds for 100% of the contract cost are required.

INSTALLATION: All material and construction shall be performed by the awarded bidder/contractor of this solicitation. Project coordination shall be coordinated with the District’s project manager. Contact information shall be provided upon contract execution.

INSTALLATION – QUALITY: Installation must be performed in accordance with the manufacturer’s specifications to avoid compromising the manufacturer’s warranty. Upon completion, all debris must be removed from the site.

SUBCONTRACTOR IDENTIFICATION: Bidder must identify all subcontractors with Schedule of Values that shall perform any portion of this contract. Bidder is responsible for subcontractor’s performance and conduct while performing any work in connection with this contract and shall adhere to all standards stipulated herein.

SPECIAL TESTING: DD2 shall be responsible for testing of construction materials (subgrade, concrete, and asphalt).

MINOR REPAIR AND SERVICE: The District may elect to extend the services of this contract beyond the project specified herein to obtain minor service or repair to the Track Facility at Ashley Ridge High School

IV. INFORMATION FOR OFFERORS TO SUBMIT

Submit the following physical items:

- one (1) USB containing a single PDF version of the technical proposal, plus a separate, single PDF version of the cost proposal form. Please label or tag the USB with the firm’s name for identification and use the firm’s name at the beginning of each of the two (2) PDF file names.
- five (5) identical, bound and paginated paper copies of the Technical Proposal (proposal content requirements are outline below).
- one (1) original copy of the Cost Proposal form in a Sealed Envelope marked “Cost Proposal.” **DO NOT PUT ANY PRICING IN YOUR TECHNICAL PROPOSAL.**
- one (1) signed original of the Cover Pages and other required forms

Offerors are discouraged from submitting supplementary materials or from making calls upon the District once this RFP is underway. All District staff, except the Procurement Official, are in the “cone of silence for the duration” of this procurement process. Failure to comply with format or content requirements may cause the proposal to be removed from further consideration.

Information presented in the RFP shall conform to the following:

- All pages must be numbered.
- Information submitted must be tabbed and organized as stated below.
- Font size must be no less than 10 point.
- Responses must be concise and sufficient in detail to provide a thorough evaluation and assessment.
- Responses must be organized into tabs as noted below.
- All sections must be included, and all information listed below must be provided.
- Technical proposals must be limited to a maximum number of pages. Refer to each tabbed section below for section page limits.

COVER PAGE Submittal Cover must include the following information:

- a. Firm’s name
- b. Firm’s address
- c. RFP #2526-010 and the date of submittal
- d. Completed forms, including the Cover Page and Page Two of this document, as well as any required forms included as attachments (i.e. Minority Participation Affidavit, Supplier Questionnaire, etc.)

PART I. TECHNICAL PROPOSAL

- TAB 1 Executive Summary (2 pages):** Provide information regarding the Offeror's general qualifications, experience, and ability to provide the services as set forth in the Scope of Work (refer to SECTION III). Include the number of years the firm has been in business and any experience with providing services of similar scope and specification to a school district, or other multi-facility governmental agency. **Provide documentation of the company's relationship to the surfacing manufacturer.** If the use of subcontractors is anticipated, submit the same general qualifications, experience and outline the portion of work to be completed by the subcontractor. Also include how long the firms have worked together on similar projects, and how management will ensure quality control and project coordination.
- TAB 2 Organizational Chart (1 page):** Include the entire organization and highlight the team proposed to work on this project for DD2.
- TAB 3 Qualifications and Experience (10 pages):** Include professional resumes of the proposed DD2 team outlining the relevant experience of each team member. Include a synopsis of each team member's role and responsibilities as they relate to the execution of this project. Include certifications, credentials, and other licenses that your company possesses that demonstrate your abilities and expertise with this type of work. Include any professional licenses that govern this type of work.
- TAB 4 Schedule (10 pages):** Provide a detailed proposed construction schedule for this project that conforms to the commencement and completion dates provided herein. Include material lead times. Include timelines for major stages as well as anticipated impacts to school operations during construction. Include a schedule expressed as a Gantt chart commencing with contract award of this RFP to final completion.
- TAB 5 Capabilities (5 pages):** Provide information demonstrating your company's assets and resources, including staff, supply chain relationships, tools and equipment, work flow processes, and other aspects that will benefit the District in the execution of this project.
- TAB 6 Projected Workload (2 pages):** We recognize that this is a dynamic economy, and workloads are subject to change, but provide a general workload for your company for the next 3-5 years so that the District can understand where we would fit into your overall customer hierarchy.
- TAB 7 References (5 pages):** Include a list of past client references that can provide insight into your company's performance on projects of a similar nature and complexity. Include names, job titles, phone numbers, email addresses, company or agency names, the project commencement and completion dates, and a brief description of the scope and value of the project or contract.

PART II. COST PROPOSAL

In a separately sealed envelope, enclose a completed Cost Proposal Form (Section 00 41 13). **DO NOT INCLUDE ANY COST OR PRICING INFORMATION ANYWHERE IN YOUR TECHNICAL PROPOSAL.**

PROPOSAL CONFIDENTIALITY

Any portions of the submitted proposal that are to be treated by the District as **proprietary and confidential information** must be clearly marked as such. Proprietary and confidential information submitted by an Offeror shall not be subject to public disclosure; however, the Offeror must invoke this protection by so stating in writing. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secrets or proprietary information. The classification of the entire proposal document, line-item prices and/or total proposal prices as proprietary or trade secret information is not acceptable and may result in rejection of the proposal as nonresponsive. By submission of a proposal, you are guaranteeing that all systems meet the requirements of this RFP.

The District reserves the right to reject any, and all, proposals or any portion of said proposals, to waive minor technicalities, and to make any and all award decisions based on the best interests of the District.

V. QUALIFICATIONS OF OFFEROR

5.1 MANDATORY MINIMUM QUALIFICATIONS

QUALIFICATIONS OF OFFEROR: Offers shall be considered only from qualified Offerors who are regularly established in the business called for and who in the judgment of the District are financially responsible and able to show evidence of their reliability, ability, experience, to render prompt and satisfactory service in the volume called for under this contract.

To be eligible for award, the Offeror must demonstrate:

- (1) they are qualified in the business called for in this proposal;
- (2) provide sufficient evidence of responsibility;
- (3) meet all material requirements of this RFP; and
- (4) they meet the following special qualifications:

The successful Offeror must have the capability in all respects to fully perform the contract requirements and the integrity and reliability which will assure good faith performance. We may also consider a documented commitment from a satisfactory source that will provide you with a capability. We may consider information from any source at any time prior to award. We may elect to consider (i) key personnel, any predecessor business, and any key personnel of any predecessor business, including any facts arising prior to the date a business was established, and/or (ii) any subcontractor you identify

You must promptly furnish satisfactory evidence of responsibility upon request. Unreasonable failure to supply requested information is grounds for rejection.

5.2 SUBCONTRACTOR -- IDENTIFICATION

If you intend to subcontract, at any tier level, with another business for any portion of the work and that portion either (1) exceeds 10% of your cost, (2) involves access to any "District information," as defined in the clause entitled "Information Security - Definitions," if included, or (3) otherwise involves services critical to your performance of the work (err on the side of inclusion), your offer must identify that business and the work which they are to perform. Identify potential subcontractors by providing the business name, address, phone, taxpayer identification number, and point of contact. In determining your responsibility, the state may contact and evaluate your proposed subcontractors.

VI. EVALUATION AND AWARD

POTENTIAL AND ACTUAL PROPOSERS SHALL **NOT** CONTACT MEMBERS OF THE BOARD OF TRUSTEES OR THE DISTRICT SELECTION COMMITTEE AT ANY TIME DURING THE EVALUATION AND SELECTION PROCESS WITH THE PURPOSE OF INFLUENCING THE OUTCOME OF THE COMPETITION.

6.1 EVALUATION OF OFFERS

- 6.1.1 **RESPONSIVENESS:** Upon receipt of all proposals, by the date and time specified in the RFP, the Procurement Office shall review all proposals for responsiveness to the proposal instructions. The District shall retain the sole right to consider any proposal as non-responsive based solely on its judgment and determination that the proposal does not satisfactorily meet the criteria of the proposal instructions herein or the District's Procurement Code. Only those proposals found to be responsive shall be further evaluated by an evaluation committee.
- 6.1.2 **EVALUATION CRITERIA:** Following receipt of proposals from all interested persons and firms, proposals shall be reviewed by a District Selection Committee. The proposals that meet the stated qualifications and submission requirements shall be ranked utilizing the stated non-cost evaluation criteria (see below).

Criteria	Points
Qualifications & Experience	20
Capabilities	15
Projected Workload	20
Past Performance	10
Cost	35

- 6.1.3 **COST:** After completion of evaluations and scoring on the non-cost criteria by the committee, the tabulated scores for cost shall be applied to the other scored criteria. The overall lowest total from the enclosed cost proposal form will be assigned the highest maximum points and the remainder of the proposed totals will be assigned lesser points in proportion to the lowest total cost.

6.1.4 **NEGOTIATIONS:** Offerors shall be ranked from highest to lowest total point scores. Negotiations shall commence with the offeror receiving the highest total score and shall proceed down the rankings until the District has successfully negotiated the fees and contract terms with an offeror, or offerors, or the District determines that no satisfactory contract can be negotiated.

6.2 CONTRACT AWARD

6.2.1 **AWARD TO ONE OFFERORS (JAN 2006):** Award will be made to one Offeror.

6.2.2 **AWARD CRITERIA – PROPOSALS (JAN 2006):** Award will be made to the highest ranked, responsive and responsible offeror, or offerors, whose offers are determined to be the most advantageous to the District.

6.2.3 **AWARD TO ONE OFFEROR (JAN 2006):** Award will be made to one Offeror.

6.2.4 **DISCUSSIONS AND NEGOTIATIONS – OPTIONAL (FEB 2015):** Submit your best terms from both a price and a technical standpoint. Your proposal may be evaluated and your offer accepted without any discussions, negotiations, or prior notice. Ordinarily, nonresponsive proposals will be rejected outright without prior notice. Nevertheless, the District may elect to conduct discussions, including the possibility of limited proposal revisions, but only for those proposals reasonably susceptible of being selected for award. [11-35-1530(6); R.19-445.2095(I)] If improper revisions are submitted during discussions, the District may elect to consider only your unrevised initial proposal, provided your initial offer is responsive. The District may also elect to conduct negotiations, beginning with the highest ranked offeror, or seek best and final offers, as provided in Section 11-35-1530(8). Negotiations may involve both price and matters affecting the scope of the contract, so long as changes are within the general scope of the request for proposals. If negotiations are conducted, the District may elect to disregard the negotiations and accept your original proposal.

VII. TERMS AND CONDITIONS

A. GENERAL

ASSIGNMENT: No contract or its provisions may be assigned, sublet, or transferred without the written consent of the Procurement Officer.

BANKRUPTCY: (a) Notice. In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish written notification of the bankruptcy to the District. This notification shall be furnished within five (5) days of the initiation of the proceedings relating to the bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of all District contracts against which final payment has not been made. This obligation remains in effect until final payment under this Contract. (b) Termination. This contract is voidable and subject to immediate termination by the District upon the contractor's insolvency, including the filing of proceedings in bankruptcy.

CHOICE-OF-LAW: The Agreement, any dispute, claim, or controversy relating to the Agreement, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation.

CONTRACT DOCUMENTS & ORDER OF PRECEDENCE: (a) Any contract resulting from this solicitation shall consist of the following documents: (1) a Record of Negotiations, if any, executed by you and the Procurement Officer, (2) documentation regarding the clarification of an offer [Article 5, Section 1530. 8], if applicable, (3) the solicitation, as amended, (4) modifications, if any, to your offer, if accepted by the Procurement Officer, (5) your offer, (6) any statement reflecting the District's final acceptance (a/k/a "award"), and (7) purchase orders. These documents shall be read to be consistent and complimentary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. (b) The terms and conditions of documents (1) through (6) above shall apply notwithstanding any additional or different terms and conditions in either (i) a purchase order or other instrument submitted by the District or (ii) any invoice or other document submitted by Contractor. Except as otherwise allowed herein, the terms and conditions of all such documents shall be void and of no effect. (c) Any document signed or otherwise agreed to by persons other than the Procurement Officer shall be void and of no effect.

DISPUTES (MAY 2024): (1) Choice-of-Forum. All disputes, claims, or controversies relating to the Agreement shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the District's Procurement Code, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Dorchester County, State of South Carolina. Contractor agrees that any act by the government regarding the Agreement is not a waiver of either the government's sovereign immunity or the government's immunity under the Eleventh Amendment of the United States Constitution. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation. The government does not consent to the jurisdiction of any judicial or administrative tribunals in any other state or to any forum of alternative dispute resolution. (2) Service of Process. Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any disputes, claims, or controversies relating to the Agreement; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided as the Notice Address on Page Two or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail.

DRUG FREE WORK PLACE CERTIFICATION: The State of South Carolina has amended Title 44, code of Laws of South Carolina, 1976, relating to health, by adding Chapter 107, so as to enact the Drug-Free Workplace Act. (See Act No. 593, 1990 Acts and Joint Resolutions). By submission of a signed proposal, you are certifying that you will comply with this Act. (See Section 44-107-30).

EQUAL OPPORTUNITY: Contractor is referred to and shall comply with all applicable provisions, if any, of Title 41, Part 60 of the Code of Federal Regulations, including but not limited to Sections 60-1.4, 60-4.2, 60-4.3, 60-250.5(a), and 60-741.5(a), which are hereby incorporated by reference.

FALSE CLAIMS (JAN 2006): According to the S.C. Code of Laws Section 16-13-240, "a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty" of a crime.

FORCE MAJURE: The Contractor shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control of and without the fault or negligence of the contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Governments in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the contractor. If the failure to perform is caused by the default of a subcontractor, and if such default arises out of causes beyond the control of both the contractor and subcontractor, and without the fault or negligence of either of them, the contractor shall not be liable for any excess costs for failure to perform, unless the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the contractor to meet the required delivery schedule.

NON-INDEMNIFICATION: Any term or condition is void to the extent it requires the District to indemnify defend, or pay attorney's fees to anyone for any reason.

NOTICE: (A) After award, any notices shall be in writing and shall be deemed duly given (1) upon actual delivery, if delivery is by hand, (2) upon receipt by the transmitting party of automated confirmation or answer back from the recipient's device if delivery is by telex, telegram, facsimile, or electronic mail, (3) upon deposit into the United States mail, if postage is prepaid, a return receipt is requested, and either registered or certified mail is used, or (4) upon posting to the location specified herein.

PURCHASE ORDERS: Contractor shall not perform any work prior to the receipt of a purchase order from the District. The District shall order any supplies or services to be furnished under this contract by issuing a purchase order. Purchase orders may be used to elect any options available under this contract, e.g., quantity, item, delivery date, payment method, but are subject to all terms and conditions of this contract. Purchase orders may be electronic. No particular form is required. An order placed pursuant to the purchasing card provision qualifies as a purchase order.

SURVIVAL OF OBLIGATIONS (JAN 2006): The Parties' rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses: Indemnification - Third Party Claims, Intellectual Property Indemnification, and any provisions regarding warranty or audit.

TERMINATION DUE TO UNAVAILABILITY OF FUNDS: Payment and performance obligations for succeeding fiscal periods shall be subject to the availability and appropriation of funds thereof. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period, the contract shall be canceled. Contractor will not be reimbursed any costs beyond the initial contract term.

B. SPECIAL

SUBMITTAL: The District shall receive all proposals **no later than 2:00 PM** on **April 16, 2026**.

Important: **Clearly mark the outside of the envelope, box, or package, with the following information:**

**RFP No. 2526-010 ARHS
Track Replacement**

Proposals should be sent via United States Postal Service, courier service, or hand-delivered to:

**Dorchester School District Two
815 South Main Street
Summerville, SC 29483
Attention: Ashley Cash**

All Offerors are solely responsible for ensuring that their courier service provider makes inside deliveries to our physical location. The District is not responsible for any delays caused by the Offeror's chosen means of delivery. The District is not liable for misdirected submissions that are not clearly marked as stated above for proper delivery.

Any proposal received after the due date and time shall be rejected.

CONTENTS OF OFFER (RFP):

- (a) Offers should be complete and carefully worded and should convey all of the information requested.
- (b) Offers should be prepared simply and economically, providing a straightforward, concise description of offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content. Each copy of your offer should be bound in a single volume where practical. All documentation submitted with your offer should be bound in that single volume.
- (d) If your offer includes any comment over and above the specific information requested in the solicitation, you are to include this information as a separate appendix to your offer. Offers which include either modifications to any of the solicitation's contractual requirements or an offeror's standard terms and conditions may be deemed non-responsive and not considered for award.

CHANGES:

- A. Contract Modification. By a written order, at any time, and without notice to any surety, the Procurement Officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:
 - 1) drawings, designs, or specifications, if the supplies to be furnished are to be specially manufactured for the District in accordance therewith;
 - 2) method of shipment or packing;
 - 3) place of delivery;
 - 4) description of services to be performed;
 - 5) time of performance (i.e., hours of the day, days of the week, etc.); or,
 - 6) place of performance of the services.

Subparagraphs (1) to (3) apply only if supplies are furnished under this contract. Subparagraphs (4) to (6) apply only if services are performed under this contract.

CLARIFICATION: Pursuant to Article 5, Section 1530.6, the Procurement Officer may elect to communicate with you after opening for the purpose of clarifying either your offer or the requirements of the solicitation. Such communications may be conducted only with offerors who have submitted an offer which obviously conforms in all material aspects to the solicitation. Clarification of an offer must be documented in writing and included with the offer. Clarifications may not be used to revise an offer or the solicitation.

COMPLIANCE WITH LAWS: During the term of the contract, contractor shall comply with all applicable provisions of laws, codes, ordinances, rules, regulations, and tariffs.

CONTRACTOR'S LIABILITY INSURANCE REQUIREMENTS: The successful contractor must furnish within ten (10) days after written acceptance of bid a copy of his Worker's Compensation and/or General Liability insurance certificate to the District. Worker's Compensation coverage shall meet the requirements of South Carolina law. It is agreed that the coverage, as stated, shall not be cancelled or altered until ten (10) days after written notice of any change has been sent by registered mail to the Procurement Department. **Dorchester School District Two shall be listed as Certificate Holder.**

The insurance required by this paragraph shall be written for not less than the following limits of liability or as required by law, whichever coverage is greater:

COMMERCIAL GENERAL LIABILITY:

General Aggregate (per project)	\$1,000,000
Products/Completed Operations	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000
Fire Damage (Any one fire)	\$ 50,000
Medical Expense (Any one person)	\$ 5,000

BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):

Combined Single Limit	\$1,000,000
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WORKERS COMPENSATION: State Statutory

Employees Liability-per accident	\$100,000
Disease – Policy Limit	\$500,000
Disease, Each Employee Limit	\$100,000

Required Documentation: (a) Prior to commencement of the work, contractor shall provide to the District a signed, original certificate of liability insurance (ACORD 25). The certificate shall identify the types of insurance, state the limits of liability for each type of coverage, include a provision for 30 day notice prior to cancellation, name every applicable using governmental unit (as identified on the cover page) as a Certificate Holder, provide that the general aggregate limit applies per project, and provide that coverage is written on an occurrence basis. (b) Prior to commencement of the work, contractor shall provide to the District a written endorsement to the contractor's general liability insurance policy that (i) names Dorchester School District Two (as identified on the Cover Page) as an additional insured, (ii) provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless the named governmental unit(s) has been given at least thirty (30) days prior written notice, and (iii) provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the District as secondary and noncontributory. (c) Both the certificate and the endorsement must be received directly from either the contractor's insurance agent or the insurance company. Contractor shall provide a minimum of thirty (30) days written notice to the District of any proposed reduction of coverage limits (on account of revised limits or claims paid under the General Aggregate) or any substitution of insurance carriers. The District's failure to demand either a certificate of insurance or written endorsement required by this paragraph is not a waiver of contractor's obligations to obtain the required insurance.

CONTRACTOR PERSONNEL: 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.

CONTRACTOR'S OBLIGATION: The contractor shall provide and pay for all materials, tools, equipment, labor and professional and non-professional services, and shall perform all other acts and supply all other things necessary, to fully and properly perform and complete the work. The contractor must act as the prime contractor and assume full responsibility for any subcontractor's performance. The contractor will be considered the sole point of contact with regard to all situations, including payment of all charges and the meeting of all other requirements.

DAMAGES LIMITATION: Contractor's maximum liability, if any, to the District for all direct, indirect, incidental, punitive, consequential, or special damages, including without limitation contract damages and damages for injuries to persons or property, whether arising from licensor's breach of this agreement, breach of warranty, negligence, strict liability, or other tort, or otherwise with respect to the supplies, services, or software provided under this agreement, shall in no event exceed an amount equal to the total contract price. In no event shall any party be liable to another for any indirect, incidental, punitive, consequential, or special damages, including, without limitation, lost revenues and profits, even if it has been advised of the possibility of such damages.

DEFAULT: The District may terminate this contract, or any part hereof, for cause in the event of any default by the contractor, or if the contractor fails to comply with any contract terms and conditions, or fails to provide the District, upon request, with adequate assurances of future performance. In the event of termination for cause, the District shall not be liable to the contractor for any amount for supplies or services not accepted, and the contractor shall be liable to the District for any and all rights and remedies provided by law. If it is determined that the District improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

DISPOSAL OF PACKAGING: Contractor shall dispose of all wrappings, crating, and other disposable materials pertaining to this contract at the end of each working day and upon completion of installation.

ILLEGAL IMMIGRATION: By signing your offer, you certify that you will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agree to provide to the District upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable to you and your subcontractors or sub-subcontractors; or (b) that you and your subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." You agree to include in any contracts with your subcontractors language requiring your subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. [07-7B097-1]

LICENSES AND PERMITS: During the term of the contract, the Contractor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections and related fees for each or any such licenses, permits and /or inspections required by the State, county, city or other government entity or unit to accomplish the work specified in this solicitation and the contract.

OWNERSHIP OF DATA & MATERIALS: All data, material and documentation prepared for the District pursuant to this contract shall belong exclusively to the District; including design documents and drawings.

PRICE ADJUSTMENTS (JAN 2006): (1) Method of Adjustment. Any adjustment in the contract price made pursuant to a clause in this contract shall be consistent with this Contract and shall be arrived at through whichever one of the following ways is the most valid approximation of the actual cost to the Contractor (including profit, if otherwise allowed):

- (a) by agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
- (b) by unit prices specified in the Contract or subsequently agreed upon;
- (c) by the costs attributable to the event or situation covered by the relevant clause, including profit if otherwise allowed, all as specified in the Contract; or subsequently agreed upon;
- (d) in such other manner as the parties may mutually agree; or,
- (e) in the absence of agreement by the parties, through a unilateral initial written determination by the Procurement Officer of the costs attributable to the event or situation covered by the clause, including profit if otherwise allowed, all as computed by the Procurement Officer in accordance with generally accepted accounting principles, subject to the provisions of Title 11, Chapter 35, Article 17 of the S.C. Code of Laws.

(2) Submission of Price or Cost Data. Upon request of the Procurement Officer, the contractor shall provide reasonably available factual information to substantiate that the price or cost offered, for any price adjustments is reasonable, consistent with the provisions of Section 11-35-1830.

PURCHASING CARD (JAN 2006): Contractor agrees to accept payment by District Purchasing Card for no extra charge. The Purchasing Card is issued by Visa. The purchasing card allows the District to make authorized purchases from a vendor without the requirement to issue a purchase order.

RESPONSIBILITY DETERMINATIONS Responsibility of the proposer shall be ascertained for each contract awarded by the District based upon full disclosure to the District concerning capacity and capability to meet the terms of the contract and based upon past record of performance for similar contracts. The unreasonable failure of a proposer or Offeror to supply information promptly in connection with an inquiry with respect to responsibility may be grounds for a determination of non-responsibility with respect to such proposer or Offeror. Failure to provide requested information may result in rejection of a solicitation response or debarment of the proposer.

