

Project Manual

Livonia Public Schools
Garfield Skills Center – Thrive Track
Livonia, Michigan

Date: October 1, 2026

Issued for: Construction Documents

Owner: Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

Landscape Architect: Foresite Design, Inc.
26777 Central Park Blvd
Suite 125
Southfield, MI 48076
Ph: 248-547-7757
Email: mike@foresitedesign.com

Civil Engineer: Spalding DeDecker Associates
905 E South Blvd.
Rochester Hills, MI 48307

Owner's Representative: Plante Moran Realpointe
3000 Towne Center, Suite 100
Southfield, MI 48075



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**REQUEST FOR BIDS
FOR
THRIVE TRACK BID**

**LIVONIA PUBLIC SCHOOLS
15125 FARMINGTON ROAD
LIVONIA, MICHIGAN 48154
Telephone: 734-812-8597
Email: hlau@livoniapublicschools.org**

I. OVERVIEW

1.1 PURPOSE

Livonia Public Schools (hereinafter the “School District” or “Owner”) is seeking bids from qualified contractors for the purpose construction of a Thrive Track at Garfield Community School. The purpose of this Request For Bids for the Thrive Track Bid (the “RFB”) is to obtain bids from experienced and qualified contractors for demolition and reconfiguration and installation of outdoor track, and related work as set forth in this RFB and the Contract (the “Work”). The Contractor shall perform all Work and other construction work/services necessary at the School District in accordance with the respective Plans, Specifications and Minimum Compliance Requirements set forth in **APPENDIX A**, attached hereto and incorporated herein by reference. The School District may select one or more experienced and qualified contractors to proceed with the post-Bid interview process from those submitting Bids. The process will include the review and evaluation of methods and procedures used to provide effective construction services for the School District within the scope of this RFB. Past experience will also be judged through the references of each entity. Each Bid must detail the contractor’s experience and expertise in order to allow the School District to properly and promptly evaluate each Bid, and the failure to do so may cause the School District to reject said Bid. The School District will select the Bid or Bids, if any, that it deems most qualified to serve the best interests of the School District, in its sole and absolute discretion. The School District, in its sole and absolute discretion, reserves the right to request post-Bid interviews from all, some or none of the entities submitting Bids.

1.2 RFB TIMELINE

NOTE: Throughout the remainder of this RFB, each bidder/prospective contractor is referred to as the “Contractor.”

The School District’s **anticipated timeline** for its selection process is:

Issuance of this RFB	October 1, 2026
Bid Kick-off Meeting – Board Office	12:00 p.m October 7, 2026
Deadline For Written Requests For Clarifications	12:00 p.m. October 14, 2026
DUE DATE FOR BIDS	12:00 p.m. October 21, 2026
Contractor Post-Bid Interviews	TBD
School District’s Consideration of the Contract	November 9, 2026
Commencement of Work	Spring 2027
Deadline for Substantial Completion of Work	n/a
Deadline for Final Completion of Work	September 2027

PLEASE NOTE: The School District reserves the right, in its sole and absolute discretion, to make modifications to the RFB timeline set forth in Section 1.2 above as it determines to be in its best interest.

II. SUBMISSION OF BIDS

2.1 BID SUBMISSION DEADLINE AND REQUIREMENTS

The Due Date for receipt of Bids is:

October 21, 2026 at 12:00 p.m. (local time) (the “Due Date”)

2.1.1 Bid Envelope: The opaque envelope containing your Bid must be marked in the lower left hand corner as follows:

SEALED BID ENCLOSED
Livonia Public Schools
Thrive Track Bid
[Contractor’s Name]
[Contractor’s Address]
[Contractor’s Telephone Number]

The envelope must also be addressed and delivered as follows:

Livonia Public Schools
Attention: Jeffrey Burnside
15125 Farmington Road
Livonia, Michigan 48154

2.1.2 Late Bids: Each Contractor is responsible for submission of its Bid. Bids or Bid revisions received after the Due Date will not be accepted or considered. The School District is not liable for any delivery or postal delays or any other delays affecting Contractor’s Bid submission.

2.1.3 Returned Bids: All Bids received after the Due Date will be unopened and made available to the respective Contractor for pick-up, at their sole cost and expense for a period of two (2) weeks from the Due Date.

2.1.4 Signed Original Bid: Each Bid must be an original hard copy and signed by an authorized member of the Contractor’s firm. NO ORAL, FAX or E-MAILED Bids will be accepted. Each Bid must be submitted on the Bid Forms attached to this RFB.

2.1.5 Copies of Bid: The Contractor shall also submit with the signed original Bid, along with three (3) complete copies of the signed original Bid.

2.1.6 Opening of Bids: At the specified location and Due Date stated above, all submitted Bids shall be publicly opened and read aloud. Any interested parties may attend. No immediate decision will be rendered.

2.1.7 E-Mail Clarifications: The School District intends to communicate with Contractors via e-mail (e.g., RFB clarifications and addenda). Except for the delivery of the Bid itself, references in this RFB to “written” form of communications include e-mail.

2.1.8 Additional Requests For Clarification: Prospective Contractors may request that the School District clarify information contained in this RFB. All such requests

must be made in writing via email. The School District will attempt to provide a written response to all written Requests For Clarification within three (3) business days after the receipt of such request. The School District will not respond to any Request For Clarification received after the date and time identified in Section 2.1 above. Requests For Clarification must be made via e-mail and must be directed to Harry Lau at hlau@livoniapublicschools.org, (Subject Line: Thrive Track Bid RFB Request For Clarification). No response will be made to any oral questions. All questions and answers will be posted on the School District's website. It is each Contractor's responsibility to check the School District's website prior to the RFB Due Date to ensure that it has received all of the information, including, but not limited to, all Addenda to this RFB.

- 2.1.9 Restrictions on Communication:** From the issue date of this RFB until a Contractor is selected and the selection announced, a prospective Contractor shall not communicate about the subject of this RFB or a Contractor's Bid with the School District, its Board of Education, or any individual member, administrators, faculty, staff, students or employees, except for additional Requests For Clarification in accordance with Section 2.1.8 above, or as otherwise required by applicable law.
- 2.1.10 Addenda to the RFB:** If it becomes necessary to revise any part of this RFB, notice of the revision will be issued and all addenda shall become a part of this RFB. Each Contractor must in its Bid, to avoid any miscommunication, acknowledge all addenda which it has received, but the failure of a Contractor to receive, or acknowledge receipt of, any addendum shall not relieve the Contractor of the responsibility for complying with the terms thereof. All Addenda will be posted to the School District's website.
- 2.1.11 RFB/Bid Information Controlling:** The School District intends that all Contractors shall have equal access to information relative to this RFB, and that this RFB contains adequate information. No information communicated, either verbally or in writing, to or from a Contractor shall be effective unless confirmed by written communication contained in an addendum to this RFB, a Request For Clarification or other written response thereto, or in the Bid.
- 2.1.12 Finality of Decision:** Any decision made by the School District, including the Contractor selection, shall be final.
- 2.1.13 Reservation of Rights:** The School District reserves the right, in its sole and absolute discretion (for this provision and all other provisions contained in this RFB), to accept or reject, in whole or in part, any or all Bids with or without cause. The School District further reserves the right to waive any irregularity or informality in the RFB process or any Bid, and the right to award the Contract to other than the Contractor submitting the best financial Bid (low bidder). The School District reserves the right to request additional information from any or all Contractors. The School District reserves the right to award the Work to one (1) or more Contractors. In the event a Contractor's Bid is accepted by the School District and that Contractor asserts exceptions, special considerations or conditions after

acceptance, the School District, in its sole and absolute discretion, reserves the right to reject the Bid and award the Contract to another Contractor.

- 2.1.14 Release of Claims:** Each Contractor by submitting its Bid releases the School District from any and all claims arising out of, and related to, this RFB process and selection of a Contractor.
- 2.1.15 Contractor Bears Bid Costs:** A recipient of this RFB is responsible for any and all costs and liabilities incurred by it or others acting on its behalf in preparing or submitting a Bid, or otherwise responding to this RFB, or any negotiations incidental to its Bid or this RFB.
- 2.1.16 Irrevocability of Bids:** All Bids submitted shall not be withdrawn and shall be irrevocable for a minimum period of ninety (90) calendar days following the Due Date for receipt of Bids set forth above.
- 2.1.17 Collusive Bidding:** By submission of a Bid, the Contractor certifies that its Bid is made without any previous understanding, agreement or connection with any person, firm or corporation making a Bid for the same Work and is in all respects fair, without outside control, collusion, fraud or otherwise illegal action.
- 2.1.18 Incorporation By Reference:** The Contract shall incorporate by reference this RFB and the Bidder's Bid. It is acknowledged by the Bidder that exceptions or special conditions of the Bidder will not be binding upon the School District unless those exceptions or special conditions are expressly accepted by the School District and specifically incorporated into the final Contract.

2.2 BID REQUIREMENTS AND FORMAT

This outlines the information that must be provided by each Contractor and the required format for its Bid. Any Bid not providing the required information, or not conforming to the format specified, may be disqualified on that basis. Please also refer to Sections 2.1, 5.1 and 5.2 of this RFB for additional Bid requirements. Attached to this RFB is a form of contract under which Work requested under this RFB shall be provided by the successful Contractor (the "Contract" and referred to throughout the Contract as the "Agreement") (See also Section 4.1 of this RFB). The Contract contains many details relative to the Work requested by the School District, the terms and conditions under which the Work shall be provided by the Contractor and should be reviewed carefully by each Contractor prior to submitting a Bid.

Any exceptions to the terms and conditions contained in this RFB or the form of Contract attached to this RFB, or any other special considerations or conditions requested or required by the Contractor MUST be specifically enumerated by the Contractor and be submitted as part of its Bid, together with an explanation as to the reason such terms and conditions of the RFB or form of Contract cannot be met by, or, in the Contractor's opinion, are not applicable to, the Contractor. The Contractor shall be required and expected to meet the Specifications, Minimum Compliance Requirements and other requirements as set forth in this RFB and the form of Contract in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the Contractor's Bid and those exceptions or

special considerations or conditions are expressly accepted by the School District. All Pricing factors must be clearly indicated in the manner required on the Bid Forms provided as part of this RFB.

Each Bid must include, at a minimum, the following:

- 2.2.1 **License.** Confirmation of all required licenses held by the Contractor necessary to perform the Work.
- 2.2.2 **Exceptions.** A detailed list setting forth any exceptions to this RFB and/or the Contract, or other special considerations or conditions of the Contractor, including explanations of such exceptions or the reason such terms and conditions of the RFB or form of Contract cannot be met by, or on the Contractor's opinion are not applicable to, the Contractor.
- 2.2.3 **References.** Each Bid must include detailed evidence that the Contractor has provided or is currently providing work, preferably for other K-12 public school districts or educational institutions, of similar scope and size. The Contractor must provide this information, including contact names, addresses, phone numbers and type of Work provided.
- 2.2.4 **Insurance and Bonding.** Evidence of the Contractor's ability to provide adequate insurance coverages and bonds as required by this RFB and the Contract to protect the interests of the Contractor and the School District.
- 2.2.5 **Legal Compliance.** Demonstrate that the Contractor understands and will comply with all regulatory laws, codes, and requirements of any Local, State, and Federal laws that apply to the requirements and obligations under this RFB and the Contract, including, but not limited to, the Americans with Disabilities Act ("ADA"), the Revised School Code, MCL 380.1 et seq., including but not limited to MCL 380.1264, as amended, the School Building Construction Act, MCL 388.851 et seq., the Stille-Derosett-Hale Single State Construction Code Act, MCL 125.1501 et seq., the Michigan Building Code, prevailing wage requirements of MCL 408.1101, et seq., as amended and as applicable ("Michigan's Prevailing Wage Act"), including the maintenance of certified payroll records and the maintenance of other records as may be necessary to enable compliance with the reporting or inspection requirements under the Michigan's Prevailing Wage Act, federal, state and local environmental laws and regulations, and the rules and regulations, policies, guidelines and consent, administrative or other lawful orders of all public authorities having jurisdiction over the project, the Work site, the Work or the prosecution of the Work. All Work must be performed in accordance with all applicable laws, rules, regulations, ordinances and School District policies.
- 2.2.6 **Bid Form.** A completed Bid Pricing Form provided as **APPENDIX B.**
- 2.2.7 **Familial Disclosure Affidavit.** All Contractors must provide familial disclosure in compliance with MCL 380.1267 and attach this information to its Bid. The Bid must be accompanied by a sworn and notarized statement disclosing any familial

relationship that exists between the owner and/or any employee of the Contractor and any member of the School District's Board of Education or the School District's Superintendent. The School District will not accept a Bid that does not include this sworn and notarized disclosure statement. The Familial Disclosure Affidavit is attached to this RFB as **APPENDIX C**.