SHIPPING / RISK OF LOSS: F.O.B. Destination. Destination is the shipping location of the Districts' designated receiving site, as specified herein.

TERMINATION FOR CONVENIENCE: The Procurement Officer may terminate this contract in whole or in part, for the convenience of the District. In such a termination, the Procurement Officer may require the contractor to transfer title and deliver to the District in the manner and to the extent directed by the Procurement Officer: (a) any completed supplies; and (b) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the contractor has specifically produced or specially acquired for the performance of the terminated part of this contract. Upon such termination, the contractor shall (a) stop work to the extent specified, (b) terminate any subcontracts as they relate to the terminated work, and (c) be paid the following amounts without duplication, subject to the other terms of this contract: (i) contract prices for supplies or services accepted under the contract, (ii) costs incurred in performing the terminated portion of the work, and (iii) any other reasonable costs that the contractor can demonstrate to the satisfaction of the State, using its standard record keeping system, have resulted from the termination. The contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided. As a condition of payment, contractor shall submit within three months of the effective date of the termination a claim specifying the amounts due because of the termination. The absence of an appropriate termination for convenience clause in any subcontract shall not increase the obligation of the District beyond what it would have been had the subcontract contained such a clause.

WARRANTY: Contractor must provide the manufacturer's standard written warranty upon delivery of product. Contractor warrants that manufacturer will honor the standard written warranty provided.

OSHA CFR 1910.1200 (SCRR article 1, 71-1910.1200). By submission of this bid, the Offeror agrees to take all necessary steps to ensure compliance with the requirements.

END OF SOLICITATION DOCUMENT

ATTACHMENTS TO SOLICITATION DOCUMENT

A. Minority Participation Affidavit

ATTACHMENT A

Minority Participation Affidavit

- Is the bidder a South Carolina Certified Minority Business? (Yes) _____ (No) _____
- Is the bidder a Minority Business certified by another governmental entity?
(Yes) _____ (No) _____
- If so, please list the certifying governmental entity: _____

- Will any of the work under this contract be performed by a SC certified Minority Business as a subcontractor? (Yes) _____ (No) _____
- If so, what percentage of the total value of the contract will be performed by a SC certified Minority Business as a subcontractor? _____%
- Will any of the work under this contract be performed by a minority business certified by another governmental entity as a subcontractor? (Yes) _____ (No) _____
- If so, what percentage of the total value of the contract will be performed by a minority business certified by another governmental entity as a subcontractor? _____%

If a certified Minority Business is participating in this contract, please indicate all categories for which the Business is certified:

_____	Traditional minority
_____	Traditional minority, but female
_____	Women (Caucasian females)
_____	Hispanic minorities
_____	Temporary certification
_____	Other minorities (Native American, Asian, etc.)

Note: *If more than one minority Contractor will be utilized in the performance of this contract, please provide the information above for each minority business.*

Track Replacement for Ashley Ridge High School
9800 Delemar Highway
Summerville, SC 29485
RFP #2526-010

OFFER SUBMITTED BY: _____
(Offeror's Name)

OFFER SUBMITTED TO: Dorchester School District Two
(Owner's Name)

PROJECT NAME: Track Replacement for Ashley Ridge High School

CONTRACT NUMBER: 2526-010

OFFER

§ 1. In response to the Request for Proposals and in compliance with all terms and conditions incorporated herein for the above-named Project, the undersigned Offeror proposes and agrees, if this Offer is accepted, to enter into a Contract with the Owner on the terms included herein, and to perform all Work as specified or indicated in herein, for the prices, and within the time frames, indicated in this Request for Proposals and in accordance with the other terms and conditions of these Documents.

§ 2. NOT USED.

§ 3. In submitting this Proposal, Offeror represents that:

- a. Offeror acknowledges the receipt of the following Addenda to the RFP Documents and has incorporated the effects of said Addenda into this Proposal:

(Offeror, check all that apply. Note, there may be more boxes than actual addenda. Do not check boxes that do not apply)

ADDENDA: #1 ☐ #2 ☐ #3 ☐ #4 ☐ #5 ☐

- b. Offeror has visited the site and become familiar with, and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the WORK.

§ 4. Offeror accepts all terms and conditions of the Request for Proposal, without limitation or qualification. Offeror agrees that its Proposal, including Alternates and Allowances, if any, may not be revoked or withdrawn after the closing deadline, and shall remain open for acceptance for a period of sixty (**60**) Days following the Proposal Date, or for such longer period of time that Offeror may agree to in writing upon request of the Owner.

Track Replacement for Ashley Ridge High School
9800 Delemar Highway
Summerville, SC 29485
IFB #2526-010

(CONTINUED)

§ 5. Offeror herewith offers to provide all labor, materials, equipment, tools of trade and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the construction work required for this project.

§ 6.1 BASE PROPOSAL WORK (*as indicated in the Solicitation Documents and generally described as follows*):

Construction, in accordance with the documents incorporated herein, of a new resilient surface running track, associated site work and concrete sidewalks at Ashley Ridge High School. The Base Proposal also includes allowances described below.

Having carefully examined the RFP Documents as well as the premises and conditions affecting the work, the undersigned proposes to furnish all materials, labor, equipment and services called for by them for a lump sum consideration of:

\$ _____, which sum is hereafter called the Base Proposal.

(Offeror - insert Proposal Amount on line above)

§ 6.2 PROPOSAL ALTERNATES.

DEDUCTIVE ALTERNATE NO. 1 – To deduct the post tension concrete base.

\$ _____, which sum is hereafter called the Alternate No. 1.

DEDUCTIVE ALTERNATE NO. 2 – To deduct the full pour synthetic surfacing.

\$ _____, which sum is hereafter called the Alternate No. 2.

ADDITIVE ALTERNATE NO. 3 – To include a laser graded asphaltic base.

\$ _____, which sum is hereafter called the Alternate No. 3.

ADDITIVE ALTERNATE NO. 4 – To include a Latex based synthetic surface.

\$ _____, which sum is hereafter called the Alternate No. 4.

ADDITIVE ALTERNATE NO. 5 – To include a sandwich system synthetic surface.

\$ _____, which sum is hereafter called the Alternate No. 5.

Track Replacement for Ashley Ridge High School
9800 Delemar Highway
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(CONTINUED)

§ 6.2 PROPOSAL ALTERNATES (CONTINUED)

ADDITIVE ALTERNATE NO. 6 – To include a basemat system synthetic surface.

\$ _____, which sum is hereafter called the Alternate No. 6.

§ 6.3 UNIT PRICING

Offeror offers the District the following unitized pricing:

No.	Item	Qty	UOM	ADD	DEDUCT
1	N/A				

Unitized pricing above includes all costs to the District.

§ 6.4 ALLOWANCES

Allowance # 1: Included in the Base Proposal shall be a general contingency allowance in the amount of \$30,000.00. Any portion of the allowance not used for this express purpose will be refunded to the District with a deductive change order at the conclusion of the project.

Allowance #2: Included in the Base Proposal shall be a landscaping allowance in the amount of \$10,000.00. Any portion of the allowance not used for this express purpose will be refunded to the District with a deductive change order at the conclusion of the project.

All allowances are to be included as distinct line items on the Contractor's Schedule of Values. The Contractor's Schedule of Values is a required submittal for this project and is due within 15 days of the date of issuance on the Notice of Intent to Award.

§ 7. LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED. At the end of this form, Offerors shall list those subcontractors which Offeror intends to use to perform the work requiring the license classification and/or sub-classification listed therein. Offeror shall only use the listed subcontractors in performance of such licensed work.

Track Replacement for Ashley Ridge High School
9800 Delemar Highway
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IFB #2526-010

(CONTINUED)

§ 8. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

a) CONTRACT TIME

Offeror agrees that the Date of Commencement of any contract awarded pursuant to the Invitation for Bids shall be established in writing on a Notice to Proceed. **Offeror agrees to substantially complete the work within One Hundred and Twenty-One (121) calendar days of the date of commencement on the Notice to Proceed**, subject to adjustments as provided in the Contract Documents. Offeror agrees to attain Final Completion within 30 calendar days of the date of Substantial Completion.

b) LIQUIDATED DAMAGES

Offeror agrees that the Owner shall be paid Liquidated Damages the amount of **\$ 200.00** for each Calendar Day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted time for Substantial Completion. Offeror further agrees that the Owner shall be paid Liquidated Damages the amount of **\$ 100.00** for each Calendar Day the actual construction time required to achieve Final Completion exceeds the specified or adjusted time for Final Completion. This amount is intended by the parties as the predetermined measure of compensation for actual damages, not as a penalty for nonperformance.

§ 9. AGREEMENTS

- a) Offeror agrees that its Proposal is subject to the requirements of the laws of the State of South Carolina.
- b) Offeror agrees that at any time prior to execution of the Construction Contract for this Project, this Project may be canceled for the convenience of, and without cost to, the District.
- c) Offeror agrees that neither Dorchester School District Two, nor any of its agencies, employees or agents shall be responsible for any proposal preparation costs, or any costs or charges of any type, should all proposals be rejected or the Project canceled for any reason prior to execution of the Construction Contract.

Track Replacement for Ashley Ridge High School
9800 Delemar Highway
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(CONTINUED)

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION

SC CONTRACTOR'S LICENSE NUMBER(S): _____

CLASSIFICATION(S) & LIMITS: _____

SUBCLASSIFICATION(S) & LIMITS: _____

By signing this Bid, the person signing reaffirms all representations and certifications made by both the person signing and the Offeror, including without limitation, those appearing in herein.

OFFEROR'S LEGAL NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

SIGNATURE: _____ DATE: _____

PRINT NAME: _____

TITLE: _____

SUBCONTRACTORS:

IF AWARDED THE CONTRACT, WE WILL USE THE FOLLOWING CONTRACTOR ON:

SITE WORK: _____

ADDRESS: _____

CITY, STATE: _____ LICENSE NO. _____

END OF COST PROPOSAL FORM

SECTION 011000 – SUMMARY

PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of replacing the existing track and field facilities at one (1) Dorchester School District Two high school campus.
 - 1. Project Locations:
 - a. Ashley Ridge High School, 9800 Delemar Highway, Summerville, SC 29485
 - 2. Owner:
 - a. Dorchester School District Two, 815 S. Main St., Summerville, SC 29483
- B. The Work consists of replacement of existing asphalt track and field facilities Ashley Ridge High School.
 - 1. The Work includes the following:
 - a. Demolition of the existing asphalt tracks;
 - b. Construction of Post Tension Concrete track, or approved alternate;
 - c. Concrete sidewalks;
 - d. Concrete curbing;
 - e. Full-pour track surfacing, or approved alternate; and
 - f. Fencing

1.2 CONTRACT

- A. Project will be constructed under an AIA contract, with the District's standard revisions.

1.3 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 011400 – WORK RESTRICTIONS

PART 1 – GENERAL

1.1 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Limits: Confine constructions operations to areas within the contract limits indicated.
 - 2. Owner Occupancy: Allow for Owner occupancy of site and use by the public.
 - 3. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
- B. Use of Existing Building: Maintain existing buildings shown to remain on demolition plans in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect buildings during construction period.

1.2 OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing buildings outside of the limits of construction during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 21 00 - ALLOWANCES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances included in the Contract Sum.
- B. Allowances are established to cover costs for work that cannot be fully defined at the time of bidding.
- C. The Contractor shall include the allowances listed in this Section in the Base Bid.
- D. Expenditures from allowance funds shall be made only upon written authorization from the Owner.

1.2 DESCRIPTION OF ALLOWANCES

- A. General Unforeseen Conditions Allowance
 - 1. Allowance Amount: \$30,000.00
 - 2. Purpose: To cover unforeseen conditions encountered during construction that are not otherwise included in the Contract Documents.
 - 3. Examples may include, but are not limited to:
 - a. Subsurface conditions requiring minor remediation
 - b. Minor drainage adjustments
 - c. Unexpected base repairs
 - d. Other field conditions determined necessary by the Owner
- B. Additional Landscaping Allowance
 - 1. Allowance Amount: \$10,000.00
 - 2. Purpose: To provide funding for additional landscaping improvements as directed by the Owner during construction.
 - 3. Work may include, but is not limited to:
 - a. Additional sod or turf restoration
 - b. Plantings or landscape beds
 - c. Irrigation adjustments
 - d. Decorative landscape enhancements

1.3 CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall include the full value of the allowances in the Base Bid.
- B. The Contractor shall not use allowance funds without prior written approval from the Owner.
- C. When directed by the Owner to perform work funded by an allowance, the Contractor shall submit:
 - 1. Detailed cost proposal
 - 2. Supporting documentation including labor, material, equipment, and subcontractor costs
 - 3. Schedule impacts, if any
- D. Upon approval, the work will be authorized through a Change Order or Construction Change Directive.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

3.1 USE OF ALLOWANCE FUNDS

- A. Allowance funds shall be used only for the purposes described and only upon written authorization by the Owner.
- B. Costs chargeable to an allowance may include:
 - 1. Labor
 - 2. Materials
 - 3. Equipment
 - 4. Subcontractor costs
 - 5. Contractor markups as permitted by the Contract Documents

3.2 UNUSED ALLOWANCE FUNDS

- A. Any portion of the allowance funds not used during the project shall be returned in full to the Owner.
- B. At project closeout, the Contract Sum shall be reduced by the unused balance of each allowance.
- C. The reduction shall be executed through a deductive Change Order.

3.3 DOCUMENTATION

- A. Contractor shall maintain records of all expenditures from allowance funds.
- B. Documentation shall include:
 - 1. Invoices
 - 2. Material receipts
 - 3. Subcontractor quotations
 - 4. Labor records if applicable
- C. Records shall be provided to the Owner upon request.

END OF SECTION 01 21 00

SECTION 013000 – PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination.
 - 2. Submittals.
 - 3. Administrative and supervisory personnel.
 - 4. Project meetings.
 - 5. General installation provisions.
 - 6. Cleaning and protection.

1.2 COORDINATION

- A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of these Specifications that are dependent upon each other for proper installation, connection, and operation.
 - 1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, cooperate with scheduled construction activities in the sequence required to obtain the best results.
 - 2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Coordinate construction activities with public and private utilities.
 - a. Notify South Carolina 811 a minimum of 48 hours prior to excavation or blasting.
 - b. Notify the Owner and Engineer of any utility locations encountered which conflict with the work. Coordinate with the Owner and Utility Company in the protection, removal, relocation or replacement of conflicting utility locations.
- B. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's Construction Schedule.
 - 2. Preparation of the Schedule of Values.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Pre-installation conferences.
 - 6. Project closeout activities.

1.3 SUBMITTALS

- A. Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the interrelationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.
 - 3. Comply with requirements contained in Section "Submittals Procedures."
- B. Staff Names: Within 15 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including mobile and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.4 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, within 3 days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference and organizational meeting at the Project site or other convenient site prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers and other concerned parties shall each be represented at the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing.
 - d. Designation of responsible personnel.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for processing Applications for Payment.
 - g. Distribution of the Contract Documents.
 - h. Submittal procedures.
 - i. Preparation of Record Documents.
 - j. Use of the premises.

- k. Responsibility for temporary facilities and controls.
 - l. Parking availability.
 - m. Work and storage areas.
 - n. Equipment deliveries and priorities.
 - o. Safety procedures.
 - p. First aid.
 - q. Security.
 - r. Progress cleaning.
 - s. Working hours.
 - t. Housekeeping.
 - u. Subcontractors.
 - v. Preliminary Schedule of Shop Drawings and Samples.
 - w. Contractor's Schedule of Values.
- C. Progress Meetings: Conduct progress meetings at the Project Site at regularly scheduled intervals. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to representatives of the Owner, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Time.
 - 3) Sequence of operations.
 - 4) Status of submittals.
 - 5) Deliveries.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
 - 14) Documentation of information for payment requests.
 - 3. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

- a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
- E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Engineer for final decision.
- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Engineer for final decision.

3.2 CLEANING AND PROTECTION

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious

exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessive internal or external pressures.
3. Excessively high or low temperatures.
4. Thermal shock.
5. Excessively high or low humidity.
6. Air contamination or pollution.
7. Water or ice.
8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining and corrosion.
16. Bacteria.
17. Rodent and insect infestation.
18. Combustion.
19. Electrical current.
20. High speed operation.
21. Improper lubrication.
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Destructive testing.
25. Misalignment.
26. Excessive weathering.
27. Unprotected storage.
28. Improper shipping or handling.
29. Theft.
30. Vandalism.

END OF SECTION

SECTION 013300 – SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Owner's responsive action.
- B. Informational Submittals: Written information that does not require Owner's approval. Submittals may be rejected for not complying with requirements.
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 SUBMITTAL ADMINISTRATIVE REQUIREMENTS:

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 - 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- B. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Owner's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Owner will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 10 days for review of each resubmittal.
 4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted to the Owner and the Owner's consultant, allow 15 days for review of each submittal. Submittal will be returned to Owner before being returned to Contractor.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., AHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., AHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Engineer.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name of Contractor.
 - d. Name of firm or entity that prepared submittal.
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Related physical samples submitted directly.
 - m. Indication of full or partial submittal.
 - n. Transmittal number, numbered consecutively.
 - o. Submittal and transmittal distribution record.
 - p. Other necessary identification.
 - q. Remarks.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- D. Options: Identify options requiring selection by Owner.
- E. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- F. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from action stamp.
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's action stamp.

PART 2 – PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 1. Submit electronic submittals via email as PDF electronic files.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.

- e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before or concurrent with Samples.
 - 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Engineer's digital data drawing files is otherwise permitted.
- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
 - 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
- 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 - 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 - 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

- a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit 1 full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer will return submittal with options selected.
- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit 3 sets of Samples. Engineer will retain 2 Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least 3 sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 - 2. Manufacturer and product name, and model number if applicable.
 - 3. Number and name of room or space.
 - 4. Location within room or space.
- F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- G. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- H. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Engineers and owners, and other information specified.
- I. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- J. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

- K. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- L. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- M. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- N. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- O. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- P. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- Q. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

2.2 CONTRACTOR'S PROJECT HEALTH & SAFETY PLAN

- A. No later than the Pre-construction meeting, the Contractor shall submit to the Engineer a written Project Health & Safety Plan, which states the Contractor's company policy relative to safety. The plan must also address specific health and safety concerns, which are expected to be encountered on the project. As a minimum this plan shall include:
 - 1. Listing of project and company safety officers.
 - 2. Specific company safety policies.
 - 3. Employee Safety Training Program.
 - 4. Administrative procedures to handle employee health & safety concerns.
 - 5. Procedures for insuring worker compliance with health and safety requirements.
- B. The Contractor shall be responsible to ensure that each Subcontractor employed on the project complies with the requirements of this section either by submitting a copy of the subcontractor's Project Health & Safety Plan or by submitting a letter from the Subcontractor stating that they will comply with the provisions of the Contractor's Project Health & Safety Plan.
- C. Submission of the required Project Health & Safety Plan by the Contractor is primarily for information or record purposes and shall not be construed to imply approval by the Engineer or to relieve the Contractor from the responsibility to adequately protect the health & safety of all workers involved in the project.

PART 3 – EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 OWNER'S ACTION

- A. General: Owner will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Owner will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Final Unrestricted Release: Where submittals are marked "No Exceptions Taken," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 - 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - 3. Returned for Resubmittal: When submittal is marked "Revise and Resubmit," "Rejected," or "Submit Specified Item," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Revise and Resubmit," "Rejected," or "Submit Specified Item" to be used at the Project site, or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."
- C. Informational Submittals: Owner will review each submittal and will not return it or will reject and return it if it does not comply with requirements. Owner will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION

SECTION 014500 – QUALITY CONTROL

PART 1 – GENERAL

1.1 SUMMARY

- A. This section establishes quality control requirements for construction of the running track facility.
- B. Quality control requirements include:
 - 1. Pre-installation conferences
 - 2. Installer qualifications
 - 3. Base tolerance verification
 - 4. Laser profiling of track base
 - 5. Surface performance testing
 - 6. Thickness verification by core sampling
 - 7. Field inspection and documentation.
- C. Quality control procedures shall ensure that the running track system is installed in accordance with the contract documents and manufacturer requirements.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 QUALITY ASSURANCE

- A. Installer Qualifications
 - 1. Track surfacing installer shall have a minimum of five years experience installing synthetic running track systems of the type specified herein.
 - 2. Installer shall have completed at least five projects of similar size and complexity.
 - 3. Installer shall be licensed or certified by the track surfacing manufacturer.

- B. Manufacturer Certification
 - 1. Contractor shall submit written certification from the surfacing manufacturer stating:
 - a. Installer is authorized to install the specified system.
 - b. Installer has received manufacturer training for the system.
 - c. Installation will be eligible for manufacturer warranty.
 - 2. Certification shall be submitted prior to installation.
- C. Pre-Installation Conference
 - 1. A pre-installation meeting shall be conducted prior to beginning work. Participants shall include:
 - a. Owner
 - b. Architect/Engineer
 - c. General Contractor
 - d. Track surfacing installer
 - e. Manufacturer representative.Topics shall include:
 - a. Base condition verification
 - b. Installation schedule
 - c. Weather limitations
 - d. Protection of adjacent facilities
 - e. Quality control testing requirements.

1.4 TESTING AND INSPECTION AGENCY

- A. Owner may engage an independent testing agency experienced in sports surfacing.
- B. Agency shall verify compliance with performance criteria and installation tolerances.

1.5 SUBMITTALS

- A. Manufacturer installation instructions.
- B. Product technical data.
- C. Material certifications.
- D. Installer certification from manufacturer.
- E. Quality control inspection reports.
- F. Core sample thickness test reports.
- G. Warranty documentation.
- H. Polyurethane Material Batch Documentation
 - 1. Contractor shall submit material batch tickets for all polyurethane binders and polyurethane surfacing materials delivered to the project site.
 - 2. Batch documentation shall include the following information:
 - a. Manufacturer name
 - b. Product name and product code
 - c. Batch or lot number
 - d. Date of manufacture
 - e. Quantity delivered
 - f. Recommended mix ratio (if applicable)

3. Batch tickets shall be submitted prior to installation and shall accompany each shipment of polyurethane materials delivered to the site.
4. Materials without proper batch documentation shall not be incorporated into the work.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 BASE INSPECTION

Prior to installation of the track surfacing system, the base shall be inspected for compliance with the following requirements.

- A. Surface Tolerances
Base shall not vary more than:
 1. 1/8 inch in 10 feet
 2. 1/4 inch in 20 feetLow spots and depressions shall be corrected prior to surfacing installation.
- B. Surface Condition
Base surface shall be:
 1. Clean
 2. Dry
 3. Free from oil, grease, and debris
 4. Structurally sound.Cracks exceeding 1/8 inch width shall be repaired.
- C. Slope Verification
Running track shall have a uniform cross slope not exceeding 1 percent. Drainage shall be directed away from the field interior.

3.2 LASER PROFILING OF BASE

- A. Prior to installation of track surfacing, the asphalt or concrete base shall be surveyed using laser profiling equipment.
- B. Survey shall verify compliance with specified tolerances.
- C. Profiling report shall include:
 1. Elevation grid measurements
 2. Identification of low areas
 3. Identification of high areas.
- D. Areas outside tolerance shall be corrected prior to installation of the track surface.

3.3 ENVIRONMENTAL CONDITIONS

Track surfacing materials shall not be installed when:

- A. Ambient temperature is below 50°F (10°C)
- B. Surface is wet or frozen
- C. Rain is imminent.

3.4 SURFACE PERFORMANCE TESTING

Following installation and curing of the track system, the surface may be tested to verify compliance with performance requirements. Testing may include:

Property	Typical Range
Force reduction	35–50%
Vertical deformation	0.6–2.5 mm
Slip resistance	≥ 0.5

Testing shall be performed using accepted athletic surface testing methods.

3.5 THICKNESS VERIFICATION (CORE SAMPLING)

- A. After installation, track surface thickness shall be verified using core samples.
- B. Minimum number of samples:
 - 1. One sample per 1,000 square yards, with a minimum of six samples.
- C. Samples shall be taken at random locations.
- D. Measured thickness shall not be less than the specified system thickness.
- E. Areas failing to meet thickness requirements shall be corrected by the Contractor.
- F. Core holes shall be properly patched using compatible surfacing materials.

3.6 SURFACE UNIFORMITY

Completed surface shall be:

- A. Free of ridges
- B. Free of depressions
- C. Uniform in color and texture.

Surface shall be visually inspected for defects.

3.7 STRIPING AND MARKING INSPECTION

Track markings shall be inspected to verify:

- A. Accurate lane widths
- B. Correct start and finish line locations
- C. Proper event markings.

Layout shall conform to standard track geometry.

3.8 FINAL ACCEPTANCE

Final acceptance shall occur after:

- A. Completion of installation
- B. Submission of testing documentation
- C. Correction of deficiencies.

Contractor shall provide written certification that the track system was installed in accordance with manufacturer requirements.

3.9 POLYURETHANE MATERIAL CONTROL

- A. Contractor shall maintain daily records of polyurethane materials used during installation.

- B. Records shall include:
 - 1. Batch numbers of materials used
 - 2. Quantities of materials installed
 - 3. Area of track covered during each installation period
 - 4. Weather conditions during installation.
- C. Contractor shall maintain records sufficient to demonstrate that installed material quantities correspond to the specified system thickness and binder ratios.
- D. Records shall be submitted to the Owner upon request and shall be included in project closeout documentation.
- E. Owner or testing agency may verify material usage quantities against installed surface area to confirm compliance with specified system thickness.

END OF SECTION

SECTION 01 56 39 - PROTECTION OF INFIELD TURF AND ATHLETIC FACILITIES

PART 1 – GENERAL

1.1 SUMMARY

- A. This section establishes requirements for protection of existing athletic facilities during demolition and construction of the running track.
- B. Work includes protection of:
 - 1. Infield turf (natural grass or synthetic turf)
 - 2. Irrigation systems
 - 3. Drainage infrastructure
 - 4. Athletic field equipment
 - 5. Adjacent sidewalks, fencing, and spectator areas.
- C. Contractor shall take all necessary measures to prevent damage to existing facilities during construction operations.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 31 20 00 – Earth Moving
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 PRE-CONSTRUCTION CONDITION DOCUMENTATION

- A. Prior to beginning work, Contractor shall document existing conditions of the athletic field and surrounding facilities.
- B. Documentation shall include:
 - 1. Photographs of the infield turf
 - 2. Photographs of irrigation heads and drainage structures

- 3. Documentation of any existing damage.
- C. Photographs shall be submitted to the Owner prior to mobilization.

1.04 PROTECTION PLAN

- A. Contractor shall submit a Field Protection Plan describing methods used to protect the infield during construction.
- B. Plan shall include:
 - 1. Equipment access routes
 - 2. Locations of material storage
 - 3. Turf protection systems
 - 4. Methods for protecting irrigation systems.
- C. Work shall not begin until the protection plan is approved by the Owner.

PART 2 – PRODUCTS

2.1 TURF PROTECTION SYSTEMS

- A. Provide temporary protection over turf areas where equipment or material transport is required.
- B. Acceptable protection materials include:
 - 1. Heavy-duty construction mats
 - 2. Interlocking ground protection panels
 - 3. Plywood sheets not less than 3/4 inch thick placed over geotextile fabric
 - 4. Temporary access road mats.
- C. Protection systems shall distribute loads to prevent rutting or turf damage.

2.2 FENCING AND BARRIERS

- A. Temporary fencing or barriers shall be installed to prevent unauthorized equipment access to protected areas.
- B. Contractor shall maintain barriers throughout construction.

PART 3 – EXECUTION

3.1 FIELD ACCESS

- A. Equipment access routes shall be limited to areas approved in the Field Protection Plan.
- B. Equipment shall not operate on unprotected turf areas.
- C. Material staging areas shall not be located on the infield without Owner approval.

3.2 IRRIGATION SYSTEM PROTECTION

- A. Contractor shall identify location of irrigation heads, control valves, and piping prior to construction.
- B. Irrigation heads located near the track edge shall be:
 - 1. Temporarily removed, or
 - 2. Protected during construction operations.
- C. Damaged irrigation components shall be repaired or replaced by the Contractor.

3.3 DRAINAGE STRUCTURE PROTECTION

- A. Existing drainage structures within the infield shall be protected from sediment, debris, and construction traffic.
- B. Contractor shall ensure drainage structures remain functional throughout construction.

3.4 TURF PROTECTION DURING DEMOLITION

- A. Track demolition equipment shall operate from the track surface whenever possible.
- B. Equipment shall not track debris or asphalt across the infield.
- C. Debris shall be removed directly to trucks or designated staging areas.

3.5 RESTORATION OF DAMAGED AREAS

- A. Any damage to infield turf caused by construction operations shall be repaired by the Contractor at no additional cost to the Owner.
- B. Repairs shall include:
 - 1. Regrading of disturbed areas
 - 2. Replacement of topsoil where required
 - 3. Sod replacement or reseeding for natural turf
 - 4. Repair of synthetic turf seams and infill replacement.
- C. Repairs shall restore affected areas to conditions equal to or better than those existing prior to construction.

3.6 FINAL ACCEPTANCE

- A. Prior to final acceptance, the Owner shall inspect the infield and surrounding facilities.
- B. Contractor shall correct any damage identified during inspection.

END OF SECTION 01 56 39

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing selection, approval, substitution, and delivery of products incorporated into the Work.
- B. Requirements in this Section apply to all materials, equipment, and systems specified throughout the Contract Documents.

1.2 DEFINITIONS

- A. Products: Items purchased for incorporation into the Work, including materials, equipment, systems, and fabricated assemblies.
- B. Named Products: Materials or equipment identified by manufacturer name, model number, or catalog designation.
- C. Substitutions: Requests to use products other than those specified.

1.3 SUBMITTALS

- A. Submit product data in accordance with Section 01 33 00 – Submittal Procedures.
- B. Product data shall include:
 - 1. Manufacturer specifications
 - 2. Installation instructions
 - 3. Physical and performance characteristics
 - 4. Certifications where required
 - 5. Maintenance recommendations
- C. Clearly identify proposed substitutions in the submittal.

1.4 QUALITY ASSURANCE

- A. Products shall be:
 - 1. New and unused
 - 2. Of current manufacture
 - 3. Free from defects
 - 4. Compliant with applicable ASTM, ANSI, or other referenced standards
- B. Products shall be used and installed only for the purpose intended by the manufacturer.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original packaging with labels intact.
- B. Protect products from damage, moisture, contamination, and deterioration.
- C. Store materials in accordance with manufacturer recommendations.

1.6 SUBSTITUTIONS

- A. Substitutions shall comply with Section 01 25 00 – Substitution Procedures unless otherwise approved by the Owner.
- B. Substitution requests shall include:
 - 1. Detailed product comparison
 - 2. Performance equivalency documentation
 - 3. Changes required to other Work
 - 4. Cost implications
- C. Contractor shall bear all costs associated with approved substitutions.

SECTION 01 73 00 – EXECUTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section establishes requirements for execution of the Work including examination, preparation, installation, coordination, and protection of completed work.

1.2 EXAMINATION

- A. Verify that existing conditions and previously completed work are acceptable for installation of subsequent work.
- B. Notify the Owner's Representative of conditions that would prevent proper execution of the Work.
- C. Do not proceed until unsatisfactory conditions have been corrected.

1.3 PREPARATION

- A. Clean and prepare substrates in accordance with manufacturer recommendations.
- B. Coordinate installation tolerances and environmental conditions.
- C. Protect adjacent surfaces from damage.

1.4 INSTALLATION

- A. Install products in strict accordance with:
 - 1. Manufacturer instructions
 - 2. Approved submittals
 - 3. Applicable standards
 - 4. Contract Documents
- B. Anchor, secure, and align products accurately.
- C. Perform cutting, fitting, and patching necessary for proper installation.

1.5 FIELD QUALITY CONTROL

- A. Contractor shall perform inspections and tests necessary to verify compliance with the Contract Documents.
- B. Correct nonconforming work at no additional cost to the Owner.

1.6 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage during construction.
- B. Repair or replace damaged work to the satisfaction of the Owner.

END OF SECTION

SECTION 01 74 00 – CLEANING

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes requirements for periodic cleaning during construction and final cleaning prior to Substantial Completion.

1.2 PROJECT SITE MAINTENANCE

- A. Maintain the project site in a neat and orderly condition.
- B. Remove waste materials, debris, and rubbish from the site regularly.
- C. Provide suitable containers for waste materials.

1.3 DISPOSAL OF WASTE MATERIALS

- A. Dispose of waste materials off site in accordance with applicable laws and regulations.
- B. Do not burn waste materials on site unless permitted by local authorities.
- C. Do not allow debris to accumulate on site.

1.4 PROTECTION DURING CLEANING

- A. Use cleaning methods that will not damage finished surfaces.
- B. Protect adjacent materials and systems during cleaning operations.

PART 2 – PRODUCTS

2.1 CLEANING MATERIALS

- A. Use cleaning agents recommended by the manufacturer of the material being cleaned.
- B. Cleaning products shall be compatible with surfaces and environmentally compliant.

PART 3 – EXECUTION

3.1 PROGRESS CLEANING

- A. Perform cleaning throughout construction to maintain safe conditions.
- B. Remove debris resulting from installation operations.

3.2 FINAL CLEANING

- A. Prior to Substantial Completion:
 - 1. Remove all construction debris
 - 2. Clean exposed surfaces
 - 3. Remove temporary labels and markings
 - 4. Clean pavement, walks, and site surfaces
 - 5. Restore areas affected by construction
- B. Leave the project site in a clean condition acceptable to the Owner.

END OF SECTION

SECTION 017700 – CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of Owner's personnel.
 - 6. Final cleaning.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 5. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 6. Terminate and remove temporary facilities from Project site, along with construction tools and similar elements.
 - 7. Complete final cleaning requirements, including touchup painting.
 - 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Owner, that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 - 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."

2. Submit certified copy of Owner's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Owner's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.
1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Note related Change Orders, Record Drawings, and Product Data, where applicable.

1.5 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
 1. Operation Data:
 - a. Emergency instructions and procedures.
 - b. System, subsystem, and equipment descriptions, including operating standards.
 - c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
 - d. Description of controls and sequence of operations.
 - e. Piping diagrams.
 2. Maintenance Data:
 - a. Manufacturer's information, including list of spare parts.
 - b. Name, address, and telephone number of Installer or supplier.
 - c. Maintenance procedures.
 - d. Maintenance and service schedules for preventive and routine maintenance.
 - e. Maintenance record forms.
 - f. Sources of spare parts and maintenance materials.
 - g. Copies of maintenance service agreements.
 - h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties to the Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Transmit a set of all warranties in electronic format as PDF files. Files are to be separated by warranty. File naming must include the project number, the manufacturer's name, and the item warrantied.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 – EXECUTION

3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Provide instructors experienced in operation and maintenance procedures.
 - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
 - 3. Schedule training with Owner, through Engineer, with at least 7 days advance notice.
 - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
 - 1. System design and operational philosophy.
 - 2. Review of documentation.
 - 3. Operations.
 - 4. Adjustments.
 - 5. Troubleshooting.
 - 6. Maintenance.
 - 7. Repair.

3.2 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Final Completion for entire Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.

- e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove labels that are not permanent.
 - g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - h. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 02 41 26 - DEMOLITION OF EXISTING RUNNING TRACK

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes demolition and removal of the existing running track and related components to prepare the site for installation of a new synthetic running track system.
- B. Work includes:
 - 1. Removal of existing synthetic track surfacing
 - 2. Removal of asphalt or concrete base where indicated
 - 3. Removal of curbs, edging, and drains associated with the track
 - 4. Removal of track markings and adhesives
 - 5. Disposal of demolished materials
 - 6. Site preparation for new construction.
- C. Work shall be performed in a manner that protects adjacent facilities including athletic fields, sidewalks, and utilities.

1.2 RELATED SECTIONS

- 31 20 00 – Earth Moving
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 REFERENCES

- A. Applicable environmental and waste disposal regulations
- B. Athletic facility construction guidance consistent with practices referenced by the American Sports Builders Association.

1.4 PRE-DEMOLITION INVESTIGATION

- A. Contractor shall inspect existing conditions prior to demolition.
- B. Contractor shall verify:
 - 1. Track construction type
 - 2. Thickness of surfacing and base layers
 - 3. Location of drainage structures
 - 4. Presence of utilities adjacent to the track.
- C. Contractor shall notify Owner of any conditions that may affect demolition operations.

1.5 PROTECTION OF EXISTING FACILITIES

- A. Protect the following from damage:
 - 1. Adjacent athletic fields
 - 2. Infield turf areas
 - 3. Bleachers and spectator areas
 - 4. Irrigation systems
 - 5. Underground utilities.
- B. Contractor shall repair damage caused by demolition operations at no additional cost to the Owner.

1.6 PROJECT LIMITS

- A. Demolition shall include all materials within the limits of the existing running track including:
 - 1. Track lanes
 - 2. Runoffs
 - 3. Event areas associated with the track.
- B. Contractor shall coordinate limits of demolition with new track construction drawings.

PART 2 – PRODUCTS

2.1 EQUIPMENT

- A. Demolition equipment shall be suitable for removal of track materials without damaging adjacent structures.
- B. Equipment may include:
 - 1. Asphalt milling machines
 - 2. Concrete saws
 - 3. Hydraulic breakers
 - 4. Excavators and loaders.
- C. Use of equipment that may damage the infield or surrounding areas shall not be permitted without approval of the Owner.

PART 3 – EXECUTION

3.1 GENERAL DEMOLITION REQUIREMENTS

- A. Demolition shall proceed in an orderly and controlled manner.
- B. Contractor shall minimize dust, debris, and disturbance to adjacent areas.
- C. Demolished materials shall not be allowed to accumulate on site.

3.2 REMOVAL OF SYNTHETIC TRACK SURFACING

- A. Remove existing synthetic track surfacing system including:
 - 1. Polyurethane or latex surfacing layers
 - 2. Base mats or cushion layers
 - 3. Adhesives and primers.
- B. Removal methods may include milling, scraping, or mechanical removal.
- C. Contractor shall remove surfacing materials completely to expose the base layer.

3.3 REMOVAL OF ASPHALT OR CONCRETE BASE

Where indicated in the drawings:

- A. Remove existing asphalt or concrete base materials.
- B. Saw-cut demolition limits to produce clean edges.
- C. Remove materials to depths required for new construction.
- D. Prevent damage to subgrade or adjacent structures.

3.4 CURBS AND EDGE RESTRAINTS

- A. Remove existing track curbs, concrete edging, and metal restraints where indicated.
- B. Dispose of removed materials off site.
- C. Prepare edges for installation of new track curbs or drainage features.

3.5 DRAINAGE STRUCTURES

- A. Existing drains within the track area shall be:
 - 1. Removed
 - 2. Replaced
 - 3. Adjusted as indicated in the construction drawings.
- B. Protect active drainage lines during demolition.

3.6 DISPOSAL OF MATERIALS

- A. Demolished materials shall be removed from the site and disposed of in accordance with applicable regulations.
- B. Recycling of asphalt and concrete materials is permitted and encouraged.
- C. Synthetic track surfacing materials shall be disposed of in approved waste facilities.

3.7 SUBGRADE PROTECTION

- A. Contractor shall avoid disturbing the subgrade beneath the existing track base.
- B. If subgrade disturbance occurs, contractor shall regrade and compact affected areas to meet project specifications.

3.8 SITE CLEANUP

- A. Upon completion of demolition, the site shall be:
 - 1. Cleared of debris
 - 2. Graded to provide a stable working surface
 - 3. Prepared for installation of the new track base.

3.9 FIELD CONDITIONS

- A. Any unexpected conditions encountered during demolition shall be reported immediately to the Owner.
- B. Contractor shall not proceed with additional removal until direction is provided.

END OF SECTION 02 41 26

SECTION 116833 – TRACK AND FIELD EQUIPMENT

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers all labor and materials required to install the following:
 - 1. In-ground track and field equipment.
 - 2. Field event materials.
 - a. Sand.
 - b. Rock Dust.
- B. The Contractor is responsible for the purchase and installation of all sports equipment. The Track & Field Synthetic Surfacing Contractor is responsible for installation of synthetic surface in, around and on top of the specified sports equipment.

1.2 CODES AND STANDARDS

- A. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFSHSA).

1.3 SUBMITTALS

- A. The following information shall be submitted prior to installation of specified work.
 - 1. Standard printed specifications and diagrams or drawings depicting installation directions and dimensions for all in-ground sports equipment.
 - 2. Installation process and requirements for subbase (stone and asphalt) and any conditions that may limit the installation or affect quality of installation.
 - 3. Material safety data sheets on all products, as necessary.
 - 4. Contractor to supply Owner with a 1-gallon sample of field event material product(s) for visual inspection and testing.

1.4 QUALITY ASSURANCE

- A. The Contractor shall only accept bids from those vendors or manufacturers that have been pre-approved or identified as approved equivalent.
- B. The Contractor shall only accept bids from those vendors or manufacturers that have been pre-approved, identified as approved equivalent or that meet the requirements as an equivalent product.

PART 2 – PRODUCTS

2.1 IN-GROUND TRACK & FIELD EQUIPMENT

- A. The Contractor is responsible to provide and install all permanent, in-ground track & field event equipment as specified by these specifications. The products must meet NFSHSA regulations.
- B. The physical make-up of these products vary across the country; therefore the Contractor shall use his best efforts to supply the Owner with a product that best meets the performance specifications listed below.

- C. The in-ground track & field equipment is available from the following:
 - 1. Sportsfield Specialties: Contact: Brian Jaeger (Southeast) Tel.: (607) 267-3621.
 - 2. UCS Spirit: Contact: Mike Chappell; Telephone: (800) 526-4856.
 - 3. Gill Athletics: Contact: Mike Cunningham; Telephone: (800) 637-3090.
- D. In-ground Equipment (Based on Sportsfield Specialties Model # or Approved Equivalent)
 - 1. Ashley Ridge High School:
 - a. One (1) cast aluminum pole vault box without the cover. Model # PVBCAW.
 - b. Two (2) mesh covers for sand pits. Model # SPCVRMCSTM.
 - c. One (1) discus cage with ground sleeves. Model # DCHSEA+DCHSBNS.
 - d. One (1) web style discus circle. Model # TFD.

2.2 FIELD EVENT MATERIALS

- A. Sand:
 - 1. The sand shall be washed and sized as follows:
 - a. 2008 IAAF Track & Field Facilities Manual (2.3.1.5):
 - 1) For the safety of the athletes, the sand must (to avoid hardening as a result of moisture) consist of washed river sand or pure quartz sand, without organic components, maximum 2mm granules, of which not more than 5% in weight is less than 0.2mm.
 - 2. Sand shall be free of trash, organic matter, clay, silt, and rocks.
 - a. Top 6" of Sand color to be white.
 - 3. Sand shall have the following technical data:
 - a. Water permeability or filtration rate with a minimum of 20 inches/hour.
 - b. Bulk density of 1.55 grams per cubic centimeter.
 - c. Penetrometer Reading of 1.8 to 2.2 kg/cm².
 - d. Sand shape of high sphericity and rounded.
- B. Rock Dust:
 - 1. The shot-put landing area shall consist of a material that is firmly compacted, yet porous to allow vertical drainage. The Contractor shall provide a one-gallon sample of the proposed material for approval by the Owner prior to installation. The material shall be compacted to at least 90 percent of Standard AASHTO Density with discing, sprinkling, and rolling as necessary. All material aggregate larger than 1/4-inch in diameter that comes to the surface during discing shall be removed prior to compacting operations.
 - 2. Rock dust shall meet the below sieve analysis

Screen No.	% Passing
3/8"	100
4	100
8	86
16	65
30	45
50	35
100	25
200	15

PART 3 – EXECUTION

3.1 INSTALLATION OF SPORTS EQUIPMENT

- A. The installation of the track and field equipment stated herein shall follow the directions of the manufacturer and/or vendor. Shop drawings must be submitted and approved prior to installation of equipment.
- B. Sand:
 - 1. The sand should be one of the last items installed on the facility to maintain the physical properties.

3.2 ADJUSTING AND CLEANING

- A. Upon completion of installation, test operation to demonstrate satisfactory operation acceptable to Owner.
- B. Clean or replace unsuitable materials.

END OF SECTION

SECTION 311000 – SITE CLEARING

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees, shrubs, groundcovers, plants, and grass to remain.
 - 2. Removing existing trees, shrubs, groundcovers, plants, and grass.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting, capping or sealing, and abandoning site utilities in place removing site utilities.

1.2 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.
- C. Grubbing: Removal of vegetation and other organic matter including stumps, buried logs, and roots.

1.3 MATERIAL OWNERSHIP

- A. Except for excess stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.4 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Section "Project Record Documents," identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.5 QUALITY ASSURANCE

- A. Stake limits of clearing, grubbing, and stripping, prior to commencing of work.

1.6 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, driveways, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct roads, streets, driveways, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Protect areas outside limits of disturbance from encroachment by construction personnel or equipment, regardless of property Ownership. Access shall be by specific, written permission or easement only
- C. Salvageable Improvements: Carefully remove items indicated to be salvaged and deliver to storage location specified herein.
- D. Utility Locator Service: Properly notify utility locator service for area where Project is located before site clearing in accordance with local protocol.
- E. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.
- F. Contractor shall verify existing grades prior to performing work under this section. If existing grades are at variance with the drawings, notify the Owner and receive instructions prior to proceeding. No additional compensation will be considered resulting from grade variances once site clearing has commenced.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag, fence and protect trees and vegetation to remain or to be relocated.

- C. Remove branches from trees that are to remain, if required to clear new construction and only if specifically approved by Owner's Representative.
 - 1. Where directed by Engineer, extend pruning operation to restore natural shape of entire tree.
 - 2. Cut branches and roots, if required, with sharp pruning instruments; do not break or chop.
- D. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
 - 1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - 1. Arrange with utility companies to shut off indicated utilities.
 - 2. Owner will arrange to shut off indicated utilities when requested by Contractor.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer and owner not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer written permission.
- D. Excavate for and remove underground utilities indicated to be removed.

3.3 CLEARING AND GRUBBING

- A. Completely remove obstructions, trees, shrubs, stumps, roots, grass, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Use only hand methods for grubbing within tree protection zone.
 - 4. Chip removed tree branches and [stockpile in areas approved by Owner

and dispose of off-site.

- B. Fill depressions caused by clearing and grubbing operations in accordance with Section "Earth Moving" unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm) and compact each layer to a density equal to adjacent original ground.

3.4 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Where trees are designated to remain, stop topsoil stripping and adequate distance from the trees to prevent damage to the main root system.
- C. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and non-soil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- D. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
 - 2. Do not stockpile topsoil within tree protection zones.
 - 3. Dispose of excess topsoil as specified for waste material disposal.

3.5 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.6 DISPOSAL

- A. Burning of debris onsite is not permitted.
- B. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - 1. Separate recyclable materials produced during site clearing from other

nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

2. Debris may be buried in designated onsite disposal areas to minimum depth of 3 feet below final grade. Only the following materials are suitable for on-site disposal:
 - C. Dispose of all diseased Elmwood within 4 days after cutting by burning or by other methods approved by the Department of Environmental Conservation.