2.2.8 Iran Sanctions Affidavit. In accordance with Michigan Public Act No. 517 of 2012, all Bids must be accompanied by a sworn and notarized statement certifying that the Contractor is not an Iran Linked Business. The School District will not accept a Bid that does not include this sworn and notarized statement. The Affidavit of Compliance – Iran Economic Sanctions Act is attached to this RFB as **APPENDIX D**.

2.2.9 Affidavit of Compliance – Criminal Background Checks. Each Bid must also be accompanied by a sworn and notarized statement certifying that the Bidder has performed and/or will perform sufficient criminal background checks for all of its owners, employees, agents, representatives, contractors and/or other personnel who will be on any School District premises to carry out the Work contemplated by the Contract Documents and that no owner, employee, agent, representative, contractor and/or other personnel of the Contractor will be on any School District premises if they are a registered criminal sexual offender under the Sex Offenders Registration Act, Public Act 295 of 1994, or have been convicted of "Listed Offense" as defined under Section 722 of the Sex Offenders Registration Act, MCL 28.722. The School District will not accept a Bid that does not include this sworn and notarized statement. The Affidavit of Compliance – Criminal Background Checks is attached to this RFB as **APPENDIX E**.

2.2.10 Bid Bond. All Contractors must include "bid security" in the form of a bid bond from a qualified surety on an unmodified AIA Form A310 (2010), a certified check or a cashier's check in the amount of five percent (5%) of the Contractor's total Bid amount as a condition for consideration of award. Bid bonds shall be duly executed by the Contractor as principal and having as surety thereon, a company authorized to execute such in the State of Michigan. All Sureties must be listed in the Department of Treasury's Circular 570. The bid bond shall pledge that the Contractor, with the understanding that if their Bid is accepted, will enter into the Contract with the School District for the Work stated in their Bid and will furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder. The attorney who signs the surety bid bond must file with the bond, a certified and effectively dated copy of the power of attorney. Bid securities will be returned to the successful Contractor after a Contract has been executed, and acceptance of required bonds and insurance is made. The bid security of all Bidders may be retained until a Contract is awarded. The bid security obligee shall be the School District and shall become its property in the event that the Contractor fails, within fifteen (15) days of notice of award, to execute the Contract, deliver the performance and payment bonds, and send the required certificates of insurance. The Bid security shall be forfeited to the School District as liquidated damages, not as a penalty.

- 2.2.11 List of Subcontractors.** Each Contractor must provide a list of all subcontractors it will utilize to perform the Work as part of its Bid. Failure to provide a complete list of subcontractors may be grounds for rejection of the Bid as incomplete. If awarded all or a portion of the Work, once the list of subcontractors is approved by the School District, it cannot be modified by the Contractor without the prior written approval of the School District and failure to obtain such prior written approval will be grounds for termination of the Contract.
- 2.2.12 Safety Data Sheets.** Each Contractor shall prior to the commencement of any Work on-site provide the School District with its Safety Data Sheets (“SDS”) for all hazardous or other applicable materials that will be brought onto School District property as part of the Work.

2.3 ORAL INTERVIEWS

The School District may require selected Contractors to participate in a post-Bid interview to discuss their Bid. In that case, the School District will notify the Contractor’s contact name as listed in its Bid. In accordance with the RFB selection timeline, it is anticipated that interviews will be scheduled during the times set forth in Section 1.2 above.

2.4 INDEPENDENT CONTRACTUAL RELATIONSHIP

It must be understood that this RFB provides for the selection of a Contractor to provide the Work for the School District on an independent contractor basis.

III. SCOPE OF WORK

The scope of the Work, Specifications and Minimum Compliance Requirements are set forth in **APPENDIX A**, as well as the other Appendices/Attachments attached to this RFB, which are all incorporated herein by reference. The School District has included the various Specifications, Minimum Compliance Requirements and functions in **APPENDIX A** to ensure Work as installed shall provide the functionality desired by the School District. The name of a model, manufacturer or brand in this RFB shall not be considered as exclusive of other brands. Brands and models specified in this RFB are preferred. The School District expects all supplies, materials, equipment or products bid by a Contractor to meet or exceed the Specifications and Minimum Compliance Requirements set forth in this RFB. Further, it is the School District’s intent that this RFB permit competition. Accordingly, the use of any patent, proprietary name or manufacturer’s name is for demonstrative purposes only and is not intended to curtail competition. Whenever any supplies, material, equipment or products requested in this RFB are specified by patent, proprietary name or by the name of the manufacturer, unless stated differently, such specification shall be considered as if followed by the words “or comparable equivalent,” whether or not such words appear. The School District in its sole and absolute discretion, shall have the right to determine if the proposed equivalent products/brands submitted by the Contractor meet the Specifications and Minimum Compliance Requirements contained in this RFB and possess equivalent and/or better qualities. It is the Contractor’s responsibility to notify the School District in writing if any Specifications, Minimum Compliance Requirements or suggested

comparable equivalent products/brands require clarification by the School District a minimum of one (1) week prior to the Due Date for Bids. Any and all deviations from Specifications or Minimum Compliance Requirements must be noted on the Bid Form. Additionally, Contractors are responsible for verifying the accuracy of measurements and materials specified prior to submitting its Bid. Any discrepancies in the Specifications and Minimum Compliance Requirements shall be immediately communicated to the School District.

IV. CONTRACTUAL OBLIGATIONS

4.1 FORM OF CONTRACT

Form of Contract: This is a Request For Bids only. Bids will be treated as offers to enter into the Contract (as defined above) with the School District. The School District and successful Contractor shall memorialize their contractual relationship and obligations using the form of Contract attached hereto as **APPENDIX G**. The Contract contains many details relative to the Work required under this RFB, as well as the terms and conditions under which the Work shall be provided by the successful Contractor. The Contract should be reviewed carefully by each Contractor prior to submitting a Bid. Any exceptions to the terms and conditions contained in the Contract, or any other special considerations or conditions requested or required by the Contractor relative to this RFB or the form of Contract shall be expressly/specifically enumerated by the Contractor and be submitted as part of its Bid, together with an explanation as to the reason such terms and conditions cannot be met by, or, in the Contractor's opinion are not applicable to, the Contractor, provided however, that exceptions or special conditions of the Contractor will not be binding upon the School District unless those exceptions or special conditions are expressly accepted by the School District, and incorporated into the final Contract. Following the selection of the successful Contractor by the School District, the Contract will be finalized by the parties. The final Contract shall be subject to the review and approval by the School District's legal counsel. The below sections contain information relative to selected provisions of the Contract and/or the expectations of the School District relative to the provision of the Work. This information is provided to assist the Contractor in evaluating the School District and submitting a Bid and should neither supplant the terms and conditions of the Contract nor a careful review of the Contract by the Contractor.

4.2 PERFORMANCE AND PAYMENT BONDS

The successful Contractor whose Bid and/or awarded Contract amounts are \$50,000 or more will be required to furnish Performance and Payment Bonds, in a form satisfactory to the School District on an unmodified AIA Form A312 (2010), in the amount of 100% of the final Contract amount by a Treasury listed Surety licensed to do business in the State of Michigan, and the attorney-in-fact who executed the Performance and Payment Bonds on behalf of the Contractor shall attach a certified, current copy of its power of attorney. **The cost of the Bonds shall be included in each Bid form, if applicable.**

4.3 PROJECT COMPLETION PERIOD & SCHEDULING

The development of the Work is weighed heavily on the ability of the Contractors to have all Work finished in sufficient time. The Contractor must commence and complete the Work within the timeframes set forth in Section 1.2. Time and coordination are the essence of the Contract. The School District's operations must continue uninterrupted throughout the construction process. Certain portions of the Work must be performed and completed in such order as directed by the School District so as to permit the orderly operation of the School District's activities or operations. Each Contractor shall review the Work to assure proper coordination to complete their Work per the project schedule. The School District reserves the right to suspend Work wholly or in part if deemed necessary for the best interest of the School District. This suspension will be without compensation to the Contractor, other than to adjust the Contract completion/delivery requirements. The Work shall be performed, primarily, between 7:00 AM to 11:00 PM, Monday through Saturday, or during school holidays. Any changes to the established schedule must have prior approval of the School District's representative and scheduled at the least disruptive time possible.

4.4 WORKMANSHIP/INSPECTION

Where not more specifically described in any of the various sections of the Specifications and Minimum Compliance Requirements, workmanship shall conform to all of the methods and operations of best standards and accepted practices of the trade or trades involved, and shall include all items of fabrication, construction or installation regularly furnished or required for completion of the Work. All Work shall be executed by personnel skilled in their respective line of work. This Work will not be subcontracted without written authorization by the School District. The Contractor shall request the School District to conduct a site inspection after the Work is complete. The School District, or its designated agent/representative, will prepare a "punch-list" during the inspection and will forward a copy of the "punch-list" to the Contractor. After the "punch-list" items have been corrected, the Contractor will request a final inspection with the School District. Final project approval is contingent upon the School District's final inspection and written approval.

4.5 WARRANTY

Contractor shall perform all duties required of this project in such a way that the manufacturer's warranty is not violated in any manner. Contractor is responsible for identifying any and all deviations of the RFB's Specifications from the manufacturer's guidelines. All such deviations must be detailed in the Contractor's Bid at time of submittal. Manufacturer specifications shall prevail in any and all instances where the RFB's Specifications differ from the manufacturer's specifications. All materials and supplies shall be guaranteed against defects in manufacturing and materials; defective products will be replaced in accordance with the Contract. All materials and products shall be guaranteed against defects in manufacturing and material and such warranty shall cover parts, materials, labor, delivery, and installation in accordance with the Contract. All labor for the installation of the project shall be warranted in accordance with the Contract. Please provide in your Bid Form the type and length of warranties provided as part of the Work.

4.6 PRICING & PAYMENT METHODS

Prices quoted are to be F.O.B. to the School District. All prices shall be net; including transportation, insurance and delivery charges fully prepaid by the successful Contractor to destinations indicated in the Bid. Payment is to be made from Contractor's invoice in accordance with the Progress Payment schedule set forth in the Contract. Invoices must include a copy of the signed delivery invoices, submitted to cover items received and accepted, and Work/services rendered, during the billing period. Invoices must contain the contract number under which the Contract is awarded.

4.7 SAFETY

The Contractor shall be responsible for providing and for placing barricades, tarps, plastic, flag tape and all other safety/traffic control measures necessary to protect its employees, the public, surrounding areas, equipment and vehicles. The flow of vehicular traffic shall not be impeded at any time during this project. The safety of the Contractor's employees and the public is of prime concern to the School District, and the Contractor must take all necessary steps to assure proper safety during the performance of the Contract. Any Contractor that has a history of safety problems or a high incidence of accidents will not be considered for award of a Contract. The Contractor shall keep the premises clean of all rubbish and debris generated by the Work involved and shall leave the School District's premises neat and clean. All surplus material, rubbish, and debris shall be disposed of by the Contractor at the Contractor's expense. The Work area shall be cleaned at the end of each workday. All materials, tools, equipment, etc., shall be removed or safely stored. The School District is not responsible for theft or damage to the Contractor's property. All possible safety hazards to workers or the public shall be corrected immediately and left in a safe condition at the end of each workday. If there is a question in this area, the School District or its agent will be consulted. The School District does not assume any responsibility, at any time, for the protection of or for loss of materials, from the time that the Contract operations have commenced until the final acceptance of the Work by the School District.

4.8 INSURANCE OF CONTRACTOR

The Contractor shall maintain the insurance coverages with minimum limits as set forth in the Contract.

4.9 GOVERNING LAW

The Contract shall be governed by and construed in accordance with the laws of the State of Michigan. The parties hereby agree to the exclusive jurisdiction and venue of courts sitting in Wayne County, Michigan.

4.10 INDEMNIFICATION

Contractor shall indemnify, defend and hold harmless the School District, its Board of Education, its Board Members, in their official and individual capacities, its administrators, employees, agents, contractors, successors and assigns, from and against any and all claims, counter claims, suits, debts, demands, actions, judgments, liens, costs, expenses,

damages, injuries and liabilities, including actual attorney's fees and actual expert witness fees arising out of or in connection with Contractor's performance of the Contract and/or from Contractor's violation of any of the terms of the Contract, including, but not limited to: (i) the negligent acts or willful misconduct of the Contractor, its officers, directors, employees, successors, assigns, contractors, subcontractors and agents; (ii) any breach of the terms of the Contract by the Contractor, its officers, directors, employees, successors, assigns, contractors, subcontractors and agents; (iii) any violation or breach of any applicable Federal, State or local law, rule, regulation, ordinance, policy and/or licensing and permitting requirements applicable to the Contract; or (iv) any breach of any representation or warranty by the Contractor, its officers, directors, employees, successors, assigns, contractors, subcontractors and agents under the Contract. The Contractor shall notify the School District by certified mail, return receipt requested, immediately upon actual knowledge of any claim, suit, action, or proceeding for which the School District may be entitled to indemnification under the Contract. This paragraph shall survive the expiration or earlier termination of the Contract and shall not be limited by the Contractor's insurance obligations contained in the Contract.

4.11 TAXES

The School District is exempt from taxes. However, state and local taxes are required on construction materials installed by the Contractor, and such taxes **must be included** in the Contractor's Bid price.

4.12 SCHOOL DISTRICT CONTRACTOR CODE OF CONDUCT

While performing any Work under the Contract, each Contractor, including its employees, agents and subcontractors, must abide by the School District's Contractor Code of Conduct, which is attached hereto and incorporated herein as **APPENDIX F**.

V. BID

5.1 BID FORMS AND PRICING

Each Contractor shall submit its Bid using the Bid Pricing Form attached hereto as **APPENDIX B**, along with any other information required by this RFB or deemed necessary and appropriate by the Contractor for evaluation of its Bid. Bid Pricing is to reflect an award by the School District of Work contemplated in, and in accordance with, the terms and conditions of the RFB and the Contract. Pricing shall be broken down by the Contractor and quoted as required in the Bid Form set forth in **APPENDIX B**. All pricing shall be on a lump sum basis which includes all costs and expenses of Contractor to complete the respective Work, such as all supplies, materials, labor, equipment, Prevailing Wage Rates, insurance, permits, bonds (if applicable), taxes, overhead/profit, etc.

5.2 BIDDING CHECKLIST

In addition to the Bid Pricing Form and any information required under Section 5.1 above, please attach copies of the following documents to your Bid:

- 5.2.1** Bid Pricing Form and detailed list setting forth any exceptions to the RFB and/or Contract, or other special considerations or conditions of the Contractor, including explanations of such exceptions or the reason such terms and conditions of the RFB or form of Contract cannot be met by, or are not applicable to, the Contractor.
- 5.2.2** Provide a list of Contractor's References (K-12 references preferred) with which Contractor has contracted to perform the work or services similar to the Work described herein. The Contractor must provide this information, including contact names, addresses, phone numbers and type and scope of work/services provided.
- 5.2.3** Contractor's Verification of addenda to the RFB, if any.
- 5.2.4** Evidence of the Contractor's ability to provide adequate insurance coverages as required by this RFB and the Contract to protect the interests of the Contractor and the School District.
- 5.2.5** A completed Familial Disclosure Affidavit, which is attached hereto as **APPENDIX C.**
- 5.2.6** A completed Iran Sanctions Act Affidavit of Compliance, which is attached hereto as **APPENDIX D.**
- 5.2.7** A completed Affidavit of Compliance – Criminal Background Checks, which is attached hereto as **APPENDIX E.**
- 5.2.8** Provide the Bid Pricing Form, a copy of the State Projection Registration for Contractor, and any Subcontractors who intend to work on the project.

APPENDIX A

SPECIFICATIONS AND COMPLIANCE REQUIREMENTS FOR THE WORK

1. **SPECIFICATIONS:** Drawings, Plans and Specifications (collectively the “Specifications”) for the Work may be accessed on the State of Michigan SIGMA website or the Livonia Public Schools’s website.
2. **MINIMUM COMPLIANCE REQUIREMENTS:**

When submitting a Bid, each Bidder acknowledges and agrees to the following:

- **Equipment:** Equipment shall be new, unused, and of current model under standard production by the manufacturer.
- **Equipment Deviation:** Any deviation from the equipment listed must be noted in writing on **Appendix B** as an exception.
- **Subcontracting:** Work/services provided for this project may not be subcontracted without the prior written approval of the School District.
- **Suspensions and Debarment:** The Contractor hereby certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any contracts with Livonia Public Schools or the State of Michigan.
- **Warranties:** The Contractor warrants that all articles, materials, and goods shall be consistent with manufacturer’s specifications and will be free from defects. The School District reserves the right to return any goods that are not as warranted to the Contractor at the Contractor’s sole expense, for either replacement with an acceptable product or credit, without additional charge to the School District.
- **Certification of Specifications Compliance:** Certifies compliance with the items listed above and further certifies that the company is licensed to perform the Work/services and provide the articles, materials, and goods stated in this RFB.

3. **STATE PREVAILING WAGES:**

State Prevailing Wages Rates for this project for all classes of construction mechanics required for the Work are contained in this **Appendix A**, as **APPENDIX A-1**.

(SEE ATTACHED APPENDIX A-1)

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
3.1 Power Equip. Operator - Highway & Heavy			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$71.46	\$94.57	\$117.67
Apprentice: Level 1 0 - 6 Months	\$57.61	\$73.79	\$89.97
Apprentice: Level 2 7 -12 Months	\$59.93	\$77.28	\$94.61
Apprentice: Level 3 13 - 18 Months	\$62.23	\$80.73	\$99.21
Apprentice: Level 4 19 - 24 Months	\$64.54	\$84.19	\$103.83
Apprentice: Level 5 25 - 30 Months	\$66.85	\$87.66	\$108.45
Apprentice: Level 6 31 - 36 Months	\$69.15	\$91.10	\$113.05

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
3.2 Power Equip. Operator - Highway & Heavy			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.31	\$92.84	\$115.37
Apprentice: Level 1 0 - 6 Months	\$56.81	\$72.59	\$88.37
Apprentice: Level 2 7 -12 Months	\$59.06	\$75.97	\$92.87
Apprentice: Level 3 13 - 18 Months	\$61.31	\$79.35	\$97.37
Apprentice: Level 4 19 - 24 Months	\$63.56	\$82.72	\$101.87
Apprentice: Level 5 25 - 30 Months	\$65.81	\$86.09	\$106.37
Apprentice: Level 6 31 - 36 Months	\$68.06	\$89.47	\$110.87

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
3.3 Power Equip. Operator - Highway & Heavy			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.58	\$82.75	\$101.91
Apprentice: Level 1 0 - 6 Months	\$52.10	\$65.53	\$78.95
Apprentice: Level 2 7 -12 Months	\$54.02	\$68.41	\$82.79
Apprentice: Level 3 13 - 18 Months	\$55.92	\$71.26	\$86.59
Apprentice: Level 4 19 - 24 Months	\$57.84	\$74.14	\$90.43
Apprentice: Level 5 25 - 30 Months	\$59.75	\$77.00	\$94.25
Apprentice: Level 6 31 - 36 Months	\$61.67	\$79.89	\$98.09

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
3.4 Power Equip. Operator - Highway & Heavy			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.02	\$81.91	\$100.79
Apprentice: Level 1 0 - 6 Months	\$51.70	\$64.93	\$78.15
Apprentice: Level 2 7 -12 Months	\$53.59	\$67.76	\$81.93
Apprentice: Level 3 13 - 18 Months	\$55.48	\$70.60	\$85.71
Apprentice: Level 4	\$57.36	\$73.42	\$89.47
Apprentice: Level 5 25 - 30 Months	\$59.25	\$76.25	\$93.25
Apprentice: Level 6 31 - 36 Months	\$61.13	\$79.07	\$97.01

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
3.5 Power Equip. Operator - Highway & Heavy			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$44.80	\$60.98	\$77.15
Apprentice: Level 1 0 - 6 Months	\$35.09	\$46.42	\$57.73
Apprentice: Level 2 7 -12 Months	\$36.71	\$48.84	\$60.97
Apprentice: Level 3 13 - 18 Months	\$38.33	\$51.27	\$64.21
Apprentice: Level 4 19 - 24 Months	\$39.95	\$53.71	\$67.45
Apprentice: Level 5 25 - 30 Months	\$41.57	\$56.13	\$70.69
Apprentice: Level 6 31 - 36 Months	\$43.18	\$58.55	\$73.91

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.1 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$73.64	\$97.79	\$121.93
Apprentice: Level 1 0 - 6 Months	\$59.15	\$76.06	\$92.95
Apprentice: Level 2 7 -12 Months	\$61.56	\$79.67	\$97.77
Apprentice: Level 3 13 - 18 Months	\$63.98	\$83.30	\$102.61
Apprentice: Level 4 19 - 24 Months	\$66.39	\$86.92	\$107.43
Apprentice: Level 5 25 - 30 Months	\$68.81	\$90.55	\$112.27
Apprentice: Level 6 25 - 30 Months	\$71.22	\$94.16	\$117.09

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name

Last Updated

4.2 Power Equip. Operator - Commercial

11/01/2025

Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$73.34	\$97.33	\$121.33
Apprentice: Level 1 0 - 6 Months	\$58.94	\$75.74	\$92.53
Apprentice: Level 2 7 -12 Months	\$61.34	\$79.34	\$97.33
Apprentice: Level 3 13 - 18 Months	\$63.74	\$82.94	\$102.13
Apprentice: Level 4 19 - 24 Months	\$66.14	\$86.54	\$106.93
Apprentice: Level 5 25 - 30 Months	\$68.54	\$90.14	\$111.73
Apprentice: Level 6 31 - 36 Months	\$70.94	\$93.74	\$116.53

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.3 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$72.52	\$96.11	\$119.69
Apprentice: Level 1 0 - 6 Months	\$58.37	\$74.88	\$91.39
Apprentice: Level 2 7 -12 Months	\$60.74	\$78.44	\$96.13
Apprentice: Level 3 13 - 18 Months	\$63.09	\$81.96	\$100.83
Apprentice: Level 4 19 - 24 Months	\$65.45	\$85.51	\$105.55
Apprentice: Level 5 25 - 30 Months	\$67.81	\$89.04	\$110.27
Apprentice: Level 6 31 - 36 Months	\$70.17	\$92.59	\$114.99