END OF SECTION

SECTION 312000 – EARTH MOVING

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes the preparation of the site, protection, excavation, embankment, drainage, dewatering, for site grading, as shown on the Drawings, and as herein specified.
- B. The Contractor shall accept the site in the condition in which it exists at the time of the award of the Contract.
- C. The Owner shall determine the suitability of materials that are to be used in the work and should any materials encountered be unsatisfactory for the purpose intended, they shall be removed from the site at the Contractor's expense.

1.2 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. The latest edition of the following standards, as referenced herein, shall be applicable.
 - a. Applicable State DOT Standard Specifications.
 - b. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)."
- B. The Contractor shall comply with the requirements for soil erosion and sedimentation control, and other requirements of governmental authorities having jurisdiction, including the State of South Carolina and Dorchester County.
- C. The Contractor shall provide and pay for all costs in connection with an approved independent testing facility to determine conformance of soils and aggregate with the specifications in accordance with Section "Quality Requirements."

1.3 SUBMITTALS

- A. Samples:
 - 1. The Contractor shall furnish earth materials to the testing laboratory for analysis and report, as directed by the Owner, or as outlined in the specifications.
- B. Test Results:
 - 1. The testing laboratory shall submit written reports of all tests, investigations, and recommendations to the Contractor and the Owner.

1.4 PROJECT REQUIREMENTS

- A. Notify the Owner of any unexpected subsurface condition.
- B. Protection of Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate support and protection during earthwork operations, comply with OSHA requirements.
 - 2. Coordinate interruption and/or termination of utilities with the utility companies and the Owner.

3. Provide a minimum of 48 hours' notice to the Owner and receive written notice to proceed before interrupting any utility.
 4. Demolish and completely remove from the site any existing underground utilities designated to be removed as shown on the Drawings or as specified in Section "Site Clearing."
 5. Repair any damaged utilities as acceptable to the Engineer, at no additional cost to the Owner.
- C. Protection of Persons and Property:
1. Barricade open excavations occurring as part of this work, and post with warning lights.
 2. Operate warning lights as recommended by authorities having jurisdiction.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 4. Perform excavation within drip-line of large trees to remain by hand and protect the root system from damage or dryout to the greatest extent possible. Maintain moist conditions for root system and cover exposed roots with burlap. Paint root cuts of 1-inch diameter and larger with emulsified asphalt tree paint.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Select Granular Material: Sound, durable, sand, gravel, stone or blends with these materials, free from organic, frozen, or other deleterious materials, conforming to the requirements of SCDOT and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
2"	100
1/4"	30 - 65
No. 40	5 - 40
No. 200	0 - 10

- B. Structural Fill: Sound, durable, sand, gravel, stone, or blends of these materials, free from organic, frozen or other deleterious materials.
1. Structural fill shall be used for backfilling footing excavations, undercuts, below slabs, and backfilling basement walls. Material suitable for Structural Fill should consist of sound, durable, non-plastic, widely graded sand and gravel, free of stumps, roots, other organics and any frozen or deleterious materials.
 2. Structural Fill shall be placed in loose lifts not exceeding 8.0 inches in thickness in open areas when using a 10-ton roller or in 6 inch lifts in confined areas such as trench excavations when using a narrow trench roller. Structural fill should be compacted to at least 95 percent of the material's maximum dry density as determined by the modified Proctor test (ASTM D 1557). Actual lift thickness shall be based on the type of compaction equipment used during construction.

SIEVE	PERCENT PASSING
4"	100
No. 40	0 - 70
No. 200	0 - 10

1. Fines passing No. 200 shall be non-plastic.
2. Particle size analysis shall show no gap grading.

PART 3 – EXECUTION

3.1 PRECONSTRUCTION MATERIAL QUALIFICATION TESTING

- A. A 100-pound minimum representative sample shall be obtained from each potential borrow source. If different material gradations are known to exist in the pit, samples shall be obtained for each material. Each sample shall be mixed thoroughly and reduced to test specimen size, in accordance with AASHTO T87. The test shall be performed in the order shown. Failure to pass any test is grounds for disqualification and shall lead to cessation of the test program for that material.
 - 1. Particle Size Analysis:
 - a. Method: ASTM D422.
 - b. Number of Tests: One (1) per potential source.
 - c. Acceptance Criteria: Gradation within specified limits.
 - 2. Maximum Density Determination:
 - a. Method: ASTM D1557, Modified Proctor.
 - b. Number of Tests: One (1) per potential source.
 - 3. Re-establish gradation and maximum density of fill material if source is changed during construction.

3.2 PREPARATION

- A. Establish required lines, levels, contours, and datum.
- B. Maintain benchmarks and other elevation control points. Re-establish, if disturbed or destroyed, at no additional cost to the Owner.
- C. Establish location and extent of utilities before commencement of grading operations.

3.3 EXCAVATION

- A. Excavation shall consist, in general, of the excavation of whatever substance is encountered to the lines, grades, and sections shown on the Drawings including excavation as necessary for grading and other similar features.
- B. All suitable materials removed in excavation shall be used in the construction of embankments, subgrade, shoulders, slopes, and at such other places as directed. The Engineer shall be the sole judge of what constitutes suitable material.
- C. During construction, the grading operations shall be executed in such a manner that the excavation will be well drained at all times. All grading shall be finished on neat, regular lines conforming to the sections and contours shown on the Plans.
- D. Removal of materials beyond the indicated subgrade elevations, without authorization by the Engineer, shall be classified as unauthorized excavation and shall be performed at no additional cost to the Owner.
- E. Excavation shall be performed in proper sequence with all other associated operations.
- F. Maintain the slopes of excavation in a safe condition until completion of the grading operation.

- G. All excavation work shall be inspected and approved by the Engineer before proceeding with construction.
- H. Any excess excavation shall be removed from the site to disposal areas at the Contractor's expense.

3.4 FILL

- A. All site fill shall be "selected fill" unless otherwise shown on the Drawings or directed by the Engineer. "Select granular fill" shall be placed in lieu of selected fill where directed by the Engineer.
- B. Before depositing fills, the surface of the ground shall be cleared of all refuse, brush, and large stones. Conform to Section "Site Clearing."
- C. Prior to placing fill over undistributed material, scarify to a minimum depth of 6 inches.
- D. Where fills are made on hillsides or slopes, the slope of the original ground upon which the fill is to be placed shall be plowed or scarified deeply or where the slope ratio of the original ground is steeper than 2 horizontal to 1 vertical, the bank shall be stepped or benched.
- E. The original ground shall be proof rolled until the underlying soil is thoroughly compacted to the satisfaction of the Engineer before any filling is begun. A steel-wheel tandem roller weighing 8 to 10 tons or equipment capable of obtaining the same effort shall be used to obtain a thoroughly compacted subgrade. Remove or recompact any soft or loose soils as determined by the Engineer prior to filling.
- F. A thoroughly and satisfactorily subgrade is defined as having a minimum dry density of 95 percent of the maximum density of the material used. The subgrade material shall be compacted at a moisture content suitable for obtaining the required density.
- G. Place backfill and fill materials in layers not more than 12 inches in loose depth unless shown otherwise on the Drawings. Lift height shall be governed by the ability of the compaction equipment to obtain the required compaction with 12 inches as a maximum lift height. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost, ice, ponded water, or extraneous debris.
- H. When work is suspended during periods of freezing weather, measures shall be taken to prevent fill already in place from freezing. Upon resumption of work after any inclement weather, prepare the exposed surface by proof rolling to identify any zones of soft/loose soils. Soft/loose materials or frozen soils shall be removed and replaced by compacted granular fill.
- I. Moisture Control:
 - 1. Where fill or backfill must be moisture conditioned before compaction, uniformly apply water to the surface and to each layer of fill or backfill. Prevent ponding or other free water on surface subsequent to, or during, compaction operations.
 - 2. Remove and replace, or scarify and air dry, soil that is too wet to permit compaction to specified density. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a value which will permit compaction to the percentage of maximum density specified.

- J. All fill shall be thoroughly and satisfactorily compacted to 95 percent of the maximum density of material used.

3.5 GRADING

- A. The present and finished grade lines are shown on the Drawings. Grade over the entire area, as shown on the drawings, shall be to the finished subgrade levels. Upon completion of this work, all debris shall be cleaned out and removed from the premises.
- B. All cutting, filling, backfilling and grading necessary shall be done to bring the area to the following grade or subgrade levels:
 - 1. For roadway surface areas to the finished subgrade levels specified on the contract drawings.
 - 2. For areas to be topsoiled and seeded to within 6 inches of the finished grade.
 - 3. For other surface treatments as detailed on the Drawings.
- C. Sufficient grading must be done during the progress of the work so that the entire site shall be well drained and free from water pockets.
- D. Finish grading, including dressing swales, cleaning up excess footing excavation, dressing terraces, disposing of excess material and all other work necessary to prepare the site for topsoil and seeding shall be done after construction of structures and roadway surface areas is substantially complete.

3.6 COMPACTION EQUIPMENT

Compaction equipment used for the Work is subject to approval by the Engineer. Any equipment not originally manufactured for compaction purposes and equipment which is not in proper working order will not be approved. Furnish manufacturer's specifications covering data not obvious from a visual inspection of the equipment and necessary to determine its classification and performance characteristics.

3.7 DRAINAGE AND DEWATERING

- A. Prevent surface, subsurface or ground water from flowing into excavation and from flooding project area, as well as surrounding areas.
- B. Do not allow water to accumulate in excavations. Remove water to prevent soil changes detrimental to the stability of subgrades.
- C. Provide and maintain the pumps, well points, sumps, suction and discharge lines, and other dewatering components necessary to convey water away from excavations.
- D. Provide and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations by dewatering, to collection or run-off areas.
- E. Dewatering operations shall be as directed by the Engineer and performed in accordance with Section "Dewatering."

3.8 FIELD QUALITY CONTROL

- A. Notify the Engineer at least one (1) working day in advance of all phases of filling and backfilling operations.

- B. Compaction testing shall be performed to ascertain the compacted density of the fill and backfill materials in accordance with the following methods:
 - 1. In-place relative density:
 - a. Method: AASHTO T310, Nuclear Method.
 - b. Number of Tests: One (1) per 8-inch vertical lift.
 - 1) Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one (1) test for every 2,000 square feet or less of paved area of building slab, but in no case fewer than three (3) tests.
- C. The Engineer may direct additional tests to establish gradation, maximum density, and in-place density as required by working conditions, at the Contractor's expense.
- D. Acceptance Criteria: The sole criterion for acceptability of in-place fill shall be in situ dry density. Minimum dry density for all fill or backfill shall be 95 percent of the maximum dry density. If a test fails to qualify, the fill shall be further compacted and retested. Subsequent test failures shall be followed by removal and replacement of the material.

3.9 CLEAN UP

- A. Provide and maintain protections or newly filled areas against damage. Upon completion or when directed, correct all damaged and deficient work by building up low spots and remove temporary protections, fencing, shoring and bracing.
- B. Remove all surplus excavated material not required for filling and backfilling and legally dispose of same away from premises.
- C. Leave the premises and work in clean, satisfactory condition, ready to receive subsequent operations.

END OF SECTION

SECTION 312319 – DEWATERING

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes provisions for a dewatering system to continuously lower and control groundwater levels and hydrostatic pressures in order to maintain near-dry conditions for construction of the work as shown on the plans and specified herein.

1.2 SUBMITTALS

- A. Submit the following:
 - 1. Description: of proposed dewatering system.
 - 2. Layout: of dewatering system, including location of sumps, deep wells, well points, header pipes, pumps, discharge lines, and observation wells.
 - 3. Details: of dewatering system, including installation methods for deep wells, well points and observation wells, depths of wells, material descriptions, pipe sizes, intake screen sizes, and pump capacities.
 - 4. Estimate: of time required to lower groundwater levels after start of pumping

1.3 JOB CONDITIONS

- A. Site soil boring data and samples, soil laboratory testing, and any soil reports shall be made available to prospective bidders for study and review. Bidders must make their own interpretation of subsurface conditions that may affect methods or the cost of construction of the Work.

PART 2 – PRODUCTS

2.1 DEWATERING SYSTEM

- A. Provide a dewatering system of adequate size and capacity to lower and maintain the groundwater at the specified level. The system shall include standby pumps and power source for continuous operation.
 - 1. Dewatering system shall consist of wellpoints, deep wells, cut-off walls, riser pipes, swing joints, header lines, valves, pumps, discharge lines, and all other necessary fittings, accessories and equipment for a complete operating system. Provide hole punches, sand backfill, and clay plugs as required by soil conditions.
- B. Observation Wellpoints: Provide groundwater reading wells or piezometers to monitor the groundwater level, as indicated on the approved Shop Drawings or as directed by the Engineer.
- C. Sand: Clean concrete sand conforming to ASTM C33.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Install the observation well points at locations indicated on approved Shop Drawings or where directed by the Engineer. Install observation wellpoints in accordance with manufacturer's printed

instructions and in accordance with approved Shop Drawings. Provide sand backfill around wellpoint. Test each observation wellpoint to verify that the installation is performing properly.

- B. Protect observation well standpipes from damage by construction operations and maintain accessibility to them. Maintain reading wells until groundwater is allowed to return to its normal level.

3.2 INSTALLATION

- A. Install the dewatering system in accordance with approved Shop Drawings and as required by site conditions. Locate elements of the system to allow a continuous dewatering operation without interfering with the installation of any permanent project Work.

3.3 OPERATION

- A. Keep the system in continuous operation from the time excavation is started in the dewatering area (or before if required by site conditions to lower the groundwater to the elevations specified) until the time backfilling is completed at least 2 feet above the normal groundwater level.
 - 1. Do not discontinue dewatering operations without specific approval from the Engineer.
 - 2. Rates of groundwater withdrawal during dewatering operations, shall at all times be below the rate at which soil particles are removed from the existing soils.
- B. In the event excavation proceeds subsequent to dewatering as specified above, and the groundwater level is found to be within two feet of the excavation, the dewatering Contractor shall immediately continue to dewater as specified herein, including, but not limited to, additional dewatering and monitoring facilities, at no additional cost to the Owner. The excavation shall not be allowed to proceed below groundwater.

3.4 FIELD CONTROL

- A. Maintain a careful check to detect any settlement in existing adjacent Work. Notify the Engineer of any signs of settlement. Establish settlement point benchmarks and take periodic readings as directed. The Contractor shall take all such precautions and do any and all Work necessary to protect the stability and integrity of adjacent lands. Pavements, buildings, and utilities from settlement or other movement that may be caused by his dewatering operations. The Contractor shall be solely responsible for any damage or injury to adjacent lands, pavements, buildings, or utilities caused by his dewatering or other operations or his failure to use corrective or preventive procedures or methods.
- B. Take and record measurements of the groundwater in each reading and pumping well periodically and when directed by the Engineer.

3.5 DISCHARGE

- A. Dispose of all water removed from the excavation in such a manner as not to endanger public health, property, or any portion of the Work under construction or completed.
- B. Dispose of water in such a manner as to cause no inconvenience to others on or adjacent to the site.
- C. Convey water from the excavation in a closed conduit. Do not use trench excavations as temporary drainage ditches.

- D. Disposal of water shall be approved by the Engineer and shall not cause erosion or sedimentation to occur in existing drainage systems. All sedimentation or blocking of existing systems shall be thoroughly cleaned and returned to original condition by the Contractor at his own expense.
- E. Provide approved sediment traps when water is conveyed into water courses.

3.6 REMOVAL

- A. When system is no longer required, gradually decrease the pumping rate until the water table resumes its natural position so that the velocity of the returning groundwater will be low enough as not to carry fines with it.
- B. When the dewatering system is no longer required and when directed by the Engineer, dismantle and remove the system and all appurtenances from the site.

END OF SECTION

SECTION 312333 – TRENCHING AND BACKFILLING

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes the excavation of trenching, backfilling, compacting, dewatering, excavation support and disposal, as herein specified.
- B. The Owner will determine the suitability of materials that are to be used in the work and should any materials encountered be unsatisfactory for the purpose intended, they shall be removed from the site at the Contractor's expense.

1.2 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. The latest edition of the following standards, as referenced herein, shall be applicable.
 - a. "Standard Specifications for Highway Construction, SCDOT."
 - b. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)."
 - c. American Society for Testing and Materials (ASTM).
 - d. National Electric Code (NEC).
- B. The Contractor shall comply with the requirements for soil erosion and sedimentation control and other requirements of governmental authorities having jurisdiction, including the State.
- C. The Contractor shall provide and pay for all costs in connection with an approved independent testing facility to determine conformance of soils and aggregate with the specifications in accordance with Section "Quality Requirements."

1.3 SUBMITTALS

- A. Samples:
 - 1. The Contractor shall furnish representative earth materials to the testing laboratory for analysis and report, as outlined in the specifications.
- B. Test Results:
 - 1. The testing laboratory shall submit written reports of all tests, investigations, findings, and recommendations to the Contractor and the Owner.

1.4 PROJECT REQUIREMENTS

- A. Notify the Owner of any unexpected subsurface condition.
- B. Protect excavations by shoring, bracing, sheet piling, or by other methods, as required to ensure the stability of the excavation. Comply with OSHA requirements.
- C. Underpin or otherwise support structures adjacent to the excavation, which may be damaged by the excavation. This includes service lines.

- D. Protection of Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations. Comply with OSHA requirements.
 - 2. Coordinate interruption and/or termination of utilities with the utility companies and the Owner.
 - 3. Provide a minimum of 48 hours' notice to the Owner and receive written notice to proceed before interrupting any utility.
- E. Demolish and completely remove from the site any existing underground utilities designated to be removed, as specified.
- F. Repair any damaged utilities as acceptable to the Owner and utility company at no additional cost to the Owner.
- G. Contractor shall comply with maintenance and protection requirements as approved by the authority having jurisdiction.
- H. Protection of Persons and Property:
 - 1. Barricade open excavations occurring as part of this work and post with warning lights, if required.
 - 2. Operate warning lights as recommended by authorities having jurisdiction.
 - 3. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 - 4. Perform excavation within drip-line of trees to remain by hand and protect the root system from damage or dryout to the greatest extent possible. Maintain moist conditions for root system and cover exposed roots with burlap. Paint cut roots of 1-inch diameter and larger with emulsified asphalt tree paint.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Pipe Zone Bedding: Select mixture of graded crushed stone, free from organic, frozen or other deleterious materials, conforming to the requirements of SCDOT and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
1-1/2"	100
1"	90 – 100
1/2"	0 – 15

- B. Pipe Zone Backfill: Sound, durable sand, gravel, stone or blends of these materials, free from organic, frozen or other deleterious materials, conforming to the requirements of SCDOT and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
2"	100
1/4"	30 – 65
No. 40	5 – 40
No. 200	0 – 10

- C. Suitable Material: Sound, durable sand, gravel, stone or blends of these materials, free from organic, frozen or other deleterious materials, conforming to the requirements of SCDOT and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
4"	100
No. 40	0 – 70
No. 200	0 – 15

1. Run-of-trench material, meeting the above criteria, shall be considered suitable material and shall be used for trench backfill only after tested in accordance with Section "Quality Requirements" and approved by the Engineer. The Contractor shall pay for all additional testing required to determine the conformance of run-of-trench material, if at any time during the Work this material appears to be in non-conformance in the opinion of the Engineer.

PART 3 – EXECUTION

3.1 PRECONSTRUCTION MATERIAL QUALIFICATION TESTING

A. General:

1. Sufficient size samples shall be obtained from the potential borrow source to allow completion of tests listed in paragraph B below. Samples may be obtained from test borings, test pits, or from borrow pit faces provided that surficial dry or wet soil is removed to expose undisturbed earth. Tests listed below shall be performed on each sample obtained. A minimum of 3 representative samples from each potential borrow source shall be furnished to the testing laboratory for prequalification testing. Test data shall be provided to the Engineer a minimum of 2 weeks prior to construction for approval of borrow source. Three test reports completed within three months prior to construction may be submitted for commercial earth borrow sources or suppliers of stone products (crushed stone or graded stone products) in lieu of prequalification tests as approved by the Engineer.

B. Material Tests:

1. Particle Size Analysis:
 - a. Method: ASTM D422.
 - b. Number of Tests: One (1) per sample; three (3) per potential source.
 - c. Acceptance Criteria: Gradation within specified limits.
2. Maximum Density Determination:
 - a. Method: ASTM D1557 - Modified Proctor.
 - b. Number of Tests: One (1) per sample; three (3) per potential source.
3. Re-establish gradation and maximum density of fill material if source is changed during construction.

3.2 PREPARATION

- A. Establish required lines, levels, contours, and datum.
- B. Maintain benchmarks and other elevation control points; re-establish if disturbed or destroyed at no additional cost to the Owner.
- C. Establish location and extent of existing utilities prior to commencement of excavation.

3.3 EXCAVATION

- A. All excavation shall be made to such depth as required and of the width shown on the Drawings to provide suitable room for building the structures and laying the pipe(s) they are to contain and for sheeting, shoring, pumping and draining as necessary, and for removing peat, silt, or any other materials which the Engineer may deem unsuitable. Hand trench excavation may be required to protect existing utilities and structures.
- B. Trench excavation for pipes shall be made by open cut to accommodate the pipe or structure at the depths indicated on the Drawings. Excavation shall be made to such a depth and to the width indicated on the Drawings so as to allow a minimum of 8 inches of pipe zone bedding to be placed beneath the bottom of all structures and barrels, bells or couplings of all pipes installed unless otherwise specified on the Drawings.
- C. The bottom of the trench shall be accurately graded to provide a uniform layer of bedding material as required for each section of pipe. Trim and shape trench bottoms and leave free of irregularities, lumps, and projections.
- D. Stockpile excavated subsoil for reuse where directed or approved.
- E. Over excavation/undercut: If, in the opinion of the Engineer, existing material below the trench grade is unsuitable for properly placing bedding material and laying pipe, the Contractor shall excavate and remove the unsuitable material and replace the same with an approved pipe zone bedding material properly compacted.
- F. Stability of Excavation: Slope sides of excavations shall comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavation in safe condition until completion of backfilling.
- G. Removal of materials beyond the indicated subgrade elevations, without authorization by the Engineer, shall be classified as unauthorized excavation and shall be performed at no additional cost to the Owner.

3.4 DEWATERING

- A. The Contractor shall remove all water from the excavation promptly and continuously throughout the progress of the work and shall keep the excavation dry at all times until the work is completed and excavation is backfilled or have sufficient weight to resist uplift pressures. Groundwater levels shall be depressed to a minimum of 2 feet below excavation subgrade. No pipe or structure is to be laid in water and water shall not be allowed to rise on or flow over any pipe or structure until such time as approved by the Engineer.
- B. Provide a suitable point of discharge from dewatering operations shall be conveyed in a non-erosive manner satisfactory to the Engineer.
- C. Precautions shall be taken to protect uncompleted work from flooding during storms or from other causes. All pipe lines or structures not stable against uplift during construction or prior to completion shall be thoroughly braced or otherwise protected.

3.5 BEDDING AND BACKFILLING

- A. All pipe trenches backfill (pipe zone bedding, pipe zone backfill and trench backfill) shall be compacted by tamping or rolling to achieve a minimum dry density of 90 percent of the modified

Proctor maximum dry density of the material used (ASTM D1557). Backfill in pipe trenches to be covered with pavement shall be compacted to a minimum of 95 percent of modified Proctor maximum dry density. Backfill materials shall be placed with water content within plus or minus 4 percent of optimum moisture content per the modified Proctor method (ASTM D1557). Any water used for compaction shall be provided by the Contractor at his own expense. The Contractor is responsible for the repair of any trench settlement at no expense to the owner.