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.4 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$71.66	\$94.82	\$117.97
Apprentice: Level 1 0 - 6 Months	\$57.77	\$73.99	\$90.19
Apprentice: Level 2 7 - 12 Months	\$60.08	\$77.45	\$94.81
Apprentice: Level 3 13 - 18 Months	\$62.40	\$80.93	\$99.45
Apprentice: Level 4 19 - 24 Months	\$64.71	\$84.39	\$104.07
Apprentice: Level 5 25 - 30 Months	\$67.03	\$87.87	\$108.71
Apprentice: Level 6 31 - 36 Months	\$69.35	\$91.35	\$113.35

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
4.5 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.69	\$93.37	\$116.03
Apprentice: Level 1 0 - 6 Months	\$57.09	\$72.96	\$88.83
Apprentice: Level 2 7 - 12 Months	\$59.36	\$76.37	\$93.37
Apprentice: Level 3 13 - 18 Months	\$61.62	\$79.76	\$97.89
Apprentice: Level 4 19 - 24 Months	\$63.90	\$83.18	\$102.45
Apprentice: Level 5 25 - 30 Months	\$66.16	\$86.57	\$106.97
Apprentice: Level 6 31 - 36 Months	\$68.43	\$89.97	\$111.51

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.6 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$68.98	\$90.80	\$112.61
Apprentice: Level 1 0 - 6 Months	\$55.89	\$71.16	\$86.43
Apprentice: Level 2 7 -12 Months	\$58.07	\$74.43	\$90.79
Apprentice: Level 3 13 - 18 Monhs	\$60.25	\$77.71	\$95.15
Apprentice: Level 4 19 - 24 Months	\$62.44	\$80.99	\$99.53
Apprentice: Level 5 25 - 30 Months	\$64.62	\$84.26	\$103.89
Apprentice: Level 6 31 - 36 Months	\$66.80	\$87.53	\$108.25

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.7 Power Equip. Operator - Commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$61.67	\$79.83	\$97.99
Apprentice: Level 1 0 - 6 Months	\$50.78	\$63.50	\$76.21
Apprentice: Level 2 7 -12 Months	\$52.58	\$66.20	\$79.81
Apprentice: Level 3 13 - 18 Months	\$54.40	\$68.93	\$83.45
Apprentice: Level 4 19 - 24 Months	\$56.22	\$71.66	\$87.09
Apprentice: Level 5 25 - 30 Months	\$58.03	\$74.37	\$90.71
Apprentice: Level 6 31 - 36 Months	\$59.85	\$77.10	\$94.35

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
4.8 Power Equip. Operator - commercial			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$60.64	\$71.39	\$86.73
Apprentice: Level 1 0 - 6 Months	\$50.05	\$62.40	\$74.75
Apprentice: Level 2 7 -12 Months	\$51.82	\$65.06	\$78.29
Apprentice: Level 3 13 - 18 Months	\$53.58	\$67.70	\$81.81
Apprentice: Level 4 19 - 24 Months	\$55.35	\$70.36	\$85.35
Apprentice: Level 5 25 - 30 Months	\$57.11	\$72.99	\$88.87
Apprentice: Level 6 31 - 36 Months	\$58.88	\$75.65	\$92.41

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
5.1 Truck Driver Class			01/05/2026
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$54.10	\$70.52	\$86.94

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Articulated Hauler		10/28/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$63.02	\$81.91	\$100.79
Apprentice: Apprentice Level 1		\$51.70	\$64.93	\$78.15
Apprentice: Apprentice Level 2		\$53.59	\$67.76	\$81.93
Apprentice: Apprentice Level 3		\$55.48	\$70.60	\$85.71
Apprentice: Apprentice Level 4		\$57.36	\$73.42	\$89.47
Apprentice: Apprentice Level 5		\$59.25	\$76.25	\$93.25
Apprentice: Apprentice Level 6		\$61.13	\$79.07	\$97.01

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Asbestos abatement worker or environmental remediation worker			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$56.20	\$73.24	\$90.28
Apprentice: Trainee 600 hours +1 year	\$43.12	\$55.01	\$66.90
Four 10-hour days allowed? - Yes			
Make Up Day Allowed? - No			

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Boilermaker		10/29/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$79.64	\$119.12	\$158.58
Apprentice: 1st Period		\$58.07	\$86.78	\$115.44
Apprentice: 2nd Period		\$59.89	\$89.50	\$119.08
Apprentice: 3rd Period		\$61.81	\$92.24	\$122.74
Apprentice: 4th Period		\$63.50	\$94.91	\$126.30
Apprentice: 5th Period		\$65.26	\$97.54	\$129.82
Apprentice: 6th Period		\$68.89	\$103.00	\$137.08
Apprentice: 7th Period		\$72.46	\$108.36	\$144.22
Apprentice: 8th Period		\$76.07	\$113.77	\$151.44

Four 10-hour days allowed? - Yes
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Boom Truck			10/28/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.31	\$92.84	\$115.37
Apprentice: Apprentice Level 1	\$56.81	\$72.59	\$88.37
Apprentice: Apprentice Level 2	\$59.06	\$75.97	\$92.87
Apprentice: Apprentice Level 3	\$61.31	\$79.35	\$97.37
Apprentice: Apprentice Level 4	\$63.56	\$82.72	\$101.87

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Bricklayers		11/01/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$67.32	\$87.09	\$106.86
Apprentice: Level 1		\$52.61	\$65.03	\$77.44
Apprentice: Level 2		\$54.79	\$68.30	\$81.80
Apprentice: Level 3		\$56.97	\$71.57	\$86.16
Apprentice: Level 4		\$59.15	\$74.84	\$90.52
Apprentice: Level 5		\$61.33	\$78.11	\$94.88
Apprentice: Level 6		\$63.51	\$81.38	\$99.24
Apprentice: Level 7		\$65.69	\$84.65	\$103.60

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Carpenters		11/01/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$74.81	\$96.28	\$117.75
Apprentice: Level 1 1st year		\$48.91	\$61.89	\$74.87
Apprentice: Level 2 2nd Year		\$55.39	\$70.50	\$85.60
Apprentice: Level 3 3rd Year		\$61.86	\$79.09	\$96.31
Apprentice: Level 4 4th Year		\$68.34	\$87.69	\$107.04

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Carpet layers (linoleum)			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$53.72	\$70.77	\$87.81
Apprentice: Level 1	\$43.49	\$55.42	\$67.35
Apprentice: Level 2	\$45.20	\$57.99	\$70.77
Apprentice: Level 3	\$48.61	\$63.10	\$77.59
Apprentice: Level 4	\$52.02	\$68.22	\$84.41

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Cement Mason			10/29/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$64.27	\$96.41	\$128.54
Apprentice: Apprentice Level 1	\$47.90	\$71.25	\$94.59
Apprentice: Apprentice Level 2	\$50.43	\$75.04	\$99.65
Apprentice: Apprentice Level 3	\$52.96	\$78.84	\$104.71
Apprentice: Apprentice Level 4	\$55.49	\$82.63	\$109.77
Apprentice: Apprentice Level 5	\$58.03	\$86.44	\$114.85
Apprentice: Apprentice Level 6	\$60.56	\$90.24	\$119.91

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Electricians			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$83.54	\$114.99	\$142.83
Apprentice: 1st Period	\$52.81	\$68.94	\$81.47
Apprentice: 2nd Period	\$55.60	\$73.13	\$87.05
Apprentice: 3rd Period	\$58.38	\$77.28	\$92.61
Apprentice: 4th Period	\$61.16	\$81.47	\$98.18
Apprentice: 5th Period	\$63.95	\$85.66	\$103.76
Apprentice: 6th Period	\$69.52	\$94.00	\$114.88

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Elevator Constructors			11/01/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$98.25	\$130.76	\$163.26
Apprentice: 1st Year Apprentice	\$63.80	\$81.68	\$99.56
Apprentice: 2nd Year Apprentice	\$72.84	\$93.97	\$115.10
Apprentice: 3rd Year Apprentice	\$76.28	\$99.04	\$121.79
Apprentice: 4th Year Apprentice	\$83.17	\$109.18	\$135.18

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Glaziers			10/29/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$67.95	\$86.22	\$107.22
Apprentice: Apprentice Level 1	\$51.15	\$63.75	\$76.35
Apprentice: Apprentice Level 2	\$53.25	\$66.90	\$80.55
Apprentice: Apprentice Level 3	\$55.35	\$70.05	\$84.75
Apprentice: Apprentice Level 4	\$57.45	\$73.20	\$88.95
Apprentice: Apprentice Level 5	\$59.55	\$76.35	\$93.15
Apprentice: Apprentice Level 6	\$61.65	\$79.50	\$97.35
Apprentice: Apprentice Level 7	\$63.75	\$82.65	\$101.55
Apprentice: Apprentice Level 8	\$65.85	\$85.80	\$105.75

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Heating and Frost Insulator			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$75.80	\$96.17	\$116.54
Apprentice: Level 1	\$59.89	\$72.11	\$84.33
Apprentice: Level 2	\$61.93	\$75.17	\$88.41
Apprentice: Level 3	\$63.97	\$78.23	\$92.49
Apprentice: Level 4	\$66.00	\$81.28	\$96.55
Apprentice: Level 5	\$72.70	\$89.61	\$106.51

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Ironworker		10/31/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$75.42	\$93.70	\$111.97
Apprentice: Apprentice Level 1		\$57.42	\$70.40	\$83.37
Apprentice: Apprentice Level 2		\$59.59	\$73.12	\$86.64
Apprentice: Apprentice Level 3		\$61.54	\$75.43	\$89.32
Apprentice: Apprentice Level 4		\$64.59	\$79.40	\$94.20
Apprentice: Apprentice Level 5		\$67.64	\$83.36	\$99.07
Apprentice: Apprentice Level 6		\$75.42	\$93.70	\$111.97

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Laborer, Common - Commercial		11/04/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$56.50	\$73.00	\$89.50
Apprentice: Apprentice Level 1		\$48.25	\$60.63	\$73.00
Apprentice: Apprentice Level 2		\$49.90	\$63.10	\$76.30
Apprentice: Apprentice Level 3		\$51.55	\$65.58	\$79.60
Apprentice: Apprentice Level 4		\$54.85	\$70.53	\$86.20

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Laborer, Common - Highway & Heavy			11/05/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$50.32	\$65.58	\$80.83
Apprentice: Level 1	\$42.69	\$54.13	\$65.57
Apprentice: Level 2	\$44.22	\$56.43	\$68.63
Apprentice: Level 3	\$45.74	\$58.71	\$71.67
Apprentice: Level 4	\$48.79	\$63.28	\$77.77

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Laborer, Landscaping			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$36.87	\$49.23	\$61.58
Apprentice: Apprentice Level 1	\$30.69	\$39.96	\$49.22
Apprentice: Apprentice Level 2	\$31.93	\$41.82	\$51.70
Apprentice: Apprentice Level 3	\$33.16	\$43.66	\$54.16
Apprentice: Apprentice Level 4	\$35.63	\$47.37	\$59.10

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Laborer, Skilled - Highway & Heavy		11/05/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$51.22	\$66.93	\$82.63
Apprentice: Level 1		\$43.37	\$55.15	\$66.93
Apprentice: Level 2		\$44.94	\$57.51	\$70.07
Apprentice: Level 3		\$46.51	\$59.86	\$73.21
Apprentice: Level 4		\$49.65	\$64.57	\$79.49

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Landscaping equipment			10/28/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$39.09	\$52.56	\$66.02

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Low Voltage Tech		11/03/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$60.91	\$81.88	\$102.84
Apprentice: Period 1		\$37.26	\$46.40	\$55.54
Apprentice: Period 2		\$38.92	\$48.89	\$58.86
Apprentice: Period 3		\$40.58	\$51.38	\$62.18
Apprentice: Period 4		\$43.34	\$54.97	\$66.60
Apprentice: Period 5		\$43.90	\$56.36	\$68.82
Apprentice: Period 6		\$44.81	\$58.10	\$71.39

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Millwright			11/05/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$82.65	\$126.09	\$165.30
Apprentice: Level 1	\$60.79	\$91.21	\$121.58
Apprentice: Level 2	\$68.09	\$102.15	\$136.18
Apprentice: Level 3	\$75.36	\$113.05	\$150.72
Apprentice: Level 4	\$79.01	\$118.54	\$158.02

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Off-Road Truck			10/29/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.02	\$81.91	\$100.79
Apprentice: Apprentice Level 1	\$51.70	\$64.93	\$78.15
Apprentice: Apprentice Level 2	\$53.59	\$67.76	\$81.93
Apprentice: Apprentice Level 3	\$55.48	\$70.60	\$85.71
Apprentice: Apprentice Level 4	\$57.36	\$73.42	\$89.47
Apprentice: Apprentice Level 5	\$59.25	\$76.25	\$93.25
Apprentice: Apprentice Level 6	\$61.13	\$79.07	\$97.01

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Painters		02/05/2026		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$57.02	\$73.38	\$90.53
Apprentice: Level 1		\$43.30	\$52.80	\$63.09
Apprentice: Level 2		\$46.73	\$58.74	\$70.75
Apprentice: Level 3		\$50.16	\$63.89	\$77.61
Apprentice: Level 4		\$53.59	\$69.03	\$84.47

Four 10-hour days allowed? - Yes
Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Piledriver		11/01/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$74.81	\$96.28	\$117.75
Apprentice: Apprentice Level 1		\$48.71	\$61.59	\$74.47
Apprentice: Apprentice Level 2		\$55.39	\$70.50	\$85.60
Apprentice: Apprentice Level 3		\$61.86	\$79.09	\$96.31
Apprentice: Apprentice Level 4		\$68.34	\$87.69	\$107.04

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Pipefitters—steamfitters			10/31/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$86.36	\$111.31	\$136.27
Apprentice: Apprentice Level 1	\$35.76	\$45.82	\$55.51
Apprentice: Apprentice Level 2	\$36.27	\$46.58	\$56.51
Apprentice: Apprentice Level 3	\$37.41	\$48.29	\$58.79
Apprentice: Apprentice Level 4	\$38.56	\$50.02	\$61.09
Apprentice: Apprentice Level 5	\$39.71	\$51.74	\$63.39
Apprentice: Apprentice Level 6	\$40.86	\$53.47	\$65.69
Apprentice: Apprentice Level 7	\$42.01	\$55.19	\$67.99
Apprentice: Apprentice Level 8	\$43.16	\$56.92	\$70.29

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Pipefitters—Steamfitters			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$79.80	\$103.47	\$127.14
Apprentice: Level 1	\$32.16	\$42.49	\$52.81
Apprentice: Level 2	\$32.91	\$43.61	\$54.31
Apprentice: Level 3	\$36.08	\$47.41	\$58.73
Apprentice: Level 4	\$37.20	\$49.09	\$60.97
Apprentice: Level 5	\$38.38	\$50.83	\$63.28
Apprentice: Level 6	\$39.50	\$52.51	\$65.52
Apprentice: Level 7	\$40.68	\$54.26	\$67.83
Apprentice: Level 8	\$41.78	\$56.16	\$70.53
Apprentice: Level 9	\$44.13	\$59.31	\$74.48

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Plumbers			10/31/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$86.36	\$111.31	\$136.27
Apprentice: Level 1	\$35.61	\$45.59	\$55.57
Four 10-hour days allowed? - Yes			
Make Up Day Allowed? - Yes			

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Plumbers		10/30/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$79.80	\$103.47	\$127.14
Apprentice: Apprentice Level 1		\$32.16	\$42.49	\$52.81
Apprentice: Apprentice Level 2		\$32.91	\$43.61	\$54.31
Apprentice: Apprentice Level 3		\$36.10	\$47.44	\$58.77
Apprentice: Apprentice Level 4		\$37.20	\$49.09	\$60.97
Apprentice: Apprentice Level 5		\$38.38	\$50.83	\$63.28
Apprentice: Apprentice Level 6		\$39.50	\$52.51	\$65.52
Apprentice: Apprentice Level 7		\$40.68	\$54.26	\$67.83
Apprentice: Apprentice Level 8		\$41.78	\$56.16	\$70.53

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name			Last Updated
Roofer/waterproofer			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$62.82	\$79.68	\$96.53
Apprentice: Apprentice 1	\$48.74	\$58.55	\$68.37
Apprentice: Apprentice 2	\$49.25	\$59.32	\$69.39
Apprentice: Apprentice 3	\$50.76	\$61.59	\$72.41
Apprentice: Apprentice 4	\$52.26	\$63.83	\$75.41
Apprentice: Apprentice 5	\$53.77	\$66.10	\$78.43
Apprentice: Apprentice 6	\$55.18	\$68.21	\$81.25
Apprentice: Apprentice 7	\$56.79	\$70.63	\$84.47
Apprentice: Apprentice 8	\$58.27	\$72.85	\$87.43
Apprentice: new apprentice	\$48.68	\$58.47	\$68.25

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Sheet Metal Worker			11/03/2025
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$74.96	\$95.01	\$115.06
Apprentice: 1st & 2nd Periods	\$48.51	\$59.65	\$70.77
Apprentice: 3rd & 4th Periods	\$50.74	\$62.99	\$75.23
Apprentice: 5th & 6th Periods	\$52.96	\$66.32	\$79.67
Apprentice: 7th & 8th Periods	\$55.19	\$69.67	\$84.13

Four 10-hour days allowed? - Yes
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name			Last Updated
Spray Foam Insulator			04/24/2026
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$38.17	\$54.00	\$69.82

Four 10-hour days allowed? - No
Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Sprinkler Fitters		11/03/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$78.57	\$102.66	\$126.74
Apprentice: 10th Period		\$69.91	\$87.12	\$104.33
Apprentice: 1st Period		\$31.91	\$40.00	\$48.09
Apprentice: 2nd Period		\$51.25	\$60.36	\$69.47
Apprentice: 3rd Period		\$53.58	\$63.71	\$73.83
Apprentice: 4th Period		\$55.91	\$67.04	\$78.17
Apprentice: 5th Period		\$58.25	\$70.40	\$82.55
Apprentice: 6th Period		\$60.58	\$73.73	\$86.89
Apprentice: 7th Period		\$62.91	\$77.08	\$91.24
Apprentice: 8th Period		\$65.25	\$80.44	\$95.62
Apprentice: 9th Period		\$67.58	\$83.78	\$99.98

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Terrazzo Workers		04/17/2026		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$63.39	\$81.78	\$100.16
Apprentice: Level 1		\$42.67	\$53.70	\$64.73
Apprentice: Level 2		\$44.51	\$56.46	\$68.41
Apprentice: Level 3		\$46.35	\$59.22	\$72.09
Apprentice: Level 4		\$50.03	\$64.74	\$79.45
Apprentice: Level 5		\$51.86	\$67.49	\$83.11
Apprentice: Level 7		\$53.70	\$70.25	\$86.79
Apprentice: Level 8		\$55.54	\$73.01	\$90.47

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Tile Finishers		04/17/2026		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$56.70	\$71.74	\$86.78
Apprentice: Level 1		\$38.39	\$48.17	\$57.94
Apprentice: Level 2		\$39.90	\$50.43	\$60.96
Apprentice: Level 3		\$41.40	\$52.68	\$63.96
Apprentice: Level 4		\$42.90	\$54.93	\$66.96
Apprentice: Level 5		\$44.41	\$57.20	\$69.98
Apprentice: Level 6		\$45.91	\$59.45	\$72.98

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects

Official Rate Schedule

Wayne

Classification Name		Last Updated		
Tile Setters		04/17/2026		
Wage Rates	Straight Time	Time and a Half	Double Time	
Journeyman	\$63.39	\$81.78	\$100.16	
Apprentice: Level 1	\$42.67	\$53.70	\$64.73	
Apprentice: Level 2	\$44.51	\$56.46	\$68.41	
Apprentice: Level 3	\$46.35	\$59.22	\$72.09	
Apprentice: Level 4	\$50.03	\$64.74	\$79.45	
Apprentice: Level 5	\$51.86	\$67.49	\$83.11	
Apprentice: Level 7	\$53.70	\$70.25	\$86.79	
Apprentice: Level 8	\$55.54	\$73.01	\$90.47	

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Tunnel Miner		11/04/2025		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$53.07	\$68.14	\$83.20
Apprentice: Level 1		\$45.54	\$56.84	\$68.14
Apprentice: Level 2		\$47.04	\$59.09	\$71.14
Apprentice: Level 3		\$48.55	\$61.36	\$74.16
Apprentice: Level 4		\$51.56	\$65.87	\$80.18

Four 10-hour days allowed? - Yes
Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Of Michigan Funded Projects
Official Rate Schedule
Wayne

Classification Name		Last Updated		
Underground and Open Cut Laborer		01/06/2026		
Wage Rates		Straight Time	Time and a Half	Double Time
Journeyman		\$52.92	\$67.91	\$82.90
Apprentice: Level 1		\$45.42	\$56.66	\$67.90
Apprentice: Level 2		\$46.92	\$58.91	\$70.90
Apprentice: Level 3		\$48.42	\$61.16	\$73.90
Apprentice: Level 4		\$51.42	\$65.66	\$79.90

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

APPENDIX B
BID PRICING FORM
LIVONIA PUBLIC SCHOOLS
REQUEST FOR BIDS FOR THRIVE TRACK BID

<u>Contractor Information</u>	
<u>Contractor Name:</u>	
<u>Business Address:</u>	
<u>Contact Person:</u>	<u>Telephone:</u>
<u>E-Mail:</u>	<u>Fax:</u>

A. CONTRACTOR PRICING

1. **Lump Sum Pricing:** The Bid pricing is to be broken down into the below components. All Bid pricing is to include all costs and expenses for the Work in accordance with the RFB, the Specifications, the Minimum Compliance Requirements and the Contract. All pricing shall be on a lump sum basis which includes all costs and expenses of Contractor to complete the respective Work, such as all supplies, materials, labor, equipment, Prevailing Wage Rates, insurance, permits, bonds (if applicable), taxes, overhead/profit, etc.

<u>LUMP SUM PRICING PARAMETERS</u>		
<u>Component of Work</u>	<u>Total Amount (in US Dollars)</u>	<u>Days to Complete</u>
	\$ _____	
Cost of Performance and Payment Bonds	\$ _____	N/A
TOTAL:	\$ _____	N/A

2. **Unit Pricing (if applicable):** In addition to the Lump Sum above, please provide unit pricing for any applicable components of the Work, i.e., equipment and its installation cost, that will be available to the School District to purchase at the identified price for a minimum of one (1) year following Substantial Completion of the Work.

UNIT PRICING PARAMETERS (LABOR + MATERIALS + OH&P)		
Unit Pricing by Product	Total Amount (in US Dollars)	
Undercutting (CY)	\$ _____	
3" Asphalt (SY)	\$ _____	
4" Non-Reinforced Concrete (SF)	\$ _____	
Poured-in-Place EPDM Rubber – 1/2" (SF)	\$ _____	
Poured-in-Place SBR Rubber – 3/4" (SF)	\$ _____	

B. WARRANTIES

Please detail the type and length of all warranties offered by the Contractor under this Bid for the following: 1) **labor/installation**; and 2) **materials and equipment**. Please detail what is covered by each warranty, what conditions are part of the warranty and what are the exclusions to the warranty, if any.

C. OTHER RFB REQUIREMENTS

1. Please include the following with this Bid Form:

- a) List of References (see 2.2.3 of RFB)
- b) Provide Proof of required insurance coverages and bonds (See 2.2.4 of RFB)
- c) List of Subcontractors (See 2.2.12 of RFB)
- d) Provide a Copy of Contractor's State Project Registration.

D. PREVAILING WAGE RATES

The State Prevailing Wage Rates for this project for all classes of construction mechanics required for the Work are contained behind **APPENDIX A-1**.