- B. Bedding and backfilling shall be accomplished in three stages unless otherwise specified on the Contract Drawings. The first stage shall involve placement of "pipe zone bedding" as a layer(s) of selected material required to support, or to stabilize unsound or unsatisfactory foundation conditions. The second stage shall involve placement of "pipe zone backfill" from the top of the bedding material up to 1 foot above the pipe. The third stage involves the placement of "trench backfill" in the remainder of the trench up to the surface of the ground or the bottom of any special surface treatment subgrade elevation.
- C. The bedding material shall be placed in the trench after the trench has been excavated a minimum of 8 inches below the bell of the pipe to permit the placing of not less than 8 inches of bedding material unless otherwise specified on the Drawings. Where, in the opinion of the Engineer, more than 8 inches of bedding material shall be required, the excavation shall be performed and bedding placed to the depth ordered by the Engineer.
- D. Provide uniform bearing and support for each section of pipe at every point along the entire length except where necessary to excavate for bell holes, pipe joints, or other required connections. Dig bell holes and depressions for joints after trench bottom has been graded. Dig no deeper, longer, or wider than needed to make the joint connection properly.
- E. The bedding material shall be placed to the full width of trench. The bedding material shall be placed in loose lifts not exceeding 6 inches to the elevation shown on the Drawings or directed by the Engineer. The bedding material shall be tamped and compacted to form a firm and even bearing surface.
- F. Pipe zone backfill shall be placed to the elevation shown on the Drawings in loose lifts not-to-exceed 6 inches in thickness, before compaction. The backfill shall be placed on both sides of the pipe at the same time and to approximately the same elevation. Any pipe that is damaged or moved out of alignment, regardless of cause, shall be replaced or realigned at the Contractor's expense. Each layer shall be thoroughly compacted by hand-tamping or mechanical means being careful not to damage the pipe. When the pipe zone backfill reaches 1 foot over the top of the pipe, the entire surface shall be compacted by mechanical means.
- G. The remainder, if any, of the trench above the pipe zone backfill shall be backfilled with suitable material in loose lifts not exceeding 6 inches in thickness before compaction. Each layer shall be thoroughly compacted by mechanical means.

3.6 BACKFILLING AROUND STRUCTURES

- A. The Contractor shall not place backfill against any structure without obtaining the approval of the Engineer. No dumping shall be allowed where materials would flow against or around such structures. Backfill material shall be deposited in horizontal layers not exceeding 6 inches in loose thickness or as shown on the Drawings and thoroughly compacted by hand or by mechanical means to the satisfaction of the Engineer.

3.7 SUSPENSION OF WORK

- A. Whenever the work is suspended, excavations shall be protected and the roadways, if any, left unobstructed. Within or adjacent to private property, material shall be stored at such locations as will not unduly interfere with traffic of any nature and in no case shall materials be stored in locations which will cause damage to existing improvements.

3.8 DISPOSAL OF MATERIAL

- A. Excess and unsuitable materials shall be disposed of by the Contractor on the site in an area approved by the Engineer or legally disposed of off- site at the Contractor's expense.

3.9 FIELD QUALITY CONTROL

- A. Notify the Engineer at least 3 working days in advance of all phases of filling and backfilling operations.
- B. In-place density testing shall be performed to ascertain the compacted density of the fill and backfill materials in accordance with the following methods:
 - 1. In-place relative density:
 - a. Method: AASHTO T310, Nuclear Method.
- C. Perform initial density testing to verify that contractors proposed compaction effort will obtain the minimum required densities.
- D. In-place density tests on trench backfills shall be provided for every 500 cubic yards of fill or in vertical lifts not exceeding 2 feet and at least once daily.
- E. One particle size analysis (ASTM D422) and one modified Proctor compaction test (ASTM D1557) shall be completed for every 5,000 cubic yards of material placed.
- F. The Engineer may direct additional tests to establish gradation, maximum density, and in-place density as required by working conditions, at the Contractor's expense.
- G. Acceptance Criteria: The criteria for acceptability of in-place fill shall be in-situ dry density and moisture content. If a test fails to qualify, the fill shall be further compacted and re-tested. Subsequent test failures shall be followed by removal and replacement of the material.

END OF SECTION

SECTION 321116 – SUBBASE COURSES

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes provisions for prepared subbase courses for under walks and pavements.
- B. Proof rolling of subgrade for walks and pavements is included in this Section.
- C. Replacement of unsuitable subgrade materials is included in another Section.
- D. Final grading of pavement subbase is specified in this Section.

1.2 REFERENCES

- A. SCDOT Standards.
- B. Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO).
- C. American Society for Testing and Materials (ASTM).

1.3 SUBMITTALS

- A. Source Quality Control Test Reports: Submit test reports directly to Engineer from the testing agency with copy to Contractor.
- B. Field Testing Reports: Submit results of field testing directly to Engineer with copy to Contractor. Reference testing location to plan, and cross-reference to all retesting required to accept installed subbase material.
 - 1. Note action taken next to all sub-standard test results.

1.4 QUALITY ASSURANCE

- A. Testing Laboratory Qualifications: To qualify for acceptance, the soil testing laboratory must demonstrate to Engineer's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM E 699, that it has the experience and capability to conduct the required testing without delaying the progress of the Work.
- B. Field Testing and Inspection Service: Contractor shall retain the services of the same independent soil testing laboratory used for source qualification testing to provide soil testing during pavement subbase installation.

PART 2 – PRODUCTS

2.1 SOURCE QUALIFICATION TESTING

- A. Contractor shall employ and pay for a qualified independent soil testing laboratory to perform soil testing services for source qualification.
 - 1. Obtain a 100-pound minimum representative sample from each potential aggregate source. Obtain samples for each different material gradation known to exist in the pit. Mix each

sample thoroughly in accordance with AASHTO T87, and submit to the testing laboratory for reduction to specimen size. The laboratory shall perform the following tests in the order shown. Each material shall pass all tests in order to qualify.

- a. Particle Size Analysis:
 - 1) Method: ASTM D422.
 - 2) Number of Tests: 2 per potential source.
 - 3) Acceptance Criteria: Gradation within specified limits.
 - b. Plasticity Index Determination:
 - 1) Method: ASTM D424.
 - 2) Number of Tests: 1 particle size analysis on material passing no 40 mesh.
 - 3) Acceptance Criteria: Plasticity Index within specified limits.
 - c. Maximum Density Determination:
 - 1) Method: ASTM D1557 Modified Proctor.
 - 2) Number of Tests: 2 per potential source.
 - d. Magnesium Sulfate Soundness Loss Test:
 - 1) Method: State DOT Standard Test Method.
 - 2) Number of Tests: 2 per potential source.
 - 3) Acceptance Criteria: 4 cycle loss within specified limits.
2. Re-establish subbase material properties if source is changed during construction.

2.2 MATERIALS

- A. Processed Gravel Subbase Course: Materials shall consist of sound, durable blast furnace slag, stone, sand, gravel or blends of these materials.
- B. Crushed Rock Subbase Course: Materials shall consist solely of approved blast furnace slag or stone which is the product of crushing ledge rock.
- C. All compacted pavement subbase aggregate materials shall be well graded from course to fine and free from organic or other deleterious materials, conforming to the requirements of SCDOT Standards, and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
1 1/2"	100
3/4"	55-90
No. 4	25-50
No. 50	5-20
No. 200	3-10

- D. All AASHTO #57 materials shall be free from organic or other deleterious materials, conforming to the requirements of SCDOT Standards, and meeting the following gradation requirements:

SIEVE	PERCENT PASSING
1 1/2"	100
1"	95-100
1/2"	25-60
No. 4	0-10
No. 8	0-5

1. Magnesium Sulfate soundness loss after 4 cycles shall be less than 20 percent.
2. Plasticity Index of material passing No. 40 sieve shall not exceed 5.0.
3. Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve shall consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than 3 times its least dimension.
4. All material shall meet the specified gradation prior to placement. All processing shall be completed at the source.

2.3 PREPARATION

- A. Establish required lines, levels, contours, and datum.
- B. Maintain benchmarks and other elevation control points. Re-establish, if disturbed or destroyed, at no additional cost to Owner.
- C. Proof-roll existing subgrade to the satisfaction of the Engineer. Should the subbase course become unstable at any time prior to the placement of the overlying course(s), correct the unstable condition to the satisfaction of the Engineer. Replace unstable or weak subgrade materials with suitable material as provided in the Specifications.
- D. Place stabilization fabric in locations as directed on the plans and in accordance with Section "Geotextiles" after subgrade has been proof-rolled and accepted by the Engineer.

2.4 INSTALLATION

- A. Place subbase material in uniform horizontal layers, with a maximum compacted thickness of 12 inches.
- B. Place subbase in a manner to avoid segregation. Uncontrolled spreading shall not be permitted.

2.5 COMPACTION

- A. Where subbase courses must be moisture-conditioned before compaction, uniformly apply water to the surface. Prevent free water from appearing on the surface during or subsequent to compaction operations.
- B. Compact all portions of each layer to a density not less than 95 percent of the maximum density.
- C. Final tolerances for the top surface of the subbase course requires that the surface does not extend more than 1/4 inch above nor more than 1/4 inch below the specified grade at any location.

2.6 TRAFFIC ON SUBBASE

- A. The movement of vehicular traffic over the final surface of the subbase may be permitted at locations designated by, and under such restrictions as ordered by the Engineer, provided such movements take place prior to the final finishing of this course to the specified tolerance. The movement of construction equipment on this course may be permitted, at locations designated by and under such restrictions as ordered by the Engineer at locations where permission is granted for such movement, the temporary surface of the course upon which the construction traffic is running, shall be placed and maintained for at least 2 inches above the final surface of this course. Just prior to paving, and after all construction traffic not required for the removal has ceased, remove the 2 inch protective layer, prepare the exposed surface of the course, and compact to the specified tolerance.
- B. Should the subbase become mixed with the subgrade or any other material, through any cause whatsoever, remove such mixture and replace it with the specified subbase material.

2.7 FIELD QUALITY CONTROL

- A. Notify the Engineer at least 1 working day in advance of all phases of subbase installation.
- B. Comply with the requirements of this Section for in-place relative density testing.
 - 1. In-place relative density:
 - a. Method: AASHTO T238, Nuclear Method.
 - b. Number of Tests: 1 per specified interval.
 - c. Acceptance Criteria: Plus/minus 2 percent of specified percent compactions.
 - 2. Compaction tests shall be provided for every 1000 square yard of subbase placement. A minimum of 3 for each lift is required.
 - 3. The Engineer may direct additional tests to establish gradation, maximum density, and in-place density as required by working conditions.
 - 4. Acceptance Criteria: The sole criterion for acceptability of in-place subbase shall be in situ dry density. Minimum dry density for all subbase shall be 95 percent of the maximum dry density. If a test fails to qualify, the fill shall be further compacted and re-tested. Subsequent test failures shall be followed by removal and replacement of the material.

END OF SECTION

SECTION 32 12 15 - POST-TENSIONED CONCRETE BASE

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes construction of a post-tensioned concrete slab base for installation of a synthetic running track surfacing system.
- B. Work includes:
 - 1. Subgrade preparation
 - 2. Aggregate base course
 - 3. Post-tensioned concrete slab
 - 4. Stressing of tendons
 - 5. Surface finishing and tolerances
 - 6. Preparation for installation of synthetic track surfacing.
- C. The finished slab shall provide a stable, crack-resistant, and smooth base suitable for installation of polyurethane or latex-bound athletic track systems.

1.2 RELATED SECTIONS

- 03 30 00 – Cast-in-Place Concrete
- 03 38 00 – Post-Tensioning
- 31 20 00 – Earth Moving
- 32 12 15 – Post Tensioned Concrete Base
- 32 12 16 – Running Track Asphalt Base
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 REFERENCES

- A. American Concrete Institute (ACI)
 - 1. ACI 301 – Structural Concrete
 - 2. ACI 318 – Building Code Requirements for Structural Concrete
- B. Post-Tensioning Institute (PTI)
- C. American Sports Builders Association – Track Construction Guidelines
- D. Track surfacing manufacturer requirements

1.4 SUBMITTALS

- A. Concrete mix design.
- B. Post-tensioning design prepared and sealed by a licensed structural engineer.
- C. Tendon layout drawings indicating:
 - 1. Tendon spacing
 - 2. Anchorage locations
 - 3. Stressing sequence.
- D. Shop drawings showing slab panel layout and joint details.
- E. Concrete test reports.

1.5 QUALITY ASSURANCE

- A. Post-tensioning system shall be installed by a contractor experienced in PT slab construction.
- B. PT work shall be performed under the supervision of a PTI-certified installer.
- C. Concrete testing shall be performed by an independent testing agency.

1.6 SURFACE TOLERANCES

- A. Finished slab shall comply with the following tolerances:

Requirement	Tolerance
Surface smoothness	1/8 inch in 10 feet
Surface smoothness	1/4 inch in 20 feet
Elevation	± 1/4 inch
Cross slope	± 0.10%

- B. Surface shall be suitable for installation of synthetic track surfacing without additional leveling.

1.7 LASER SURVEY VERIFICATION

- A. After completion of the slab and prior to installation of track surfacing, Contractor shall provide a laser survey of the entire track surface.
- B. Survey grid spacing shall not exceed:
 - 1. 10 feet longitudinally
 - 2. 10 feet transversely.
- C. Survey shall verify elevations, slopes, and smoothness tolerances.
- D. Areas not meeting tolerances shall be corrected by grinding or approved repair methods.

1.8 MANUFACTURER BASE ACCEPTANCE

- A. Prior to installation of track surfacing, the concrete base shall be inspected by the track surfacing manufacturer's representative.
- B. Written approval shall be required before installation of the synthetic track system.

PART 2 – PRODUCTS

2.1 AGGREGATE BASE COURSE

- A. Provide crushed aggregate base meeting applicable DOT specifications.
- B. Minimum compacted thickness: 6 inches.
- C. Compaction: 98 percent Modified Proctor density.

2.2 CONCRETE

- A. Concrete compressive strength:
Minimum 4,000 psi at 28 days
- B. Maximum water-cement ratio:
0.45
- C. Air entrainment:
5% ± 1.5%
- D. Maximum aggregate size:
1 inch
- E. Concrete shall contain admixtures to improve workability and reduce shrinkage.

2.3 POST-TENSIONING SYSTEM

- A. System shall consist of:
 - 1. High-strength steel tendons
 - 2. Protective sheathing
 - 3. Anchorage assemblies.
- B. Tendons shall conform to ASTM A416.

C. Tendon spacing:

1. Typically 3 to 4 feet on center, unless otherwise designed by engineer.

2.4 SLAB THICKNESS

A. Provide post-tensioned concrete slab with minimum thickness of:

1. 5 inches to 6 inches, as determined by structural design.

PART 3 – EXECUTION

3.1 SUBGRADE PREPARATION

- A. Subgrade shall be proof-rolled and compacted to 95 percent Modified Proctor density.
- B. Unsuitable soils shall be removed and replaced with approved fill.
- C. Subgrade shall be graded to required elevations.

3.02 AGGREGATE BASE INSTALLATION

- A. Install 6 inches compacted crushed aggregate base.
- B. Place material in lifts not exceeding 4 inches.
- C. Compact each lift to 98 percent Modified Proctor density.

3.3 POST-TENSIONING INSTALLATION

- A. Tendons shall be placed according to engineered layout.
- B. Tendons shall be properly supported to maintain correct position during concrete placement.
- C. Anchors shall be securely fastened at slab edges.

3.4 CONCRETE PLACEMENT

- A. Concrete shall be placed using mechanical equipment to produce uniform slab thickness.
- B. Surface shall be finished to provide smooth texture suitable for athletic track installation.
- C. Finishing shall minimize surface irregularities.

3.5 TENDON STRESSING

- A. Post-tensioning shall occur after concrete has achieved required strength.
- B. Stressing shall be performed in accordance with engineer's specifications.
- C. Stressing operations shall be documented.

3.6 JOINTS

- A. PT slab shall minimize control joints.
- B. Construction joints shall be located as shown on approved drawings.
- C. Joints shall be sealed prior to installation of track surfacing.

3.7 CURING

- A. Concrete shall be cured in accordance with ACI recommendations.
- B. Curing period shall be minimum 7 days prior to stressing.
- C. Track surfacing installation shall not occur until slab has cured a minimum of 21 days.

3.8 SURFACE PREPARATION

Prior to installation of the synthetic track system:

- A. Surface shall be cleaned of debris and contaminants.
- B. Surface defects shall be repaired.
- C. Cracks shall be evaluated and repaired if necessary.

3.9 WEATHER LIMITATIONS

- A. Track surfacing shall not be installed when:
 - 1. Ambient temperature is below 50°F
 - 2. Surface temperature is below 50°F
 - 3. Rain or moisture is present.

3.10 FIELD QUALITY CONTROL

- A. Testing shall include:
 - 1. Concrete compressive strength tests
 - 2. Surface tolerance verification
 - 3. Laser survey verification.
- B. Deficiencies shall be corrected prior to installation of the track system.

END OF SECTION 321823.20

SECTION 32 12 16 - RUNNING TRACK ASPHALT BASE

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes construction of the asphalt base course for a synthetic/resilient surface running track, including:
 - 1. Subgrade preparation
 - 2. Aggregate base course
 - 3. Asphalt base and surface courses
 - 4. Fine grading and tolerances required for installation of synthetic running track surfacing.
- B. The asphalt base shall provide a smooth, stable, and well-drained platform suitable for installation of a polyurethane or latex-bound running track system.

1.2 RELATED SECTIONS

- 31 20 00 – Earth Moving
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)
- B. American Sports Builders Association (ASBA) – Running Track Construction Guidelines
- C. State Department of Transportation (DOT) Standard Specifications for Asphalt Pavement

- D. Track surfacing manufacturer's installation standards

1.4 SUBMITTALS

- A. Asphalt mix design submitted by paving contractor.
- B. Aggregate base material certifications.
- C. Compaction test reports for:
 - 1. Subgrade
 - 2. Aggregate base
 - 3. Asphalt paving
- D. Shop drawing indicating:
 - 1. Track elevations
 - 2. Slopes and drainage plan
 - 3. Paving layout and joint locations.

1.5 QUALITY ASSURANCE

- A. Asphalt paving contractor shall have a minimum of 5 years experience installing athletic track bases or similar high-tolerance paving.
- B. Asphalt paving equipment shall include:
 - 1. Self-propelled asphalt paver capable of producing smooth uniform surface
 - 2. Steel drum rollers suitable for finish rolling.
- C. Work shall be performed to tolerances required for athletic track surfacing systems.

1.6 FIELD TOLERANCES

Surface tolerances are critical for resilient track installations.

- A. Finished asphalt surface shall not vary more than:
 - 1. 1/8 inch in 10 feet
 - 2. 1/4 inch in 20 feet
- B. No birdbaths or depressions that allow standing water will be permitted.

1.7 WARRANTY

Contractor shall warrant asphalt base against structural failure due to defective workmanship or materials for a period of three (3) years from date of acceptance.

1.8 LASER GRADING VERIFICATION

- A. Upon completion of asphalt paving and prior to installation of the synthetic track surface, the Contractor shall provide a laser survey of the entire running track surface.
- B. Survey shall be performed by a licensed land surveyor or qualified testing agency.
- C. Survey grid shall be taken at intervals not exceeding:
 - 1. 10 feet longitudinally
 - 2. 10 feet transversely
- D. Survey shall verify:
 - 1. Finished elevations
 - 2. Cross slopes
 - 3. Smoothness tolerances
 - 4. Compliance with design geometry.
- E. Finished surface shall comply with the following tolerances:

Requirement	Tolerance
Smoothness	1/8 inch in 10 feet
Smoothness	1/4 inch in 20 feet
Elevation	± 1/4 inch
Cross slope	± 0.10%

- F. Areas failing to meet tolerance requirements shall be corrected by milling and repaving at no additional cost to the Owner.

1.9 TRACK SURFACING MANUFACTURER BASE ACCEPTANCE

- A. Prior to installation of the synthetic track surfacing system, the asphalt base shall be inspected by the track surfacing manufacturer's authorized representative.
- B. The representative shall review:
 - 1. Surface smoothness
 - 2. Drainage
 - 3. Surface integrity
 - 4. Crack conditions
 - 5. Joint conditions.

- C. The Contractor shall obtain written certification from the manufacturer stating that the asphalt base is acceptable for installation of the specified track system.
- D. Installation of the track surfacing system shall not proceed until written approval is received.
- E. Any deficiencies identified by the manufacturer shall be corrected by the Contractor at no additional cost to the Owner.

1.10 WEATHER LIMITATIONS AND INSTALLATION WINDOW

- A. Installation of synthetic track surfacing materials is highly dependent on temperature, humidity, and weather conditions.
- B. The Contractor shall coordinate asphalt construction and curing to allow sufficient time for installation of the track system during acceptable weather conditions.
 - 1. Track surfacing installation shall not occur when:
 - 2. Ambient temperature is below 50°F
 - 3. Surface temperature is below 50°F
 - 4. Rain or moisture is present
 - 5. Conditions do not meet manufacturer installation requirements.

1.11 LIQUIDATED DAMAGES – TRACK INSTALLATION WINDOW

- A. The running track shall be completed in sufficient time to allow installation of the synthetic track system within the manufacturer's recommended weather window.
- B. Failure of the Contractor to complete the asphalt base and allow installation of the track surfacing within this window shall result in delay damages.
- C. If installation must be postponed to the following construction season due to Contractor delay, the Contractor shall be responsible for:
 - 1. Remobilization of the track surfacing installer
 - 2. Additional mobilization costs
 - 3. Surface preparation required due to weather exposure
 - 4. Associated delay costs incurred by the Owner.

PART 2 – PRODUCTS

2.1 AGGREGATE BASE COURSE

- A. Material shall consist of crushed stone or crushed gravel meeting applicable DOT specifications.
- B. Gradation:
Maximum aggregate size: 1 1/2 inches
- C. Material shall be clean, durable, and free from organic matter.

2.2 HOT MIX ASPHALT

- A. Asphalt shall meet requirements of the applicable State DOT standard specifications.
- B. Asphalt Mix Type:
Dense graded hot mix asphalt with:
 - 1. 9.5 mm or 12.5 mm nominal aggregate size
- C. Asphalt shall not be open-graded.

2.3 ASPHALT THICKNESS

Provide asphalt paving with the following minimum compacted thickness:

Layer	Thickness
Asphalt Base Course	2 inches
Asphalt Surface Course	1.5 inches
Total Asphalt Thickness	3.5 inches minimum

Where required by the track manufacturer, total asphalt thickness shall be 4 inches.

PART 3 – EXECUTION

3.1 SUBGRADE PREPARATION

- A. Subgrade shall be proof-rolled to identify unstable areas.
- B. Unsuitable materials shall be removed and replaced with approved compacted fill.
- C. Subgrade shall be compacted to 95 percent Modified Proctor density.
- D. Subgrade shall be graded to proper elevation and slope prior to placement of aggregate base.

3.2 AGGREGATE BASE INSTALLATION

- A. Install 6 inches minimum compacted thickness of crushed aggregate base.
- B. Base shall be placed in lifts not exceeding 4 inches.
- C. Each lift shall be compacted to 98 percent Modified Proctor density.
- D. Finished aggregate base shall not vary more than 1/4 inch in 10 feet.

3.3 ASPHALT PAVING

- A. Asphalt shall be placed using a mechanical paver capable of producing a smooth surface.
- B. Handwork shall be minimized.
- C. Asphalt shall be compacted using steel drum rollers to achieve proper density.
- D. Asphalt shall be placed in two lifts:
 - 1. Base course
 - 2. Surface course

3.4 SURFACE FINISH

- A. Finished asphalt surface shall be:
 - 1. Smooth and uniform
 - 2. Free of cracks, ruts, or depressions
 - 3. Free of segregation or coarse texture.
- B. Surface shall meet tolerance requirements specified in Section 1.06.

3.5 SLOPE AND DRAINAGE

- A. Track asphalt shall be constructed with positive drainage.

Typical slopes:

Area	Slope
Track straights	0.8% – 1.0%
Track curves	per design geometry
Edge conditions	slope away from track

- B. Standing water will not be accepted.