E. EXCEPTIONS

Please provide a detailed list of any exceptions or special considerations you have to the terms and conditions of the RFB and the Contract. This must include a detailed reference to the corresponding section of the RFB the Contract, and explanations for the same. (Use additional pages if necessary).

F. ACKNOWLEDGEMENT OF ADDENDA TO RFB

The Contractor acknowledges receipt of the following addenda:

Addendum Number _____ dated _____

Addendum Number _____ dated _____

Addendum Number _____ dated _____

The undersigned declares that they have carefully examined the instructions, the Specifications, Minimum Compliance Requirements and the Contract, and agrees to furnish these items and the Work within such Specifications for the price set forth in this Bid. The undersigned and/or its representative attended the Pre-Bid Conference and fully understands the detailed Specifications presented and discussed. The undersigned hereby confirms that they have of all licenses necessary to perform the Work. The undersigned has carefully checked all of its Bid figures and understands that it shall be responsible for any error or omission in this Bid and is in receipt of all Addenda as issued. The undersigned understands that the School District reserves the right to accept or reject in whole or in part any and all Bids, to waive informalities and irregularities therein, and to award the Contract to other than the Contractor submitting the best financial Bid (low bidder) and to award the Contract to one (1) or more Contractors in the School District's sole and absolute discretion.

If award is made to our firm based upon our Bid, we agree to enter into the attached form of Contract with the School District to furnish the Work in strict accordance with this Request For Bid, the Contract and our Bid.

My signature certifies that the Bid as submitted complies with all terms and conditions as set forth in this Request For Bid and the Contract, unless specifically enumerated as an exception as part of our Bid.

The undersigned certifies that they are authorized to sign as a Representative for the undersigned Contractor.

THE BELOW CONTRACTOR HEREBY SUBMITS THIS BID PRICING FORM IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE RFB.

Contractor Name:_____

Authorized Individual Name:_____

Position/Title:_____

Signature:_____

Date:_____

FAMILIAL DISCLOSURE AFFIDAVIT

List any Familial Relationships:

By: _____

Its: _____

This instrument was acknowledged before me on the _____ day of _____, 202____, by _____.

_____, Notary Public

County, _____

My Commission Expires:_____

Acting in the County of : _____

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT
Michigan Public Act No. 517 of 2012

The Contractor further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for bids/proposal for three (3) years from the date it is determined that the person has submitted the false certification.

Name of Contractor

By: _____

Its: _____

Date: _____

This instrument was acknowledged before me on the _____ day of _____, 202____, by _____.

_____, Notary Public
_____, County, _____
My Commission Expires: _____
Acting in the County of _____

AFFIDAVIT OF COMPLIANCE – CRIMINAL BACKGROUND CHECKS

The Contractor further acknowledges that if it is found to have submitted a false certification or otherwise fails to comply with the requirements of this certification, the School District may immediately terminate the Contract.

Name of Contractor

By: _____

Its: _____

Date: _____

STATE OF _____)
COUNTY OF _____) ss.

This instrument was acknowledged before me on the _____ day of _____, 202____, by _____.

_____, Notary Public

County, _____

My Commission Expires:

Acting in the County of _____

APPENDIX F
SCHOOL DISTRICT CONTRACTOR CODE OF CONDUCT

The purpose of the School District and its employees is to provide a safe, positive learning environment for the students and staff of the School District. In providing that environment it is mandatory that all employees, visitors, and contractors follow certain levels of conduct, dress, and demeanor. This Code of Conduct outlines the expectations of the School District for persons both contemplating performing work and performing Work for the School District in the capacity of a Contractor or subcontractor. These rules will become part of the mandatory working conditions of the Contract and failure to comply by the any Contractor, subcontractor, management, employee, or contracted consultant may result in the termination of the Contract.

In general, it is expected that everyone entering a School District facility, whether a school, support facility, or the surrounding grounds, must dress, act, and talk in a manner that is conducive to the education process of children while assuring their overall safety and security. The following rules have been established to assure that this is done:

1. Every Contractor, subcontractor, management, employee, or contracted consultant that enters or leaves the building must sign in and out at the School District office as designated by the School District administrator. This sign in sheet must record the name, time in and out, the firm, and the signature of the individual.
2. All Contractors, subcontractor, management, employee, or contracted consultant shall be furnished by their company a badge or identification that is to be worn while in the building. Such identification shall clearly indicate the individual's name and the name of the firm they are working for.
3. Prior to the beginning of a job, the Contractor shall furnish the School District with a list of individuals expected to be on the job, contact persons with phone numbers, and a schedule of the activities to take place.
4. The Contractor shall provide the School District with a scope of work and check in prior to drilling or penetrating any walls, floors, or ceilings a minimum of one (1) week before any such Work is planned to commence. Likewise, the Contractor prior notice must be provided to the School District in advance (one (1) week) prior to any scheduled interruptions to building systems (i.e., power, fire alarm, system, HVAC, PA, data/internet, security alarm, etc.).
5. Each person working in a School District building or on School District property shall comply with the following:
 - No drinking or possession of liquor or alcoholic beverages and or possession of any kind of illicit drugs or narcotics
 - No use of School District facilities or equipment including telephone, computers, internet access, fax, kitchen, maintenance or office equipment
 - No smoking, vaping or use of any tobacco products anywhere within the building at any time nor outside on the School District property during normal school hours (This is a law and punishable as a civil infraction by local authorities)
 - A reasonable standard of dress must be followed, within the educational facilities where students and parents are or can be present; this is to mean clothing or attire must be suitable for the work and must not bear images or writing depicting anything to be construed as

- obscene in nature or promoting or portraying alcoholic beverages or use, drugs, narcotics, tobacco or establishments that serve or promote the use of these substances
- There shall be no use of profanity or obscene language or gestures
 - Language, gestures, or other actions that depict sexual or ethnic harassment or intimidation will not be permitted
6. The Contractor is responsible for a clean and safe workplace. To that end the following will be adhered to:
- All work areas, walkways, and stairs must be kept clear of debris and loosely scattered materials
 - Material storage is to be in an area designated by the School building's administrator.
 - All work areas are to be cleaned by the contractor prior to leaving. Building staff will not be responsible for cleaning work areas
 - All trash, debris, and material must be removed from the worksite each day and disposed of off-site. School District dumpsters and trash containers are not to be used by Contractors for disposal
 - All Contractor tools and equipment must be kept in good working order, with guards and safety devices in place and working. Defective tools must be taken out of service. School District tools and equipment will not be loaned to Contractors
 - Contractors are to provide, and use required protective safety equipment and comply with all local, state, and federal safety laws and regulations
 - Contractors are responsible for the reporting of accidents both to the School District and their management and to obtain any emergency treatment that may be required
 - Upon leaving a jobsite all doors and windows must be locked, secured, or left as they were found prior to beginning the work
 - Contractors are to provide their own site safety plan for areas that they are working in
 - Contractors are reminded that there is asbestos insulation in our buildings. They are not to disturb any insulation or enter any areas that contain asbestos containing building materials. If they have any questions, contact the School District for direction.
 - Contractor is not to disable or interfere with any fire or burglary system equipment or telephone lines servicing such equipment. If equipment needs to be removed, relocated, or temporarily disabled, the contractor needs to coordinate this with the School District.
7. The School District will not tolerate acts of theft, vandalism, fighting, or abuse of the facilities or activities that threaten the security and safety of the school environment and its students, staff, and employees.

In summary, good judgment must be used to protect the learning environment. **Failure to comply with the above or to exhibit conduct which is deemed not in the best interest of the School District will be grounds for immediate removal from the building and the project and termination of the Contract.**

APPENDIX G
FORM OF CONTRACT
ATTACHED

CONSTRUCTION CONTRACT

This Construction Contract ("Contract") is made on _____, 202__ ("Effective Date"), between **LIVONIA PUBLIC SCHOOLS**, a Michigan public school district (the "Owner"), whose address is 15125 Farmington Road, Livonia, Michigan 48154 and _____, a Michigan _____ ("Contractor"), whose address _____. Owner and Contractor may each be referred to herein as a "Party" and collectively as the "Parties".

RECITALS

A. Owner issued a Request For Bids For Thrive Track Bid dated October 1, 2026 (collectively the "RFB"), the purpose of which was to solicit Bids from qualified contractors to furnish to Owner all of the materials and labor required to construct a track at Garfield Community School within the School District as identified in the RFB in accordance with the terms and conditions contained in the RFB and the Specifications attached thereto (the "Work").

B. In response to the RFB, the Contractor submitted to Owner a Bid dated _____, 2022__, to perform the Work contemplated by the RFB.

C. The Parties have, in accordance with the provisions of the RFB, conducted negotiations concerning the Contractor's Bid to the RFB. The Contractor's Bid together with written clarifications of the Parties, if any, are attached hereto, incorporated herein by reference, and marked as **Exhibit A** (collectively referred to as the "Bid"). Any terms and conditions proposed by Contractor as part of its Bid are not a part of this Contract unless specifically accepted by Owner in writing and contained in **Exhibit A**.

D. Pursuant to the terms of the RFB, the Contractor is required to enter into a written contract in accordance with the Owner's written acceptance of its Bid.

E. The Parties agree that certain terms, conditions and provisions of the RFB and the Bid must be further clarified, and that certain additional terms and conditions need to be expressly set forth by way of this Contract.

NOW THEREFORE, in consideration of the foregoing and the mutual covenants set forth herein, the Parties agree as follows:

1. RESTATEMENT CONSTITUTES THE CONTRACT

(a) **Incorporation By Reference.** The object of this Contract is to formalize in one document the complete agreement between the Parties, and to do so by specifically incorporating by reference into this Contract the RFB, the Contractor's Bid and other related documents, and by including certain additional necessary or appropriate Contract terms, particularly where the Contract terms agreed to by the Parties during the RFB negotiation process do not correspond with the RFB and/or the Contractor's Bid.

(b) **Order of Precedence.** The Contract Documents, which are all incorporated herein by reference, include the following:

1. This Contract, including all Exhibits attached hereto;
2. The RFB, including the Specifications and Compliance Requirements attached thereto; and
3. The Contractor's Bid.

To the extent that the terms and conditions of the Contract Documents are in conflict, the terms and conditions shall be interpreted in the above-referenced order from 1 to 3. However, the Parties also agree that where there is not a conflict between any of the terms and conditions contained in the above-referenced Contract Documents, all of the Contract Documents shall be binding upon both Parties, except to the extent the exceptions contained in the Contractor's Bid are not expressly accepted by the Owner in writing and incorporated into this Contract.

2. TERM AND TERMINATION

(a) This Contract shall commence on the Effective Date and all Work hereunder shall be Substantially Completed no later than July 9, 2027, and shall be in compliance with the Construction Schedule attached hereto as **Exhibit B**.

(b) Each Party shall have, in addition to all other remedies available to it, the right to terminate this Contract immediately upon written notice to the other Party that the other Party has committed a material breach of any of its obligations herein and such material breach shall not have been cured or corrected within ten (10) days following written notice of the same. Furthermore, in addition to the rights of the Owner under this Paragraph if the Owner must regularly request that the Contractor to cure breaches of this Contract, such circumstances shall be grounds for termination of this Contract for cause, even if each breach on its own would not be material. If this Contract is terminated by the Owner after said ten (10) day cure period, due to Contractor's failure to substantially perform in accordance with the terms of this Contract, Contractor shall receive no fees or reimbursable expenses other than those due for Work actually rendered, without negligence, prior to the date of termination. Notwithstanding the foregoing, if any actions or inactions of Contractor, its employees, contractors, subcontractors or agents, pose a serious or imminent threat to the health and safety of any person, the Owner may terminate this Contract immediately if such default is not cured by Contractor within twenty-four (24) hours of Contractor's receipt of written notice of such default.

(c) Upon termination of this Contract by the Owner for breach or default of the Contractor pursuant to this Paragraph, the Owner shall be entitled to exercise any other right, remedy or privilege which may be available to it under applicable law or proceed by appropriate court action to enforce the terms of this Contract or to recover damages for the breach of this Contract. If this Contract is terminated in accordance with any of the provisions contained herein, all rights of the Contractor under this Contract shall cease. If this Contract is terminated for cause and not cured by the Contractor as provided for above, the Contractor shall not be entitled to receive any further payment until final completion of the Work and determination of the sums due and owing Contractor, if any. If the unpaid balance of the Contract exceeds all costs to the Owner of completing the Work, including increased costs resulting from Contractor's default, then the Contractor shall be paid for all Work performed by the Contractor to the date of termination, but in no event shall the amount paid to the Contractor cause the Contract amount to be exceeded. If the costs to the Owner of completing the Work exceed such unpaid balance, the Contractor shall pay the difference, plus interest, to the Owner within thirty (30) days after the Owner's demand. The costs to the Owner of completing the Work shall include (but only to the extent caused or exacerbated by the Contractor's default) the cost of any additional architectural, legal, managerial, and administrative services required, any costs incurred in retaining another contractor or other subcontractors, any additional interest or fees which the Owner incurs or must pay by reason of a delay in completion of the Work, attorneys' fees and expenses, and any other damages, costs, and expenses the Owner may incur by reason of completing the Work. Regardless of the basis for termination, the Owner shall neither be liable to, nor obligated to pay, the Contractor for any incidental or consequential damages or lost profits, or costs incurred for Work not actually performed.

(d) Notwithstanding anything contained herein to the contrary, the Owner may terminate this Contract at any time and for any reason or no reason at all upon written notice to the Contractor. In the event of a termination for convenience, the Owner's sole responsibility shall be to pay the Contractor in accordance with Paragraph 6 for Work performed and accepted prior to the date of termination, without waiver of damages, if any, flowing from Contractor's acts, errors, or omissions.

3. WARRANTY

The Contractor warrants and represents that its all of its Work will be in accordance with all applicable federal, state, and local laws, rules, regulations and the Contract Documents. If within two (2) years after the date of Substantial Completion of the Work or designated portion of the Work, if any of Contractor's Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct the Work at its sole expense promptly after receipt of written notice from the Owner. This two (2) year period shall be extended (i) with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of Contractor's Work, and (ii) with respect to warranty work for an additional two (2) year period following each correction. This obligation shall survive acceptance of the Work and termination of this Contract.

In the event Contractor fails to repair any such defect and the Owner may be required to do so, then Contractor agrees to pay Owner any expense incurred thereby. This warranty shall be in addition to the terms of any other warranty or longer period of obligation specified in the Contract Documents, any applicable special warranty required by the Contract Documents, or the terms of any general warranty and is not in lieu of any of them. This warranty shall not be construed to establish a period of limitation with respect to other obligations which Contractor might have under the Contract Documents and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced or to the time which any proceeding may be commenced.

4. INSURANCE

The Contractor shall maintain, at its expense, during the term of this Contract the following insurance: (See Contractors Certificate of Insurance(s) attached hereto as **Exhibit C**):

(a) Worker's Compensation Insurance with statutory limits and Employer's Liability Insurance with a minimum limit of \$1,000,000 each occurrence.

(b) Comprehensive General Liability Insurance with a minimum combined single limit of \$1,000,000 per occurrence and \$3,000,000 in the aggregate, in the same amount made for bodily injury and property damage. The policy is to include products and completed operations, cross liability, broad form property damage, independent bidders, and contractual liability coverage. The policy shall be endorsed to provide thirty (30) days written notice to the Owner of any material change of coverage, cancellation, or non-renewal of coverage.

(c) If Subcontractors are likely to be used, the Comprehensive General Liability policy shall include coverage for independent contractors.

(d) Automobile Liability insurance covering all owned, hired, and non-owned vehicles with personal protection insurance and property insurance to comply with the provisions of the Michigan no-fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each occurrence of bodily injury and property damage.

(e) In addition to the underlying policies outlined above, the Contractor shall maintain a commercial umbrella policy in the amount of \$1,000,000.

(f) All insurance policies shall be issued by companies licensed to do business in the State of Michigan. The companies issuing the policies must be domestic (on-shore) companies.

(g) The Contractor shall be responsible for payment of all deductibles contained in any insurance policy required in this Contract.

(h) Other requirements: Evidence of your insurance coverages, required herein, are to be provided to the Owner and must indicate that "Livonia Public Schools" is endorsed as an additional insured on the General Liability and Automobile policies.

5. INDEMNIFICATION

(a) General Indemnification: Contractor shall indemnify, defend and hold harmless the Owner, its Board of Education, its Board Members, in their official and individual capacities, its administrators, employees, agents, contractors, successors and assigns, from and against any and all claims, counter claims, suits, debts, demands, actions, judgments, liens, costs, expenses, damages, injuries and liabilities, including actual attorney's fees and actual expert witness fees arising out of or in connection with Contractor's performance of this Contract and/or from Contractor's violation of any of the terms of this Contract, including, but not limited to: (i) the negligent acts or willful misconduct of the Contractor, its officers, directors, employees, successors, assigns, contractors, subcontractors, and agents; (ii) any breach of the terms of this Contract by the Contractor, its officers, directors, employees, successors, assigns, contractors subcontractors, and agents; (iii) any violation or breach of any applicable Federal, State or local law, rule, regulation, ordinance, policy and/or licensing and permitting requirements applicable to the Contract; or (iv) any breach of any representation or warranty by the Contractor, its officers, directors, employees, successors, assigns, contractors subcontractors, and agents under the Contract. The Contractor shall notify the Owner by certified mail, return receipt requested, immediately upon actual knowledge of any claim, suit, action, or proceeding for which the Owner may be entitled to indemnification under the Contract. This Paragraph shall survive the expiration or earlier termination of the Contract and shall not be limited by the Contractor's insurance obligations contained in this Contract.

(b) Environmental Indemnification: While performing any Work under this Contract, Contractor shall not permit itself or any third party to use, generate, handle, store or dispose of any Hazardous Substances in, on, under, upon or affecting any Owner's property in violation of any applicable law or regulation. As used herein, the term "Hazardous Substances" shall mean (i) any hazardous or regulated substance as defined by all federal, state and local environmental laws, including, but not limited to, Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.) ("Clean Water Act"), the Resource Conservation & Recovery Act (42 U.S.C. §§ 6901 et seq.) ("RCRA"), Safe Drinking Water Act (42 U.S.C. §§ 300f-j-26), Toxic Substances Control Act (15 U.S.C. §§ 2601 et seq.), Clean Air Act (42 U.S.C. §§ 7401 et seq.), the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.) ("CERCLA"), the Emergency Planning and Community Right to Know Act, 42 U.S.C. §§ 11001 et seq. ("EPCRA"), the Michigan Natural Resources and Environmental Protection Act (MCL § 324.101 et seq.) the administrative rules and regulations promulgated under such statutes, or any other similar federal, state or local law or administrative rule or regulation of similar effect, each as amended and as in effect and as adopted as of the date of execution of this Contract, (ii) any other pollutant, contaminant, hazardous substance, solid waste, hazardous material, radioactive substance, toxic substance, noxious substance, hazardous waste, particulate matter, airborne or otherwise, chemical waste, medical waste, crude oil or any fraction thereof, radioactive waste, petroleum or petroleum-derived substance or waste, asbestos, PCBs, radon gas, all forms of natural gas, or any hazardous or toxic constituent of any of the foregoing, whether such substance is in liquid, solid or gaseous form, or (iii) any such substance the release, discharge or spill of which requires activity to achieve compliance with applicable law. This paragraph shall survive the expiration or earlier termination of this Contract.

(c) Compliance With Laws: Contractor shall comply with any and all applicable federal, state and local laws, rules, regulations and ordinances relating the performance of its Work for, and completion of, its Work. Contractor shall comply with all applicable requirements of the state and federal occupational safety and health laws (OSHA and MIOSHA). Contractor shall obtain and pay for all necessary permits and licenses pertaining strictly to its Work not already obtained by Owner and shall comply with all county, city, state and federal laws and regulations relating to any such permits.

6. CONTRACTOR'S COMPENSATION

Based upon the Owner's RFB and the Contractor's Bid, the Owner shall pay the Contractor for its Work as follows:

(a) Contractor's Fee: A Lump Sum in the amount of _____ and 00/100 Dollars (\$ _____), which is inclusive of all costs, Prevailing Wage Rates, taxes, fees, permits, reimbursable expenses, payment and performance bonds, insurance and/or any other expenses. The Contractor shall pay all taxes associated with the Work and the Project. The Contractor shall secure, at its sole cost and expense, all building permits, licenses, inspections and governmental approvals necessary for the proper completion of the Work in accordance with all applicable laws.

(b) Progress Payments: Contractor may submit Applications for Payment on a monthly basis covering all construction completed during the previous calendar month. Provided an Application for Payment is received by the 20th day of the month, the Owner shall make payment of the certified amount, less retainage, on or before the 15th day of the following month. The Contractor, and its subcontractors, if any, shall maintain certified payroll records and other records required under this act for a minimum of three (3) years. Contractor shall provide copies of certified payrolls with each payment application to ensure on-going compliance with Michigan Public Act 10 of 2023.

(c) Retainage: The Owner shall retain 10% of the amount of each Application for Payment as its retainage. The retainage shall be paid by the Owner to Contractor upon Owner's final acceptance of the Work and the Project.

(d) Final Payment. The amount of the Application for Final Payment shall be the Contractor's Compensation, less all previous payments made to date. After completion of all items on the punchlist, Contractor shall notify the Owner. If after inspection, the Owner deems the Project completed and acceptable under the Contract Documents, the Owner shall notify Contractor in writing and Contractor may then issue its Application for Final Payment.

7. PREVAILING WAGES

(a) Unless otherwise notified in writing by the Owner, the Contractor shall comply with all provisions of the Michigan State Prevailing Wage Laws ("Michigan's Prevailing Wage Act" also known as Public Act 10 of 2023). The Contractor must pay prevailing wages and fringe benefits to all of Contractor's, and its Subcontractors', Construction mechanics working on the Project in

accordance with Public Act 10 of 2023. The prevailing wage and fringe benefit rates are a part of the RFB process and are incorporated by reference into the Contract Documents.

(b) The Contractor and each Subcontractor shall keep posted on the Project site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in the Contract Documents and shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each Construction mechanic employed by it in connection with the Project. These records shall be available for reasonable inspection by the Owner, Architect and/or the State Commissioner.

(c) The Owner, by written notice to the Contractor and the sureties of the Contractor known to the Owner, may terminate the Contractor's right to proceed with that part of the Project, for which less than the prevailing rates of wages and fringe benefits have been or will be paid, and may proceed to complete the Contract by separate agreement with another contractor or otherwise, and the original Contractor and the original Contractor's sureties shall be liable to the Owner for any excess costs occasioned thereby. This right is incorporated by reference and included in all performance and payment bonds provided by the Contractor for the Project.

(d) The Contractor acknowledges and agrees that the Construction mechanics are intended beneficiaries of the contractual prevailing wage, fringe benefit, and nondiscrimination nonretaliation requirements and any Construction mechanic aggrieved by the failure of a Contractor or Subcontractor to pay prevailing wages or benefits as specified in the Contract, or by a violation of Michigan's Prevailing Wage Act, in addition to any other remedies provided in Public Act 10 of 2023 or by law, may bring an action in a court of competent jurisdiction against the Contractor or Subcontractor for damages or injunctive relief and may be awarded reinstatement or other appropriate relief, and all damages sustained, together with actual costs and attorney fees at trial and on appeal. The Contractor shall indemnify and hold the Owner harmless for its failure to comply.