3.6 CURING

- A. Asphalt shall cure a minimum of 14 to 28 days prior to installation of track surfacing.
- B. Surface shall be dry and free of oils or contaminants.

3.7 PREPARATION FOR TRACK SURFACING

- A. Prior to installation of the resilient track system:
 - 1. Surface shall be cleaned of dirt and debris.
 - 2. Minor voids shall be patched.
 - 3. Cracks shall be sealed.
 - 4. Surface shall be inspected and approved by the track surfacing installer.

3.8 FIELD QUALITY CONTROL

- A. Testing may include:
 - 1. Asphalt density testing
 - 2. Surface smoothness verification
 - 3. Laser grading verification
 - 4. Drainage inspection.
- B. Deficiencies shall be corrected prior to installation of the synthetic track system.

3.09 ASPHALT CRACK LIMITATION

- A. Asphalt surface shall be free of structural cracking prior to installation of track surfacing.
- B. Any cracks exceeding 1/16 inch width shall be repaired using approved crack repair methods prior to installation of the track system.
- C. Structural cracking shall require milling and replacement of affected asphalt areas.

END OF SECTION 321823

SECTION 321630 – CONCRETE SIDEWALKS

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes the installation of concrete sidewalk as shown on the Drawings, or as specified herein.
- B. The materials and methods specified herein are directly intended for placement of “new” concrete sidewalk. Where existing sidewalk is removed and replaced during construction, modifications to these specifications to match existing conditions shall be made as directed by the Engineer.

1.2 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. The latest edition of the following standards, as referenced herein, shall be applicable.
 - a. SCDOT Standards.
 - b. American Society of Testing and Materials (ASTM).
 - c. American Concrete Institute (ACI).
- B. The Contractor shall provide and pay for all costs in connection with an approved independent testing facility to determine conformance of materials with the specifications, if at any time during the Work, materials appear unsuitable in the opinion of the Engineer.

1.3 SUBMITTALS

- A. Concrete:
 - 1. The Contractor shall furnish the name and location of the concrete supplier.
 - 2. Submit the design mix for each class of concrete prior to use in the Work.
- B. Product Data:
 - 1. Submit manufacturer’s catalog cuts, specifications, and installation instructions.
- C. Test Results:
 - 1. The testing laboratory shall submit written reports of all tests, investigations, and recommendations to the Contractor and the Engineer.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Concrete:
 - 1. All cast-in-place concrete shall be ready mixed concrete meeting the following criteria:
 - a. 28-day compressive strength-4000 psi
 - b. Air entrainment-4% to 8%
 - c. Slump-2" to 4"

- B. Premoulded Expansion Joint Filler:
 - 1. Concrete curbing shall be provided with a 1/2 inch premoulded expansion joint filler conforming to ASTM D1751.
 - 2. The premoulded expansion joint filler shall be “pre-cut” to match the concrete sidewalk cross-sectioned dimensions as detailed on the Drawings.
- C. Fabric Reinforcement:
 - 1. Flat sheets of 6 x 6 - W 2.9 x W 2.9, ASTM A1064, welded wire reinforcement.
- D. Sealants:
 - 1. Joint Sealers: ASTM C920.
- E. Forms:
 - 1. Sidewalk forms shall be of wood or steel, straight of sufficient strength to resist springing during depositing and consolidating concrete, and of a height equal to the full depth of the finished sidewalk.
 - 2. Wood forms shall be surfaced plank, 2-inch nominal thickness, straight and free from warp, twist, loose knots, splits or other defects. Wood forms shall have a nominal length of 10 feet, with a minimum of three stakes per form, at maximum spacing of 4 feet. Corners, deep sections, and radius bends shall have additional stakes and braces, as required. Radius bends may be formed with 3/4-inch boards, laminated to the required thickness.
 - 3. Steel forms shall be channel-formed sections with a flat top surface and with welded braces at each end and at not less than two intermediate points. Form ends shall be interlocked and self-aligning. Forms shall include flexible forms for radius forming, corner forms, form spreaders, and fillers. Forms shall have a nominal length of 10 feet, with a minimum of two welded stake pockets per form. Stake pins shall be solid steel rods with chamfered heads and pointed tips, designed for use with steel forms.

PART 3 – EXECUTION

3.1 INSPECTION

- A. The Contractor shall notify the Engineer 24 hours before placing concrete in order to give the Engineer an opportunity to inspect the formwork, reinforcing and related items prior to placement of the concrete.
- B. Delivery tickets shall show the amount of cement, brand, and amount of all admixtures, in addition to information required by ASTM C94, Section 14. Water added on the job shall be approved and the amount noted on the delivery ticket and initialed by the Contractor.

3.2 SUBBASE PREPARATION

- A. Concrete sidewalk shall be constructed on a compacted granular subbase as shown on the Drawings.
- B. The completed subbase shall be tested for grade and cross section with a template extending the full width of the sidewalk and supported between side forms.
- C. The subbase shall be maintained in a smooth, compacted condition in conformity with the required section and established grade, until the concrete is placed.
- D. The subbase shall be in a moist condition when concrete is placed.

- E. The subbase shall be prepared and protected so as to produce a subbase free from frost when the concrete is deposited.

3.3 FORMWORK

- A. Earth cuts may not be used as forms for vertical surfaces.
- B. All forms shall be built mortar tight and of materials sufficient in strength to hold concrete without bulging between supports. Forms shall be maintained to eliminate the formation of joints due to shrinkage of the forms. Concrete, misshapen by bulges or deformations caused by inadequate forms, shall be removed or corrected as ordered by the Engineer. All replacements or corrections shall be made at the Contractor's expense.
- C. All surfaces of wooden forms that will be in contact with exposed concrete shall be thoroughly treated with an approved lacquer in the procedure recommended by the manufacturer. Forms so treated shall be protected from being damaged or dirtied prior to placing of the concrete.
- D. Metal forms shall be treated with an approved form lacquer or may be treated with an approved form oil. The metal used for forms shall be of sufficient thickness to remain true to shape. All bolt and rivet heads shall be designed to hold the forms rigidly together and to allow removal, without injury to the concrete. Metal forms which do not have smooth surfaces, correct alignment and clean surfaces shall not be used.
- E. Side forms shall not be removed for less than 12 hours after finishing has been completed.

3.4 CONCRETE PLACEMENT AND FINISHING

- A. Preparation:
 - 1. Set forms true to line and grade and anchor rigidly in position.
 - 2. Transverse expansion joints shall be installed at sidewalk returns and opposite expansion joints in adjoining curbs. Longitudinal expansion joints shall be installed between concrete sidewalk and abutting concrete curb, continuously. Transverse expansion joints shall be installed equally at not more than 25 feet on center, unless otherwise directed by the Engineer, or as detailed on the Drawings.
 - 3. Transverse expansion joints shall be filled with 1/2-inch joint filler strips. Joint filler shall be placed with top edge 1/4 inch below the surface and shall be held in place with steel pins or other devices to prevent warping of the filler during floating and finishing. Protect the top edge of the joint filler during concrete placement with a temporary cap and remove after concrete has been placed.
 - 4. Expansion joints shall be formed about structures and features that project through or into the sidewalk pavement, using joint filler of the type, thickness, and width indicated. The filler shall be installed in such manner as to form a complete, uniform separation between the structure and sidewalk pavement.
- B. Placement of Fabric Reinforcement:
 - 1. Prior to placement, clean reinforcement thoroughly of mill and rust scale and of coatings which could destroy or reduce bond. Where there is a delay in depositing concrete after the positioning of reinforcement, reclean reinforcement, if necessary.
 - 2. Place reinforcement midway between top and bottom of the slab and secure against displacement.

3. Lap edges and ends of adjoining sheets of fabric reinforcement at least half the mesh width. Offset end laps in adjacent sheets to prevent continuous joints at ends. Interrupt reinforcement at expansion joints, stopping 2 inches from edges.
- C. Concrete Placement:
1. Concrete shall be placed in the forms in one layer of such thickness that when compacted and finished the sidewalk will be of the thickness indicated. After concrete has been placed in the forms, a strike-off guided by side forms shall be used to bring the surface to proper section to be compacted.
 2. The concrete shall be tamped and consolidated with a suitable wood or metal tamping bar, and the surface shall be finished to grade with a wood float. Finished surface of the walk shall not vary more than 3/16 inch from the testing edge of a 20-foot straightedge. Irregularities exceeding the above shall be satisfactorily corrected. The surface shall be divided into rectangular areas by means of contraction joints spaced at intervals shown on the drawings.
 3. Place concrete in accordance with ACI 301 unless otherwise specified herein.
 4. Cold Weather Concreting: Comply with ACI 306 for placement at temperatures of, or expected to be, below 40°F.
 5. Hot Weather Concreting: Comply with ACI 305 for placement at temperature of, or expected to be, above 90°F.
- D. Concrete Finishing:
1. After straight edging, when most of the water sheen has disappeared, and just before the concrete hardens, the surface shall be finished to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. A scored surface shall be produced by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, or as otherwise shown on the drawings.
 2. All slab edges, including those at formed joints, shall be finished carefully with an edger having a radius of 1/8 inch. Corner and edges which have crumbled and areas which lack sufficient mortar for proper finishing shall be cleaned and filled solidly with a properly proportioned mortar mixture and then finished.
 3. The completed surface shall be uniform in color and free of surface blemishes and tool marks.

3.5 CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing as follows:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.

- c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

3.6 SEALING JOINTS

- A. At the end of the curing period, expansion joints shall be carefully cleaned and filled with joint sealer. Concrete at the joint shall be surface dry, and the atmospheric and pavement temperatures shall be above 50°F, at the time of application of joint sealing materials.
- B. Joints shall be filled flush with the concrete surface in such manner as to minimize spilling on the walk surface. Spilled sealing material shall be removed immediately and the surface of the walk cleaned. Dummy groove joints shall not be sealed.

3.7 BACKFILLING AND RESTORATION

- A. After curing, debris shall be removed, and the area adjoining the concrete shall be backfilled, graded, and compacted to conform to the surrounding area in accordance with lines and grades indicated.
- B. All lawns, pavements, driveways, shrubs, or other improvements affected by sidewalk placement shall be restored to their original condition.

3.8 PROTECTION

- A. The Contractor shall protect the sidewalk and keep it in “first class” condition until the completion of the Contract. Any sidewalk which is damaged prior to final acceptance of the Work shall be removed and replaced at the Contractor’s expense.

3.9 FIELD QUALITY CONTROL

- A. Testing and Inspecting: The Owner will provide an inspecting agency to perform tests and inspections and to submit reports.
- B. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
 - 2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - 3. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 - 4. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - 5. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 DegF and below and when 80 DegF and above, and one test for each composite sample.
 - 6. Compression Test Specimens: ASTM C 311/C 311M.
 - a. Cast and laboratory cure three sets of two standard cylinder specimens for each composite sample.

7. Compressive-Strength Tests: ASTM C39/C39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days. The remaining two cylinders will be held in reserve. If the results of the 28-day tests indicate low strength concrete, the engineer will direct the contractor and laboratory to test the remaining two cylinders at a time directed by the Engineer.
8. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
9. Test results shall be reported in writing to Engineer, concrete manufacturer, and Owner within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

END OF SECTION

SECTION 32 18 23.10 - FULL POUR POLYURETHANE SYNTHETIC SURFACE

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes installation of a full pour polyurethane synthetic running track surfacing system.
- B. System shall consist of:
 - 1. Polyurethane-bound rubber base mat
 - 2. Poured polyurethane structural layers
 - 3. Embedded EPDM wearing surface
 - 4. Lane striping and event markings.
- C. The surfacing system shall be installed over a prepared asphalt or concrete base.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 01 56 39 – Protection of Infield Turf
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 PERFORMANCE REQUIREMENTS

- A. Track surfacing shall meet performance standards consistent with requirements used for certified athletic facilities.

- B. Typical performance criteria include:

Property	Typical Requirement
Force reduction	35–50%
Vertical deformation	0.6–2.5 mm
Tensile strength	≥ 0.5 MPa
Elongation at break	$\geq 40\%$
Slip resistance	≥ 0.5

- C. Surface shall be suitable for competitive track and field events.

1.4 SUBMITTALS

- A. Product data for all materials used in the surfacing system.
- B. Installation procedures from manufacturer.
- C. Samples of:
 - 1. Rubber granules
 - 2. EPDM top layer.
- D. Evidence of installer qualifications.
- E. Warranty documentation.

1.5 INSTALLER QUALIFICATIONS

- A. Installer shall have a minimum of 5 years experience installing synthetic track systems.
- B. Installer shall have completed at least 5 similar installations.
- C. Installation shall be performed by technicians trained by the surfacing manufacturer.

1.6 WARRANTY

- A. Provide manufacturer's warranty covering defects in materials and workmanship.
- B. Warranty period shall be not less than 8 years.

PART 2 – PRODUCTS

2.1 BASE MAT MATERIALS

- A. Rubber granules:
 - 1. Recycled SBR rubber
 - 2. Particle size: approximately 1–4 mm

- B. Polyurethane binder:
 - 1. Moisture cured polyurethane
 - 2. Designed for athletic surfacing applications.

2.2 STRUCTURAL POLYURETHANE LAYER

- A. Polyurethane compound shall form a resilient intermediate layer providing structural strength and elasticity.
- B. Material shall be designed for outdoor athletic surfacing applications.

2.3 WEARING SURFACE

- A. Wearing surface shall consist of:
 - 1. Polyurethane resin layer
 - 2. EPDM rubber granules broadcast into the resin.
- B. EPDM granules:
 - 1. UV resistant
 - 2. Particle size: 1–3 mm
 - 3. Color as selected by Owner.

2.4 SYSTEM THICKNESS

- A. Typical system thickness:

Layer	Thickness
Polyurethane-bound base mat	8–10 mm
Structural polyurethane layer	3–4 mm
EPDM wearing surface	2–3 mm
Total system thickness	13–15 mm

2.5 LINE MARKING MATERIAL

- A. Lane striping and event markings shall be applied using polyurethane line marking paint.
- B. Paint shall be compatible with the track surfacing system.
- C. Color: White unless otherwise specified.

PART 3 – EXECUTION

3.1 BASE PREPARATION

- A. Asphalt or concrete base shall be clean, dry, and free of contaminants.

- B. Surface shall meet the following tolerances:
 - 1. 1/8 inch in 10 feet
 - 2. 1/4 inch in 20 feet.
- C. Cracks and surface defects shall be repaired prior to installation.

3.2 PRIMER APPLICATION

- A. Apply polyurethane primer to prepared base surface.
- B. Primer shall promote adhesion between the base and track system.

3.3 INSTALLATION OF RUBBER BASE MAT

- A. Mix rubber granules with polyurethane binder.
- B. Spread mixture evenly over track surface.
- C. Mechanically screed to uniform thickness.
- D. Allow material to cure before installation of subsequent layers.

3.4 STRUCTURAL POLYURETHANE LAYER

- A. Apply polyurethane compound over cured base mat.
- B. Spread uniformly using specialized paving equipment.
- C. Allow curing before installation of wearing surface.

3.5 EPDM WEARING SURFACE

- A. Apply polyurethane resin layer.
- B. Broadcast EPDM granules uniformly into the resin.
- C. Remove loose granules after curing.

3.6 TRACK MARKINGS

- A. Layout shall comply with standard track geometry.
- B. Lines shall be measured and applied accurately.
- C. Lane markings, start lines, and event markings shall be installed in accordance with competition standards.

3.7 WEATHER LIMITATIONS

- A. Track surfacing shall not be installed when:
 - 1. Ambient temperature below 50°F
 - 2. Surface temperature below 50°F
 - 3. Rain or moisture present
 - 4. Humidity or weather conditions exceed manufacturer recommendations.

3.8 FIELD QUALITY CONTROL

- A. Inspect finished surface for uniform thickness and appearance.
- B. Verify adhesion to base.
- C. Surface shall be free of bubbles, depressions, or irregularities.

3.9 CLEANING

- A. Upon completion, Contractor shall remove debris and leave the track surface clean and ready for use.

END OF SECTION

SECTION 32 18 23.20 LATEX SYNTHETIC RUNNING TRACK SURFACING SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes installation of a latex-bound synthetic running track surfacing system.
- B. System shall consist of:
 - 1. Latex binder coats applied over asphalt base
 - 2. Rubber granules embedded within latex binder
 - 3. EPDM wearing surface
 - 4. Lane striping and event markings.
- C. System shall be installed over a prepared asphalt base designed for athletic track construction.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 01 56 39 – Protection of Infield Turf
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 PERFORMANCE REQUIREMENTS

- A. The finished surfacing system shall provide a resilient, slip-resistant athletic surface suitable for track and field activities.

- B. Typical performance characteristics include:

Property	Typical Requirement
Force reduction	30–45%
Vertical deformation	0.5–2.0 mm
Slip resistance	≥ 0.5
Tensile strength	≥ 0.4 MPa

- B. Surface shall provide consistent traction and shock absorption for athletic activities.

1.04 SUBMITTALS

- A. Product data for latex binder and rubber granules.
- B. Installation procedures.
- C. Samples of rubber and EPDM granules.
- D. Installer qualifications.
- E. Warranty documentation.

1.5 INSTALLER QUALIFICATIONS

- A. Installer shall have at least 5 years experience installing latex track systems.
- B. Installer shall have completed at least 5 projects of similar size and scope.
- C. Installation shall be performed by personnel trained in application of latex athletic surfacing.

1.6 WARRANTY

- A. Provide manufacturer's warranty covering materials and installation.
- B. Warranty period shall be not less than 5 years.

PART 2 – PRODUCTS

2.1 LATEX BINDER

- A. Binder shall be a water-based latex compound specifically formulated for athletic track surfacing.
- B. Latex shall provide flexibility, durability, and resistance to weathering.

2.2 RUBBER GRANULES

- A. Granules shall consist of:
 - 1. Recycled SBR rubber
- B. Particle size:
 - 1. 1–4 mm
- C. Rubber shall be clean and free from contaminants.

2.3 EPDM WEARING SURFACE

- A. EPDM rubber granules shall be broadcast into the final latex coat.
- B. EPDM granules shall be:
 - 1. UV resistant
 - 2. Weather resistant
 - 3. Color stable.
- C. Particle size:
 - 1. 1–3 mm
- D. Color shall be selected by the Owner.

2.4 SYSTEM THICKNESS

- A. Typical installed system thickness:

Layer	Thickness
Multiple latex binder coats	4–6 mm
EPDM wearing surface	1–2 mm
Total system thickness	5–8 mm

- B. Minimum 0.10–0.12 gallons of latex binder per square yard per coat

2.5 LINE MARKING MATERIAL

- A. Lane striping and event markings shall be applied using polyurethane or acrylic line marking paint compatible with the latex surface.
- B. Color: White unless otherwise specified.

PART 3 – EXECUTION

3.1 BASE PREPARATION

- A. Asphalt base shall be clean, dry, and free of contaminants.
- B. Surface shall meet the following tolerances:
 - 1. 1/8 inch in 10 feet
 - 2. 1/4 inch in 20 feet.
- C. Cracks and surface defects shall be repaired prior to installation.

3.2 PRIMER APPLICATION

- A. Apply primer if recommended by the surfacing manufacturer to improve adhesion between asphalt base and latex system.

3.3 APPLICATION OF LATEX SYSTEM

- A. Latex binder shall be mixed with rubber granules.
- B. Mixture shall be applied to the track surface using mechanical application equipment.
- C. Multiple coats shall be applied to achieve specified thickness.
- D. Each coat shall be allowed to cure before application of subsequent coats.

3.4 EPDM WEARING SURFACE

- A. Final latex coat shall receive broadcast EPDM granules.
- B. Granules shall be evenly distributed across the surface.
- C. Excess granules shall be removed after curing.

3.5 TRACK MARKINGS

- A. Layout shall conform to standard track geometry.
- B. Contractor shall install lane lines, start lines, relay zones, and event markings.
- C. Lines shall be measured and applied accurately.

3.6 WEATHER LIMITATIONS

Track surfacing shall not be installed when:

- 1. Ambient temperature below 50°F
- 2. Surface temperature below 50°F
- 3. Rain or excessive humidity present.

3.7 FIELD QUALITY CONTROL

- A. Surface shall be inspected for:
 - 1. Uniform thickness
 - 2. Proper adhesion
 - 3. Smoothness and texture.
- B. Surface shall be free of blisters, depressions, or loose granules.

3.8 CLEANING

- A. Upon completion, Contractor shall remove debris and leave the track surface clean and ready for use.

END OF SECTION

SECTION 32 18 23.30 - RUBBER BASEMAT SYNTHETIC RUNNING TRACK SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes installation of a rubber basemat synthetic running track system.
- B. System shall consist of:
 - 1. Polyurethane-bound rubber base mat
 - 2. Surface sealing layer
 - 3. Optional EPDM broadcast wearing surface
 - 4. Lane striping and event markings.
- C. System shall be installed over a prepared asphalt or concrete base.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 01 56 39 – Protection of Infield Turf
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 PERFORMANCE REQUIREMENTS

- A. The running track surface shall provide consistent resilience and traction suitable for athletic competition.
- B. Typical properties:

Property	Requirement
Force reduction	35–50%
Vertical deformation	0.6–2.5 mm
Slip resistance	≥ 0.5

1.4 SUBMITTALS

- A. Product data for all surfacing materials.
- B. Installation procedures.
- C. Samples of rubber granules and EPDM granules.
- D. Installer qualifications.
- E. Warranty documentation.

1.5 INSTALLER QUALIFICATIONS

- A. Installer shall have minimum 5 years experience installing synthetic running track systems.
- B. Installer shall have completed at least five projects of similar size.

1.6 WARRANTY

- A. Provide manufacturer warranty covering materials and installation.
- B. Warranty period shall be minimum 8 years.

PART 2 – PRODUCTS

2.1 RUBBER GRANULES

- A. Granules shall consist of recycled SBR rubber.
- B. Particle size: 1–4 mm.
- C. Material shall be clean and free from contaminants.

2.2 POLYURETHANE BINDER

- A. Moisture-cured polyurethane binder designed for athletic surfacing systems.
- B. Binder shall provide strong adhesion and flexibility.

2.3 SYSTEM THICKNESS

- A. Typical basemat thickness:

Layer	Thickness
Rubber basemat	10–12 mm
Seal coat	1–2 mm
Total system thickness	11–14 mm

2.4 LINE MARKING MATERIAL

- A. Markings shall be applied using polyurethane or acrylic line marking paint.
- B. Color: White unless otherwise specified.

PART 3 – EXECUTION

3.1 BASE PREPARATION

- A. Base surface shall be clean, dry, and free of contaminants.
- B. Surface tolerances shall not exceed:
 - 1. 1/8 inch in 10 feet
 - 2. 1/4 inch in 20 feet.

3.2 BASEMAT INSTALLATION

- A. Rubber granules shall be mixed with polyurethane binder.
- B. Mixture shall be spread evenly using mechanical paving equipment.
- C. Surface shall be screeded to uniform thickness.

3.3 SEAL COAT APPLICATION

- A. Apply polyurethane seal coat over cured basemat.
- B. Seal coat shall provide protection and prepare surface for markings or additional layers.

3.4 TRACK MARKINGS

- A. Markings shall be installed in accordance with standard track geometry.
- B. Contractor shall accurately layout lanes, start lines, relay zones, and event markings.

END OF SECTION

SECTION 32 18 23.40 SANDWICH SYSTEM SYNTHETIC RUNNING TRACK

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes installation of a sandwich system synthetic running track.
- B. System shall consist of:
 - 1. Polyurethane-bound rubber basemat
 - 2. Spray-applied polyurethane structural layer
 - 3. Embedded EPDM wearing surface
 - 4. Lane striping and event markings.
- C. System shall be installed over a prepared asphalt or concrete base.

1.2 RELATED SECTIONS

- 02 41 26 – Demolition of Existing Running Track
- 32 12 15 – Post Tension Concrete Paving
- 32 12 16 – Asphalt Paving
- 32 18 23.10 – Full Pour Polyurethane Track System
- 32 18 23.20 – Latex Track Surfacing System
- 32 18 23.30 – Rubber Basemat Track System
- 32 18 23.40 – Sandwich Track System
- 32 18 23.50 – Synthetic Track Surveying
- 32 18 23.60 – Synthetic Track Surfacing
- 32 18 23.70 – Synthetic Track Line Marking
- 32 18 23.80 – Synthetic Track Certification Survey

1.3 PERFORMANCE REQUIREMENTS

- A. Surface shall provide resilient, slip-resistant performance suitable for competitive athletics.

B. Typical properties:

Property	Requirement
Force reduction	35–50%
Vertical deformation	0.6–2.5 mm
Slip resistance	≥ 0.5
Tensile strength	≥ 0.5 MPa

1.4 SUBMITTALS

- A. Product data for all surfacing materials.
- B. Installation procedures.
- C. Samples of rubber and EPDM granules.
- D. Installer qualifications.
- E. Warranty documentation.

1.5 WARRANTY

- A. Provide manufacturer warranty covering materials and installation.
- B. Warranty period shall be minimum 8 years.

PART 2 – PRODUCTS

2.1 BASEMAT MATERIALS

- A. Rubber granules: recycled SBR rubber.
- B. Polyurethane binder for mixing with rubber granules.

2.2 SPRAY POLYURETHANE LAYER

- A. Polyurethane compound applied by spray equipment.
- B. Layer shall provide structural integrity and uniform performance.

2.3 EPDM WEARING SURFACE

- A. EPDM rubber granules shall be embedded into the spray polyurethane layer.

- B. Granules shall be:
 - 1. UV resistant
 - 2. Weather resistant
 - 3. Color stable.
- C. Particle size: 1–3 mm.

2.4 SYSTEM THICKNESS

- A. Typical sandwich system thickness:

Layer	Thickness
Rubber basemat	10–12 mm
Spray polyurethane layer	2–3 mm
EPDM wearing surface	1–2 mm
Total thickness	13–15 mm

2.5 LINE MARKING MATERIAL

- A. Lane striping shall be applied using polyurethane line marking paint compatible with the surfacing system.

PART 3 – EXECUTION

3.1 BASE PREPARATION

- A. Base surface shall be clean, dry, and free from contaminants.
- B. Surface tolerances:
 - 1. 1/8 inch in 10 feet
 - 2. 1/4 inch in 20 feet.

3.2 BASEMAT INSTALLATION

- A. Rubber granules shall be mixed with polyurethane binder.
- B. Mixture shall be spread and screeded to uniform thickness.
- C. Allow base mat to cure prior to application of spray layer.

3.3 SPRAY POLYURETHANE APPLICATION

- A. Apply polyurethane layer over basemat using specialized spray equipment.
- B. Material shall be applied uniformly.

3.4 EPDM BROADCAST

- A. EPDM granules shall be broadcast into wet polyurethane layer.
- B. Excess granules shall be removed after curing.

3.5 TRACK MARKINGS

- A. Markings shall be installed in accordance with standard track geometry.
- B. Layout shall include lanes, start lines, relay zones, hurdle marks, and event markings.

END OF SECTION

SECTION 321823.38 – SYNTHETIC RUNNING TRACK SURVEYING

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers all labor and materials required to provide survey of key construction elements and the final track and field facility. The Contractor is responsible for completing all survey work.

1.2 CODES AND STANDARDS

- A. The survey work must be completed by a licensed surveyor or engineer.
- B. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFSHSA).

1.3 SUBMITTALS

- A. The following information must be submitted by the Contractor:
 - 1. New outside and infield border curbs:
 - a. Survey the outside border curbs location with elevations at:
 - 1) 10-meter intervals starting at the common finish line.
 - 2) All sprint chute corners.
 - 3) Elevations to show top of curb and top of notch if necessary.
 - b. Survey the infield border curbs location with elevations at:
 - 1) 10-meter intervals.
 - 2) Elevations to show top of curb and top of notch.
 - 2. After installation of all field events:
 - a. Survey all field events with elevations as follows:
 - 1) 4 corners of all long/triple jump sand pits.
 - 2) Center of all long/triple jump take-off boards.
 - 3) Top flange of all pole vault boxes (center front and center back).
 - 4) 4 corners of all throw circle pads.
 - 3. After installation of the asphalt/concrete base:
 - a. Survey track oval and field event areas as follows:
 - 1) Both edges of all runways at 10-foot intervals.
 - 2) High jump area on a 20-foot grid.
 - 3) All paved D-zone surfaces on a 20-foot grid.
 - 4) Oval lanes 1, 4 and 8 at 10-meter intervals starting at the common finish line.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 321823.39 – SYNTHETIC RUNNING TRACK SURFACING

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers all labor and materials required to install a first-class track & field surface. The Track & Field Synthetic Surfacing Contractor is responsible for installing all track & field synthetic surfacing materials and line markings as designated in these specifications.

1.2 CODES AND STANDARDS

- A. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFSHSA).

1.3 SUBMITTALS

- A. The following information must be submitted by the Track & Field Synthetic Surfacing Contractor prior to installation.
 - 1. Test results, from an IAAF certified laboratory, verifying manufacturer's Track & Field Synthetic Surfacing product meets the IAAF Performance Specifications for Synthetic Surfaces.
 - a. The same components from the test sample must be used in the installed surface. No substitutions will be allowed.
 - b. TRRL Pendulum test results for slip resistance must be greater than 47.
 - 2. Surfacing Contractor On-site Project Manager/Superintendent Qualifications:
 - a. The project manager/superintendent for the surfacing contractor will be on-site during all surfacing operations. Substitution of project manager/superintendent shall not be permitted.
 - b. A list of completed facilities, minimum of 5, which are certified to meet NFSHSA rules & regulations in the past 5 years utilizing the product specified in these specifications. The Track & Field Synthetic Surfacing Contractor's project manager/supervisor responsible for the completed facilities must supervise this project.
 - 3. Standard printed specifications of the track & field synthetic surfacing system that is being installed.
 - 4. Installation process and requirements for subbase (stone, asphalt, and concrete) and any conditions that may limit the track & field synthetic surface installation or affect quality of installation.
 - 5. Temperature/climatic conditions limiting quality of installation.
 - 6. Standard specification and application for recommended subbase primers, crack filler, patching and leveling material.
 - 7. Three product samples, a minimum of 6" x 6" in size, the same color, texture, thickness, etc. of the same type of surfacing to be installed for this project. This must be a representative sample of the product. This sample must be submitted and approved by the Owner prior to installation. At completion of the project this sample may be used as a comparison to judge the quality of the installed product.
 - 8. Material safety data sheets on all individual components of the product being installed.
 - 9. Provide a letter stating the Track & Field Synthetic Surfacing Contractor reviewed the asphalt specification and are accepting the specification as correct. Upon completion of the Asphalt paving and prior to installation of the track & field synthetic surface, the Track & Field Synthetic Surfacing Contractor will provide a letter accepting the installed asphalt and stating it is suitable to receive the track & field synthetic surface.

10. Letter from synthetic surfacing manufacturer approving the installer/applicator of the synthetic surface listed in these specifications.
 11. Written notice and acceptance that all in-ground field event equipment is installed as per the Contract Documents and the rules of the sport.
- B. The following information shall be submitted after completion of the specified work:
1. Provide a copy of the Track & Field Synthetic Surface vendor's standard Warranty noting any exceptions to the Warranty information included in this Specification Section.
 2. Provide a Care and Maintenance manual for the Owner's use in maintaining the synthetic surfacing.

1.4 QUALITY ASSURANCE

- A. Prior to installation, or during installation or at completion of installation of the synthetic surfacing, if the Owner has any question or doubt about the quality or formulation of the material, the Track & Field Synthetic Surfacing Contractor shall have the product tested. If the product meets these specifications, then the Owner shall pay for the cost of the testing; if the product does not meet these specifications, then the Track & Field Synthetic Surfacing Contractor shall pay for the testing. Any material failing to meet specifications will be replaced with new material at the Track & Field Synthetic Surfacing Contractor's expense.
- B. Slopes and Tolerances (NFSHSA):
1. The maximum lateral inclination permitted for the track across the full width of the track, preferably toward the inside lane, and across all runways, shall not exceed 2:100, 2.0 percent.
 2. The maximum overall downward inclination permitted in the running direction for the track, the running direction for all runways and the throwing direction for all landing sectors shall not exceed 1:1,000, 0.1 percent. Inclination shall be measured by comparing the start and end points of the races that use the straightaway portion of the oval, the last 20 meters of the javelin runway, the start and end points of other runways, not to exceed 40 meters, and the full graded length of each landing sector.
 3. In the high jump approach and takeoff area, the maximum overall downward inclination shall not exceed 1:100, 1.0 percent, in the running direction toward the center of the crossbar.
 4. The surface of a throwing circle shall be level.

1.5 SPECIAL PROJECT CONDITIONS

- A. The Track & Field Synthetic Surfacing Contractor will provide a project manager/superintendent on-site daily through the completion of the Track & Field Synthetic Surfacing Contractor's portion of the contract.
1. The on-site project manager/superintendent shall remain on site through the completion of the project. Substitution of project manager/superintendent shall not be permitted.
- B. The Track & Field Synthetic Surfacing Contractor will provide a technician that will serve as a consultant to the Owner and Contractor during the Asphalt Paving, first reviewing the asphalt specification, accepting the specification as correct, and then, providing daily review and guidance of the construction of the Asphalt Paving which will directly affect the tolerances and longevity of the eventual synthetic surfacing installation.
- C. Prior to installing any concrete, the Contractor must verify with the Track & Field Synthetic Surface manufacturer if any curing compounds or agents are allowed or acceptable.

1.6 SPECIFIC SCOPE OF WORK

- A. The Track & Field Synthetic Surfacing Contractor shall verify the entire track & field subbase and all events to determine that:
 - 1. The synthetic surface for the 400-meter track oval will accurately fit onto the Asphalt Paving base.
 - 2. That slopes and elevations meet required tolerances.
 - 3. No bird baths exceed the allowable limits as specified.
 - 4. The track & field areas will meet or exceed the rules of the sport.
- B. The Track & Field Synthetic Surfacing Contractor shall provide all labor, materials and equipment to perform the following work:
 - 1. The Track & Field Synthetic Surfacing Contractor is responsible for installing all track & field synthetic surfacing materials and line markings as designated in these specifications.
 - 2. Review Bidding documents and specifications, provide technical assistance, and approve Asphalt Paving base work as required in the specifications.
 - 3. Review and approve installation of all field event in-ground equipment before any track & field synthetic surfacing is installed as specified and shown on the Drawings.
 - 4. Brush and wash down all areas to be surfaced, as often as necessary during the installation of the track and field synthetic surface.
 - 5. Repair all birdbaths as required in these specifications.
 - 6. Install removable track & field synthetic surfacing (full pour polyurethane) plugs in all pole vault boxes, throw circles (cut plugs in half); apply synthetic surfacing to the junction box covers.
 - 7. Install special material (i.e., foam, board, etc.) in slot drain opening to prevent polyurethane from entering the opening. The drainage slot opening shall be neatly trimmed out (vertical cuts), after polyurethane installation, to allow proper drainage to occur. No polyurethane is allowed on the inside of the drainage slot opening. This shall apply only if the precast slot drain is installed.
 - 8. Repair all damaged areas, clean-up all glue, and remove excess polyurethane, primers and similar products. All trim cuts shall be neat and clean; on all curves the trim-out shall follow a radius line for accuracy and neatness.

1.7 WARRANTY/GUARANTEE

- A. General: Warranties / Guarantees specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and are in addition to and run concurrent with other warranties/guarantees made by the Contractor under requirements of the Contract Documents.
- B. The following are inclusive of the term "Track & Field Synthetic Surface" for provisions of the guarantee:
 - 1. All slopes & tolerances as required in this specification.
 - 2. Synthetic track & field surface product as specified and represented by the Track & Field Synthetic Surface Manufacturer.
 - 3. All materials and products specified.
 - 4. All line markings installed in accordance with the Contract Documents.
- C. Track & Field Synthetic Surface Installer Guarantee: Provide in writing a "Full System Guarantee" agreement. The President/Principal(s) of both the Track & Field Synthetic Surface Installer and the Track & Field Synthetic Surface Manufacturer (if different) shall sign this document and it shall include the following:

1. All work executed under this section will be free from defects of material and workmanship for the specified period from date of Substantial Completion/Acceptance of the Owner.
 2. Any defects will be remedied on written notice at no additional cost to the Owner.
 3. The warranty shall not be prorated.
 4. All material shall be guaranteed to the extent that the surfacing:
 - a. Has been manufactured, applied and will perform in accordance with these and the manufacturer's specifications.
 - b. Will hold fast and/or adhere to the primer, asphalt, concrete, edging, filler, patches, or overlay materials.
 - c. Is Ultra-Violet resistant, will not bubble, blister, fade, crack, or wear excessively during the warranty period.
- D. The Track & Field Synthetic Surfacing Contractor shall, in the presence of the Owner, inspect the track and field synthetic surfacing each year until the end of the warranty period, or at any time requested by the Owner. Any defects in workmanship or materials (at no fault of the Owner) shall be repaired at the expense of the Track & Field Synthetic Surfacing Contractor to the satisfaction of the Owner.
- E. Contractor shall not be held liable for incidental or consequential damages. The Track & Field Synthetic Surface Warranties described shall be conditioned upon:
1. Owner shall maintain track as described in the Owner's Manual submitted by the Contractor to the Owner.
- F. The Warranty does not cover any defect, failure, damage caused by or connected with abuse, neglect, deliberate acts, acts of God, casualty or loads exceeding the Contractor's recommendations.
- G. Warranty period to be five (5) years minimum.

PART 2 – PRODUCTS

2.1 TRACK & FIELD SYNTHETIC SURFACE

- A. The track and field synthetic surface shall be as per the manufacturer's specifications, plus the following requirements and where discrepancies exist, they shall be brought to the attention of the Owner or Owner's representative prior to Bidding or Installation.
- B. Colors: Manufacturer's Standard Red. Confirm final color with owner.
- C. Basemat Structural Spray Track Surfacing: The following Products are approved for bidding:
1. Beynon Sports Surfaces:
 - a. Contact: (410) 771-9473.
 - b. Product: Basemat Structural Spray (Porous): BSS 100.
 2. Advanced Polymer Technologies (APT):
 - a. Contact: (724) 452-1330.
 - b. Product: Basemat Structural Spray (Porous): Spurtan BS.
 3. Stockmeier Urethanes:
 - a. Contact: (704) 905-4156.
 - b. Product: Basemat Structural Spray (Porous): Stobitan SC.
 4. Conica:
 - a. Contact: (615) 499-3624
 - b. Product: Basemat Structural Spray (Porous): Conipur SP

- D. Synthetic Track Surfacing shall be IAAF approved thickness unless otherwise specified.
- E. Patching Material: All materials must be approved materials and compatible with the synthetic surface.

PART 3 – EXECUTION

3.1 INSPECTION AND ACCEPTANCE

- A. Examine all surfaces and contiguous elements to receive work of this section and correct, as part of the Work of this Contract, any defects affecting installation.
- B. Commencement of work will be construed as complete acceptability of surfaces and contiguous elements.

3.2 INSTALLATION REQUIREMENTS

- A. The following installation requirements must be met by the Track & Field Synthetic Surfacing Contractor:
 - 1. Installation by synthetic surface manufacturer approved project manager/superintendent applicators and technicians. Local laborers may be hired for non-technical work, only.
 - 2. Priming - The primer shall be spray-applied in accordance with the manufacturer's specifications. Only those areas which can be installed the same day should be primed. All concrete areas to be surfaced shall receive manufacturer's approved primer.

3.3 INSTALLATION OF TRACK & FIELD SYNTHETIC SURFACE

- A. Basemat Structural Spray (Porous):
 - 1. Thickness to match sample submitted to IAAF certified testing laboratory.
 - 2. Base Layer:
 - a. The SBR granules and polyurethane shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The single component polyurethane binder shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.
 - 3. Wearing layer:
 - a. The 0.5 to 1.5-millimeter EPDM granules shall be mixed with polyurethane, the single-component structural spray coating. The structural spray shall be made in two (2) uniform applications.

3.4 TIMING, LIMITATIONS, AND CONDITIONS AFFECTING INSTALLATION

- A. The track surfacing material shall be applied no sooner than 28 days after placement of the asphalt top course.
- B. Weather and Climate: If in the opinion of the synthetic track surfacing manufacturer or the Owner, weather and climatic conditions are having or will have an adverse effect on installation; work shall be delayed until the adverse condition has passed.
- C. Adjacent and Concurrent Construction: Installation shall not take place until the completion of the adjacent or concurrent construction operations which generate dust, airborne abrasives, or any other by-product that, in the opinion of the Owner or synthetic track surfacing manufacturer, would be harmful to the track material. Under specific direction of the Owner, the Track & Field Synthetic

Surfacing Contractor may be allowed to cover the track material with an approved covering if such harmful construction operations must occur after the track material has been installed.

END OF SECTION

SECTION 321823.40 – SYNTHETIC RUNNING TRACK LINE MARKINGS

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers all labor and materials required to install the track & field line markings.
- B. The Synthetic Surface Contractor is responsible for the purchase and installation of all paints and line markings.

1.2 CODES AND STANDARDS

- A. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFSHSA).

1.3 SUBMITTALS

- A. The following information shall be submitted prior to installation of specified work:
 - 1. A list, similar to the one in Part 3.2 below, depicting the colors of all line markings and labels of the events to be included for approval prior to installation. Also, all symbols and markings clearly identified, illustrated, and their colors stated. The recommended NFSHSA colors shall be used.
 - 2. Installation process and requirements for line markings and any conditions that may limit the installation or affect quality of installation.
 - 3. Material safety data sheets on all products, as necessary.
- B. The following information shall be submitted at the completion of the specified work:
 - 1. Upon completion of all line markings, the Track & Field Synthetic Surfacing Contractor shall submit to the Owner a five (5) diagram/drawing depicting and identifying all line markings: 1) a key to the color codes, 2) a chart for all symbols, and 3) labels for all events.

PART 2 – PRODUCTS

2.1 PAINT

- A. The paint shall be a metal latex based paint typically used on Track & Field Synthetic Surface.

2.2 TEMPORARY REFERENCE MARKINGS

- A. These markings shall be removed at the completion of the project.

PART 3 – EXECUTION

3.1 SUMMARY

- A. General line markings of the 400-meter track and field events, shall be spray applied, using only paint, primers and finishes supplied and guaranteed by the approved manufacturer and/or supplier.
- B. All markings shall be in accordance with the rules of the NFSHSA and shall be certified for accuracy. The color code of the NFSHSA shall be followed.

- C. No line markings shall be installed if the weather conditions are not proper (i.e., too windy).

3.2 LINE MARKINGS

- A. Paint:
 - 1. All line markings to receive adequate paint to completely cover the track & field synthetic surface.
- B. Measure Line (Theoretical – not painted):
 - 1. Track oval will not utilize a regulation curb.
 - 2. Distance to right hand edge of the inside lane line of Lane 1 to be 20 centimeters from the measure line.
- C. Line Precedence:
 - 1. Lane lines to take precedence over other markings.
 - a. Numbers and letters to be broken at all lane line intersections.
 - 2. Waterfall starting lines take precedence over straight starting lines.
 - a. Straight starting lines to taper at waterfall starting lines – maintain a 1/2-inch gap.
- D. Chute Extensions:
 - 1. Chute extension lines to be solid not dashed.
 - 2. Break chute extension lies 2 inches either side of track oval lines.
- E. 100 Meters:
 - 1. One Direction – main straight away.
 - 2. Event label:
 - a. 100.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 - 3. Color of starting line is white.
- F. 100 Meter Hurdles:
 - 1. One Direction – main straight away.
 - 2. Event label:
 - a. 100.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 - 3. Color of the starting line is white.
 - 4. The hurdle tic marks are yellow.
 - a. Hurdle tic marks are a 2.5-inches wide by 3 inches high triangle, the triangle is pointing in the direction of running – Each lane shall have 2 tic marks with each tic mark adjacent to the lane line, but not touching the lane line.
- G. 110 Meter Hurdles:
 - 1. One Direction – main straight away.
 - 2. Event label:
 - a. 110.

- b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 - 3. Color of the starting line is white.
 - 4. The hurdle tic marks are blue.
 - a. Hurdle tic marks are a 2.5-inches wide by 3 inches high triangle, the triangle is pointing in the direction of running – Each lane shall have 2 tic marks with each tic mark adjacent to the lane line, but not touching the lane line.
- H. 200 Meters:
 - 1. All in lanes.
 - 2. Event label:
 - a. 200.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in Lane 2 and is above the starting line.
 - 3. Color of the starting line is white.
- I. 400 Meters:
 - 1. All in lanes.
 - 2. Event label:
 - a. 400.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in Lane 2 and is above the starting line.
 - 3. Color of the starting line is white.
- J. 400 Meter Hurdles:
 - 1. All in lanes.
 - 2. Event label:
 - a. 400.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in lane 2 and is above the starting line.
 - 3. Color of the starting line is white.
 - 4. The hurdle tic marks are red.
 - a. Hurdle tic marks are a 2.5-inches wide by 3 inches high triangle, the triangle is pointing in the direction of running – Each lane shall have 2 tic marks with each tic mark adjacent to the lane line, but not touching the lane line.
- K. 800 Meters:
 - 1. Waterfall start and 1 turn stagger.
 - 2. Event label:
 - a. 800.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. The 1 turn stagger starting line is located in Lane 2, the waterfall starting line is located in the outside lane, and the labels are above the starting line.

3. Color of the 1 turn stagger starting line is white with a green insert.
 4. The color of the waterfall starting line is white.
- L. 1600 Meters:
1. Waterfall start.
 2. Event label:
 - a. 1600.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 3. Color of the starting line is white.
- M. 1-Mile Run:
1. Waterfall start.
 2. Event label:
 - a. 1 mile.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 3. Color of the starting line is white.
 4. Install 1-inch wide by 3-inch long white marks on the infield side of the inside lane line at the $\frac{3}{4}$, $\frac{1}{2}$, and $\frac{1}{4}$ marks.
- N. 3200 Meters:
1. Waterfall start.
 2. Event label:
 - a. 3200.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in the outside lane and is above the starting line.
 3. Color of the starting line is white.
- O. 4x100 Meter Relay:
1. All in lanes.
 2. Event label:
 - a. 400.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in lane 2 and is above the starting line.
 3. Color of the starting line is white, same starting line as the staggered starting line for the 400 meters.
 4. The relay exchange zone markers are yellow.
 - a. Exchange zone markers are 36-inch wide by 18-inch high triangles, the two triangles point into the relay exchange zone, and the triangles are included in the 30-meter zone
- P. 4x200 Meter Relay:
1. Four turn stagger.

2. Event label:
 - a. 4x200R.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in lane 2 and is above the starting line.
 3. Color of the starting line is white with a red insert.
 4. The relay exchange zone markers are red.
 - a. Exchange zone markers are 36-inch wide by 18-inch high triangles, the two triangles point into the relay exchange zone, and the triangles are included in the 30-meter zone
- Q. 4x400 Meter Relay:
1. Three turn stagger.
 2. Event label:
 - a. 4x400R.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in lane 2 and is above the starting line.
 3. Color of the starting line is white with a blue insert.
 4. The relay exchange zone markers are blue.
 - a. Exchange zone markers are 36-inch wide by 18-inch high triangles, the two triangles point into the relay exchange zone, and the triangles are included in the 30-meter zone.
- R. 4x800 Meter Relay:
1. One turn stagger.
 2. Event label:
 - a. 4x800R.
 - b. 4 inches high.
 - c. The color of the label to be white.
 - d. Located in lane 2 and is above the starting line.
 3. Color of the starting line is white with a green insert.
 4. The relay exchange zone markers are green.
 - a. Exchange zone markers are 36-inch wide by 18-inch high triangles, the two triangles point into the relay exchange zone, and the triangles are included in the 30-meter zone.
- S. Break Lines:
1. The break line shall be a solid green arc line per Rule, Section 1, Article 10.
 2. Provide green dashes on the inside lane line of Lane 5 from box alley 2 start to break lines (both turns).
- T. Finish Line:
1. Location:
 - a. Common: Located per plan.
 2. 2 inches wide and white in color.
 3. The intersection of the finish line with the lane lines shall be painted to conform with the current NCAA recommendation
 4. No lean line is to be provided.

- U. Box Alleys:
1. Provide 1-turn box alley starts for the following events:
 - a. 800.
 - b. 1600.
 - c. 3200.
 2. Box 1 to be lanes 1 through 4.
 3. Box 2 to be lanes 5 through 8.
- V. Long/Triple Jump:
1. Runway lines:
 - a. 2-inch wide lines.
 - b. White in color.
 - c. 48-inch wide runways (inside edge to inside edge of line).
 2. Distance marks:
 - a. Provide 1.5-inch long by 1-inch wide white lines outside the runway on the right hand (direction of running) side every foot beginning at 20 feet from the long jump foul line and extending the length of the runway or 150 feet, whichever is shorter.
 - b. Every 5- and 10-foot line to be 3 inches long by 1 inch wide.
 - c. Every 10-foot line to be labeled below the line facing the athlete.
- W. Pole Vault:
1. Runway lines:
 - a. 2-inch wide lines.
 - b. White in color.
 - c. 48-inch wide runways (inside edge to inside edge of line).
 - d. Terminate runway lines at zero line.
 2. Zero line:
 - a. 1/2-inch wide line.
 - b. White in color.
 - c. 24-foot long centered on back edge of box (not flange).
 3. Marks:
 - a. Provide 36-inch long by 2-inch wide white line with label beside the line in the center of the runway at 12 feet from the back of the plant box.
 - b. Provide 12-inch long by 2-inch wide white lines in the center of the runway at 9, 10, 11, 13, 14, and 15 feet from the back of the plant box. Dimension labels to be placed outside the runway line.
 4. Distance marks:
 - a. Provide 1.5-inch long by 1-inch wide white lines outside the runway on the right- hand side (direction of running) every foot beginning at 15 feet from the plant box and extending the length of the runway or 150 feet whichever is shorter.
 - b. Every 5- and 10-foot line to be 3 inches long by 1 inch wide.
 - c. Every 10-foot line to be labeled below the line facing the athlete.
- X. Discus (Berkeley HS only):
1. Dividing lines:
 - a. 2-inch wide lines.
 - b. White in color.
 - c. Back edge of line to be on centerline of throw circle.

- d. Extend 2.46 feet from edge of throw circle.
 - 2. Sector Lines:
 - a. To be at angle of 34.92 degrees.
 - b. 2-inch wide lines.
 - c. White in color.
 - d. Outside the recessed throwing circle.
- Y. Lane numbers:
 - 1. The numbers are a block style, 24 inches high, and the numbers will not have a color shadow.
 - 2. The color of the numbers will be white.
 - 3. There are 5 sets of numbers:
 - a. There is 1 set of numbers 5 feet before the 110M starting line.
 - b. There is 1 set of numbers 1 foot after the common finish line, facing to the outside of the track oval.
 - c. There is 1 set of numbers staggered in the first turn, above the 400M staggers.
 - d. There is 1 set of numbers staggered at the 300M, above the starting line.
 - e. There is 1 set of numbers staggered at the 200M, above the starting line.
- Z. Interval Marks:
 - 1. Provide a 2-inch wide white line on the inside of the track oval extending from the inside edge of the inside Lane 1 line approximately 4 inches long.
 - 2. These lines are to be at 50-meter intervals starting at the common finish line and running the entire length of the track oval.
- AA. All color markings listed above must be reviewed and verified as correct, as per the rules and regulations of the governing body.

Note: All line markings must be reviewed and verified with the Owner's representative prior to installation.

END OF SECTION

SECTION 321823.41 – SYNTHETIC RUNNING TRACK CERTIFICATION SURVEY

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers all labor and materials required to provide certification of the final track & field facility. The Contractor is responsible for completing all survey work.

1.2 CODES AND STANDARDS

- A. The survey work must be completed by a licensed surveyor.
- B. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFSHSA).

1.3 SUBMITTALS

- A. The following information must be submitted by the Contractor:
 - 1. After installation of the track & field synthetic surface and line markings:
 - a. The Contractor shall submit the below Track & Field Certification Survey, stating the completed facility meets requirements outlined in the NFSHSA Rulebook. The Engineer or Surveyor, selected by the Contractor, must survey the facility's as-built line markings.

- B. Certification Survey:

- 1. Facility Information:

Owner _____

Facility Name _____

Location _____

- 2. Surveyor/Engineer Information:

Firm Name _____

Contact _____

Phone # _____

Registration # _____

- 3. Survey Information:

Date of Survey _____

Weather Conditions _____

1.4 TRACK OVAL MEASUREMENTS

- A. Contractor shall provide for Engineer's review a completed Class 4 Markings Certification for Running Tracks per the latest ASBA (American Sports Builders Association) Construction and Maintenance Manual.
- B. The track survey and certification form shall be completed and stamped and signed by a licensed surveyor and the surveyor shall have provided similar work for at least 5 running tracks in the last 5 years.

END OF SECTION

SECTION 323113 – CHAIN LINK FENCE AND GATES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to, the installation of chain link fence and gates, as shown on the Drawings and as specified herein.
- B. All chain link fence shall be galvanized.

1.2 QUALITY ASSURANCE

- A. Comply with standards of the Chain Link Fence Manufacturer's Institute.
- B. Provide steel fence and related gates as a complete system produced by a single manufacturer, including necessary erection accessories, fittings and fastenings.
- C. Comply with ASTM A53 for requirements of Schedule 40 piping.
- D. Comply with ASTM F1043 Specification for Strength and Protective Coatings of Metal Industrial Fence Framework.
- E. Height of fence shall be measured from the top of concrete footing to the top of post.
- F. Manufacturer: Company shall be headquartered in the US having US manufacturing facility/facilities specializing in manufacturing chain link fence products with at least 5 years of experience.
- G. Fence contractor: Company with demonstrated successful experience installing similar projects and products in accordance with ASTM F567.
- H. Tolerances: Current published edition of ASTM specifications tolerances apply. ASTM specification tolerance supersede any conflicting tolerance.

1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
 - 1. Fence and gate posts, rails and fittings
 - 2. Chain link fabric, reinforcements, and attachments.
 - 3. Gates and hardware.
- B. Shop Drawings: Show locations of fences, gates, posts, rails, tension wires, details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections details of post anchorages, attachment, bracing, and other required installation and operational clearances.
- C. Samples for Verification: For each type of chain-link fence and gate indicated:
 - 1. Galvanized steel wire (for fabric) in 6-inch (150-mm) lengths on shapes for posts, rails, wires and gate framing.

- D. Product Certificates: For each type of chain-link fence and gate, signed by product manufacturer:
 - 1. Strength test results for framing according to ASTM F1043.
 - 2. Material certifications, made in USA, Buy America Act or Buy America when required.
- E. Qualification Data: For installer.
- F. Field quality-control test reports.
- G. Maintenance Data: For the following to include in maintenance manuals:
 - 1. Galvanized finishes.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

PART 2 – PRODUCTS

2.1 STEEL FRAME WORK

- A. Unless noted otherwise on the Drawings, minimum Nominal Framework Sizes shall be the following:

FENCE HEIGHT	LINE POSTS	END, CORNER & PULL POSTS	RAILS & BRACES	GATE FRAMES	*GATE POSTS	CONCRETE FOUNDATION DIA.		DEPTH
						Diameters	Corner/End	
						LINE POSTS	PULL & GATE POSTS	
3'	1-1/2"	2"	1-1/4"	1-1/2"	3"	12"	12"	4'
3'-6"	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
4'	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
4'-6"	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
5'	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
6'	2"	3"	1-1/4"	1-1/2"	4"	12"	18"	4'
8'	2"	3"	1-1/4"	1-1/2"	4"	12"	18"	4'
10'	3"	4"	1-1/4"	1-1/2"	4"	12"	18"	4'
12'	3"	4"	1-1/4"	1-1/2"	4"	12"	18"	5'
16'	3-1/2"	4"	1-1/4"	1-1/2"	4"	12"	18"	5'

SCHEDULE 40 S/L PIPE TABLE		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
1	1.315	1.67
1-1/4	1.660	2.27
1-1/2	1.900	2.71
2	2.375	3.65
2-1/2	2.875	5.79
3	3.500	7.58
3-1/2	4.000	9.11

50,000 PSI HOT DIPPED GALVANIZED STEEL TUBING		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
1	1.315	
1-1/4	1.660	1.83
1-1/2	1.900	2.28
2	2.375	3.12
2-1/2	2.875	4.64
3	3.500	5.71
3-1/2	4.000	6.56

- B. Pipe must comply with ASTM F1043 Group 1A or 1C
- C. Round Steel Pipe and Rail: Schedule 40 standard weight pipe, in accordance with ASTM F1043, materials design Group 1A minimum steel yield strength 30,000 psi. Type A, 1.8 oz/ft² hot dipped galvanized zinc exterior and 1.8 oz/ft² hot dipped galvanized zinc interior coating.

2.2 CHAIN LINK FABRIC

- A. General: Height indicated on Drawings. Provide fabric in one-piece heights for fence heights up to 10 feet measured between top and bottom of outer edge of selvage knuckle or twist. Comply with ASTM A392, CLFMI CLF 2445, and requirements indicated below:
 - 1. Steel Chain Link Wire Fabric:
 - a. Zinc-coated steel fabric: ASTM A392 hot dipped galvanized before or after weaving.
 - 1) Class 2 – 2.0 oz/ft²
 - a) 9-gauge core diameter for fences and gates.
 - b) 6-gauge core diameter for backstops.
- B. Mesh Size:
 - 1. 2 inches for fences.
- C. Selvages: Knuckled top and bottom.

2.3 SWING GATES

- A. Assemble gate frames with fully coped welds as shown on the Drawings or on Shop Drawings approved by the Engineer.
 - 1. All ferrous metal components shall be blast cleaned to and SSPC-6 commercial blast clean.
- B. Galvanized steel welded fabrication in compliance with ASTM F900. Frame members spaced no greater than 8 ft. apart vertically and horizontally. Welded joints protected by applying zinc-rich paint in accordance with ASTM Practice A780. Positive locking gate latch, pressed steel galvanized after fabrication. Galvanized malleable iron or heavy gauge press steel post and frame hinges. Match gate fabric to that of the fence system.

2.4 GATE HARDWARE

- A. Hinges: Non-lift-off type, offset to permit 180-degree swing, and of suitable size and weight to support gate. Provide 1-1/2 pair of hinges for each leaf over 6 feet high.
- B. Latch: Provide plunger bar type complete with flush plate set in concrete for all double gates and single gates over 10 feet. Padlock eye shall be an integral part of latch construction.
 - 1. Provide plunger bar complete with flush plate set in concrete on each gate leaf
 - 2. Provide flush plate set in concrete for both the fully open position and full closed position
- C. Keeper for Vehicle Gates: Provide keeper which automatically engages the gate leaf and holds it in open position until manually released.

2.5 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Post Tops: Steel, wrought iron, or malleable iron.
- B. Stretcher Bars: One piece equal to full height of fabric, minimum cross-section 3/16 inch by 3/4 inch.
- C. Metal Bands (for stretcher bars): Steel, wrought iron, or malleable iron, to secure stretcher bars to end, corner, pull and gate posts.
- D. Wire Ties:
 - 1. For tying fabric to line posts, rails and braces: 9-gauge steel wire.
 - 2. For tying fabric to tension wire: 11-gauge steel hog rings.
- E. Truss Rods: 3/8-inch diameter.
- F. Angle Beams, I Beams and Steel Shapes: ASTM A36.
- G. Bolts and Nuts: ASTM A307, Grade A.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work and other conditions affecting performance:
 - 1. Begin installation in general site areas or those not directly adjacent to the playing field only after final grading including topsoiling and paving is completed in that area or as otherwise permitted by Engineer.
 - 2. For installation directly adjacent to the playing field, coordinate footing installation timing with final installation of playing field materials so as not to contaminate, destroy or displace these playing field materials.
 - 3. If unsatisfactory conditions are present, proceed with installation only after they have been corrected.

3.2 PREPARATION

- A. Coordinate fence and gate installation with completion of finished grading and installation of adjacent finish field materials.
- B. Stake locations of fence lines, gates and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, irrigation system, underground structures, benchmarks and property monuments.

3.3 INSTALLATION

- A. Space posts equidistant in the fence line with a maximum of 10 feet on center or as shown on Drawings.
- B. Footings: Excavate holes as indicated for fence and gate posts. Excavate footings to depths and widths as noted in Specifications or on drawings. Install gravel drainage material in bottom of hole as shown on the drawings.
- C. Setting Posts and Footings at Concrete Areas: Set posts in center of hole. Embed post so that bottom of post is flush with the bottom of concrete footing and in gravel drainage layer. Fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish elevation on top of footing to be coordinated with construction of concrete adjacent to posts or as shown on drawings. Do not attach fabric to posts until concrete has cured a minimum of 7 days.
- D. Setting Posts and Footings at Warning Track Areas: Set posts in center of hole. Embed post so that bottom of post is flush with the bottom of concrete footing and in gravel drainage layer. Fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish elevation on top of footing to be set below finish grade. Do not attach fabric to posts until concrete has cured a minimum of 7 days.
- E. Setting Posts and Footings in Grass Areas: Set posts in center of hole. Embed post so that bottom of post is flush the bottom of concrete footing and in gravel drainage layer. Fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish concrete in a dome shape above ground to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.
- F. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.
- G. Install top rail continuously through post caps or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.
- H. Install intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.
- I. Diagonally brace corner posts, pull posts, and terminal posts to adjacent line posts with truss rods and turnbuckles.
- J. Attach fabric to playing field side of fence. Bottom of fabric to be set on finished grade of curb, track, or playing field except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and two for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30-pound pull is exerted perpendicular to the center

of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches on center. Fasten fabric to steel framework with wire ties spaced 12 inches on center for line posts and 24 inches on center for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.

- K. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and score excess threads.
 - 1. Secure post tops, extension arms, and caps with one-way cadmium plated steel screws.
- L. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary. Attach fabric as for fencing. Install ground-set items in concrete as shown on the drawings.
- M. Touch Up: Small nicks or other blemishes shall be touched up with paint materials suitable for and matching the finish of the damaged material. Severely damaged fencing/gates deemed as unacceptable at the sole discretion of the Owner or its representatives shall be replaced at the contractor's expense.

END OF SECTION

SECTION 329113 – SOIL PREPARATION

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes provisions for the placement of topsoil outside of the athletic field limits in conformance with the lines, grades and thicknesses as shown on the Drawings and as herein specified.
- B. Minimum thickness is 6 inches, for all areas disturbed during construction and not receiving other surface treatment.
- C. The Contractor shall furnish all materials and perform all work in accordance with these specifications, drawings, and instructions provided by the Owner.

1.2 SUBMITTALS

- A. Samples: Furnish earth materials to the testing laboratory for analysis and report, as directed by the Engineer or as outlined in the specifications.
- B. Quality Control Submittals:
 - 1. Test Reports: The testing laboratory shall submit written reports of all tests, investigations, and recommendations to the Contractor and the Engineer. Indicate quantities of materials necessary to bring topsoil into compliance with textural/gradation requirements. Indicate quantity of lime and quantity and analysis of fertilizer.

1.3 REFERENCES

- A. Comply with the latest edition of the following standards:
 - 1. SCDOT Standards
 - 2. “Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO).”
 - 3. ASTM International (ASTM)
 - a. C33, Standard Specification for Concrete Aggregates.
 - b. C602, Standard Specification for Agricultural Liming Materials
 - 4. U.S. Bureau of Reclamation (USBR)
 - a. 514.4.4, Reclamation Instructions, Series 510—Land Classification Techniques and Standards, Part 514—Laboratory Procedures, Chapter 4—Particle-Size Analyses.
 - b. 14.8.7, Reclamation Instructions, Series 510—Land Classification Techniques and Standards, Part 514—Laboratory Procedures, Chapter 8—Soil Chemical Tests

1.4 QUALITY ASSURANCE

- A. Provide and pay for all costs in connection with an approved independent testing facility to determine conformance of soils and aggregate with the specifications.

1.5 PROJECT CONDITIONS

- A. Coordinate the placement of topsoil with the completion of all underground work including that of the other trades.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Topsoil: Natural, friable, fertile, fine loamy soil possessing the characteristics of representative topsoils in the vicinity which produces a heavy growth; free from subsoil, objectionable weeds, litter, sods, stiff clay, stones larger than 1 inch in diameter, stumps, roots, trash, toxic substances, or any other material which may be harmful to plant growth or hinder planting operations. Contractor is to verify amount stockpiled and supply any additional as needed:
1. Topsoil shall contain not less than 6% nor more than 20% organic matter as determined by the wet combustion method (chronic acid reduction); topsoil shall have a pH value of not less than 5.5 nor more than 7.0;
 2. Topsoil shall meet the following mechanical analysis:

SIZE OF SCREEN	% OF SOIL RETAINED	% OF SOIL PASSING
1"	0	100
1/4	3	97
No. 100	40-60	40-60

3. Imported topsoil in which more than 60% of the material passing a No. 100 sieve shall be rejected. All percentages are to be based on the dry weight of the samples.
4. Laboratory tests of the topsoil shall be performed by a certified testing laboratory, and shall perform tests for the following:
 - a. Sieve particle size analysis and gradient of mineral content
 - b. Chemical analysis of the following:
 - 1) pH and buffer pH.
 - 2) Percent of organic content.
 - 3) Nutrient levels of phosphorus, potassium magnesium, manganese, iron, zinc and calcium.
 - 4) Soluble salt.
 - 5) Cation exchange capacity (CEC).
 - c. Recommended fertilizer and rate of application for low and medium level nutrient soils.

2.2 MATERIAL ACCEPTANCE

- A. Topsoil may be acquired from approved sites that are designated on the Drawings. If no sites are designated, material proposed for use as topsoil must be stockpiled, sampled, and tested prior to use.
- B. Topsoil containing foreign material may be rejected on the basis of visual examination by the Engineer, prior to testing.
- C. Acceptance of topsoil shall be based upon test results. Tested topsoil must be approved in writing by the Engineer before any material is used.

2.3 SOIL AMENDMENT

- A. Textural Amendments: Amend as necessary to conform to required composition by incorporating sand, peat, manure, or sawdust
- B. Fertilizer: Shall be delivered to the site, mixed as specified, in the original unopened standard size bags showing weight, analysis and name of manufacturer. Store fertilizer in a weatherproof place and in such a manner that it shall be kept dry and its effectiveness shall not be impaired.

1. Percentages of nitrogen, phosphorus and potash shall be based on laboratory test recommendations. For the purpose of bidding, assume 10% nitrogen, 6% phosphorus and 4% potash by weight. At least 50% of the total nitrogen shall contain no less than 3% water-insoluble nitrogen. At least 60% of the nitrogen content shall be derived from super-phosphate containing not less than 18% phosphoric acid or bone meal containing 25% to 30% phosphoric acid and 2% to 3% nitrogen. Potash shall be derived from muriate of potash containing 55% to 60% potash.
 2. Grass or sodded areas shall have fertilizer applied according to soil text report or as specified on the drawings.
- C. Organic Matter: Leaf matter and yard waste composted sufficiently to break down all woody fibers, seeds, and leaf structures, and free of toxic and non-organic matter. Organic matter shall be commercially prepared compost. Coarse sand shall be clean, sharp, natural sands free of limestone, shale and slate particles, ASTM C33 fine aggregate with a Fines Modulus Index of 2.75 or greater.
- D. Lime: Shall be ground palletized, or pulverized lime manufactured to meet agricultural standards and contain a maximum of 60% oxide.

PART 3 – EXECUTION

3.1 STOCKPILING

- A. Stockpile topsoil from on-site sources or provide from off-site sources and stockpile, if on-site quantities are deficient.
- B. Stockpiles are to contain not less than 200 cubic yards or the minimum required for the project.
- C. Stockpiles are to have a maximum height of 10 feet and be trimmed to uniform surfaces and slopes.
- D. The sites of all stockpiles and adjacent areas, which have been disturbed are to be graded and put into an acceptable condition by seeding, as directed by the Engineer.

3.2 PREPARATION

- A. Preparation - Disk, drag, harrow or hand rake subgrade to a depth of 3 inches to provide bond for topsoil. Topsoil, which must be transported across finished walks, shall be delivered in such a manner that no damage will be done to the walks. The Contractor shall be responsible for the repair of such damage.
- B. Before placing topsoil, rake subsoil surface clear of stones larger than 1.5 inches, debris, and roots. Compact topsoil to form a layer with minimum depth of 4 inches in lawn areas and 12 inches in shrub beds. Topsoil shall be placed so that after final settlement there will be good drainage (and conforming to elevations shown on drawings). Contractor is to maintain surfaces and place any additional topsoil necessary to replace that which may have eroded before acceptance.
- C. Locations containing unsuitable subsoil shall be treated in one of the following manners:
 1. Where unsuitability within the construction site is deemed by the Owner to be due to excessive compaction caused by heavy equipment or by the presence of boards, mortar, concrete or other construction materials in subgrade, and where the natural subsoil is other than A.A.S.H.T.O. classification of A6 or 7, the Contractor shall loosen such areas with spikes, discs, or other means to loosen the soil to a condition acceptable by the Owner. The Contractor shall also remove all debris and objectionable material. Soil should be loosened to a minimal depth of

12 inches with additional loosening as required to obtain adequate drainage. Contractor may introduce peat moss, sand, or organic matter into the subsoil to obtain adequate drainage should he so desire. All such remedial measures shall be considered as incidental to the work and no extra payment shall be made for this part of the work; and

2. Where subgrade is deemed by the Owner to be unsuitable because the natural subsoil falls into an AASHTO classification of A6 or 7 and contains moisture in excess of 30%, then such a condition shall be rendered suitable by installation of a subdrainage system or by other means described elsewhere in these specifications. Where such conditions have not been known or revealed prior to planting time and where they have not been recognized in the preparation of drawings and specifications, then the Owner shall issue a change order to install the proper remedial measures, all of which shall be in addition to the contract sum.

3.3 TOPSOIL PLACEMENT

- A. Do not place topsoil when subsoil or topsoil is frozen, excessively wet, or otherwise detrimental to the Work.
- B. Mix soil amendments, lime, and fertilizer with topsoil before placement or spread on topsoil surface and mix thoroughly into entire depth of topsoil before planting or seeding. Delay mixing of fertilizer if planting or seeding will not occur within 3 days.
- C. Place 1/2 of total depth of topsoil and work into subgrade soil to create a transition layer. Place remainder of topsoil to depth after compacting to 75% where seeding and planting are scheduled.
- D. Uniformly distribute to within 1/2 inch of final grades. Fine grade topsoil eliminating rough or low areas and maintaining levels, profiles, and contours of subgrade to ensure positive drainage.
- E. Remove stones exceeding 1 inch, roots, sticks, debris, and foreign matter during and after topsoil placement.
- F. Remove surplus subsoil and topsoil from Site. Grade stockpile area as necessary and place in condition acceptable for planting or seeding.

3.4 CLEANING

- A. Remove all surplus subsoil and topsoil from project site.
- B. Leave the site in clean, satisfactory condition ready to receive subsequent operations.

END OF SECTION