(e) The Contractor shall indemnify and hold harmless the Owner from any civil penalties or other liabilities arising out of the Contractor's or its Subcontractor's violation of the Public Act 10 of 2023.

(f) The Owner, the Commissioner or the Commissioner's designee shall have the right to enter the Project covered by the Public Act 10 of 2023 during normal hours of operation of the Project for the purposes of inspecting payroll records, interviewing employees, conducting wage surveys of employees, or all other actions reasonably related to the enforcement of Public Act 10 of 2023.

(g) The Contractor and/or Subcontractors shall provide to the Commissioner or the Commissioner's designee any records requested necessary to enforce Public Act 10 of 2023, including certified payroll, fringe benefit information, or other information necessary to ensure compliance with Public Act 10 of 2023.

(h) The Contractor, and Subcontractors, shall maintain certified payroll records and other records required under the Michigan's Prevailing Wage Act for a minimum of three (3) years.

Contractor shall provide copies of certified payrolls with each payment application to ensure on-going compliance with Public Act 10 of 2023.

8. MISCELLANEOUS

(a) Notices. All notices hereunder shall be in writing and shall be effective when sent by facsimile or electronic mail (provided, however, that any notice which could materially affect the rights of either Party shall also be sent by courier as provided herein) or a nationally known courier service such as DHL or Federal Express, addressed to the addresses written below, or to such other address as either Party may have last designated in writing in the manner herein provided. Such notice shall be deemed given when received, but in any event no later than four (4) days after sent by the internationally known courier. All notices shall be sent to the following address:

If to the Contractor:

Attention: _____

If to the Owner:

Livonia Public Schools
15125 Farmington Road
Livonia, Michigan 48154
Attention: William Green

(b) Assignment. This Contract and any other interest herein may not be assigned or transferred, in whole or in part, by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld, and any assignment or transfer without such consent shall be null and void. This Contract shall be binding upon the successors, and subject to the above, assigns of either Party.

(c) Severability. If any provision of this Contract is held invalid or unenforceable, the remainder of this Contract shall nevertheless remain in full force and effect. If any provision is held invalid or unenforceable with respect to particular circumstances, it shall nevertheless remain in full force and effect in all other circumstances.

(d) Independent Contractor; No Joint Venture. It is expressly agreed that Contractor is acting hereunder as an independent contractor and under no circumstances shall any of the employees of either Party be deemed the employees of the other for any purpose. This Contract shall not be construed as authority for either Party to act for the other Party in any agency or other capacity or to make commitments of any kind for the account of, or on behalf of, the other Party, except to the extent, and for the purposes, expressly provided for and set forth herein, and no partnership or joint venture is created hereby.

(e) Modifications. No provision of this Contract or any Exhibit hereto may be modified without the prior written consent of both Parties.

(f) **Captions.** The captions used in this Contract are for convenience only and shall not affect in any way the meaning or interpretation of the provisions of this Contract.

(g) **Pricing.** Prices quoted are to be F.O.B. to _____ [Insert Name and Location]. Contractor's Compensation shall be net; including transportation, insurance and delivery charges fully prepaid by the successful Contractor to the Owner's facilities.

(h) **Risk of Loss.** The Contractor shall assume all risk of loss for all supplies, materials and equipment or other components of the Contractor's Work until all Work is completed and accepted by the Owner.

(i) **Change Orders.** Neither the scope of the Work, this Contract nor the Contractor's Compensation may be modified or changed unless upon the written consent of the Owner.

(j) **Clean Up.** Contractor agrees, at its own expense, to clean up and remove all debris, dirt, etc. resulting from the performance of its Work. After three days written notice to Contractor of its failure to clean up, the Owner may clean up and deduct the cost thereof from any monies due Contractor; or if no monies are due, then to charge back against Contractor such clean-up, which charge Contractor hereby agrees to pay.

(k) **Limitation of Liability.** Contractor hereby assumes the entire liability for any and all damage or injury of any kind or nature whatever to all persons, whether employees or otherwise, and to all property, resulting from the performance of the Work and agrees to indemnify the Owner from and against such loss and expense, in connection with the performance of the Work, provided however, NEITHER PARTY SHALL BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER ARISING FROM THIS CONTRACT OR THE WORK.

(l) **Taxes.** Contractor is responsible for sales taxes and any other applicable taxes related to the Work provided under this Contract.

(m) **Governing Law.** This Contract shall be construed in accordance with, and its performance governed by, the laws of the State of Michigan. The Parties hereby agree to the exclusive jurisdiction and venue of courts sitting in Wayne County, Michigan.

(n) **Performance and Labor and Material Payment Bonds.** Upon award of this Contract, Contractors whose Bids are \$50,000.00 or more will be required to furnish a Performance Bond and a Labor and Material Payment Bond, in forms satisfactory to the Owner, in the amount of 100% of its Bid by a Treasury listed Surety licensed to do business in the State of Michigan, and the attorney-in-fact who executed the Performance and Labor and Material Payment Bonds on behalf of the Contractor shall attach a certified, current copy of its power of attorney. The cost of the Bonds shall be included in each Bid and the Contractor's Compensation contained herein. The Bonds shall, at a minimum, remain in effect for a period of two (2) year from Substantial Completion of the Work, but through the applicable warranty

period. The Contractor shall submit both the Performance Bond and Labor and Material Payment Bond to the Owner's Administration Office, with a copy to the Owner's Representative, if any, prior to the start of on-site Work.

(o) Limitation on Owner's Responsibility. The Owner shall not, under any circumstances, be liable for or have control over the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and these are solely the responsibility of Contractor. The Owner shall not be responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner shall not be responsible for the acts or omissions of Contractor, or any of its employees, contractors or subcontractors.

(p) Entire Agreement. This Contract and all Exhibits and documents incorporated herein by reference constitute the entire agreement between the Parties, and supersedes all previous agreements, whether written or oral.

IN WITNESS WHEREOF, the undersigned have caused this Contract to be duly executed on the dates indicated below.

CONTRACTOR:

OWNER:

By: _____

By: _____

Its: _____

Its: _____

Date: _____

Date: _____

EXHIBIT A

**CONTRACTOR'S BID, CLARIFICATIONS AND
SCHEDULE OF VALUES**

(see attached)

EXHIBIT B

CONSTRUCTION SCHEDULE

(see attached)

EXHIBIT C

CONTRACTORS CERTIFICATE OF INSURANCE(S)

(see attached)

SECTION 00 2413 – SCOPE OF WORK

GENERAL NOTES (Applicable to All Bid Categories)

1. Contractor shall visit the site and familiarize themselves with the project layout, existing conditions, site access, etc. and all other obstacles with the work areas. Contractor is responsible for all means of setting up and relocating their equipment and materials to perform this work as well as in conjunction with other trade contractors. There will be no additional compensation made for reason of omission or interpretation as it relates to the aforementioned required site visit.
2. Bidder/Contractor shall be aware of and include the cost for, all State and Local laws, codes, ordinances, building rules and regulations, as are or may become applicable to the Work.
3. Bidders shall exclude costs of quality control construction testing from bid unless required on the proposal form. Independent testing will be hired directly by the Owner/Owner's Representative and contractor shall cooperate with the testing agency.
4. Each contractor/subcontractors shall coordinate and cooperate with other contractors for expedient completion of the work of this project.
5. Each contractor shall be solely responsible and make every effort to locate existing underground utilities. This shall include consulting with all local utility companies, using a signal locator prior to excavation for private utility lines, or consulting with a private utility locating company.
6. The Scope of Work for each Bid Category includes cleaning and maintaining streets free of dirt, debris, mud, gravel caused by the construction operations as it pertains to their scope of work. Contractors shall be aware that local authorities intend to enforce local ordinances in this regard. Penalties resulting from contractor negligence in adhering to the State and Local ordinances, laws, codes shall be the responsibility of the Contractor.
7. The Scope of Work for each Bid Category includes strict adherence to the safety requirements as defined in the General Conditions and Supplementary General Conditions and current MiOSHA Guidelines.
8. Each Contractor shall review existing building and site conditions prior to commencement of work and advise the Owner's Representative of any claim of changes in the work within seventy-two (72) hours therefore, or waive its right for claim of changes in the existing site conditions. Each Contractor shall be responsible for restoring site to its original conditions upon completion of their respective work.
9. All excess materials shall be legally disposed of off-site unless indicated otherwise.

10. Milestone Schedule. All trades will be required to confirm a detailed schedule prior to award of this contract.

PROPOSAL A: SITE WORK

CM Supplementary Conditions
General Conditions
Division 1 General Requirements
Division 2 Existing Conditions

	Specification Section	03 3000	Cast In Place Concrete
	Specification Section	06 1050	Turf Wood Nailer
	Specification Section	11 6813	Playground Safety Surface
	Specification Section	11 6824	Basketball Equipment
	Specification Section	31 2000	Earthwork – Athletics
	Specification Section	31 3219	Geotextile Fabric
	Specification Section	32 1123	Aggregate Drainage Layer
	Specification Section	32 1124	Aggregate Base Course
	Specification Section	32 1811	Synthetic Turf - Landscape
	Specification Section	32 9119	Topsoil
	Specification Section	32 9227	General Lawn Restoration
	Specification Section	32 9300	Exterior Plants
	Specification Section	33 4615	Subdrainage Systems – Turf Drintile

General Scope of Work:

1. Requirements of items included under General Work to be completed by all contractors.
2. Provide engineering and layout as required to complete this work.
3. Coordinate work with other trades on site, including Contractors installing all fitness equipment and site furnishings.
4. Strict enforcement of this contractor's requirement to provide timely clean-up, removal and disposal of all rubbish and debris generated by this trade during the work. Maintain clean conditions at all areas on site and free from dirt, mud, and gravel. Provide all cleanup as it relates to Scope of Work.
5. Protect existing asphalt/concrete from damage by equipment.
6. Remove and legally dispose of all excess materials and debris generated by scope of work.
7. Provide and install complete soil erosion control measures and perform weekly maintenance. Note: Strict enforcement of soil erosion control system maintenance is required as part of this project. Work includes maintenance of system during Construction, after each rain each. Contractor shall employ a Certified Stormwater Operator for system logs, removal of system at the completion of the project.
8. Contractor is responsible for scheduling all construction testing with Owner's Independent Testing Agency as noted in Bid Documents and shall comply with all recommendations.
9. Provide all labor and equipment necessary for the complete site demolition as shown within the Construction Limits unless specifically noted to be completed by others. Work includes but not

limited to: clearing and grubbing, asphalt, gravel, and basketball hoops & footings. Work includes removal and backfill of post footings as specified.

10. Salvage and stockpile existing gravel as noted. Upon completion of utility installation, re-install gravel material to pre-construction conditions.
11. Provide and install any earthwork and engineered fill required for work of this category. Excavations must be compacted and ready to accept concrete.
12. Provide necessary temporary dewatering associated with this work division.
13. Excavate topsoil as required. Contractors may elect to screen and stockpile topsoil onsite for re-use for lawn restoration. All excess topsoil and spoils shall be exported off site. Prepare site for proof-roll inspection on synthetic turf areas, poured-in-place rubber areas and new asphalt spaces. Maintain positive drainage during all earthwork operations.
14. Remove and legally dispose of all excess materials and debris generated by scope of work.
15. Provide temporary pavement measures for vehicle or walkway traffic so as not to disrupt Owner operations.
16. Provide all earthwork as shown. Work includes but not limited to site balancing, rough grading, subgrade fine grading and finish grade fine grading.
17. Furnish and install new site utilities as shown. Work includes, but not limited to, perforated and solid wall dual wall HDPE pipe. Work includes all backfill and tie-ins as noted on Drawings.
18. Install new concrete collar on existing drainage structure as indicated.
19. Provide labor, materials and equipment necessary for complete installation of new concrete turf anchor, wood nailer and sawcutting of concrete turf anchor.
20. Furnish and install geotextile fabric and free draining aggregate stone as indicated.
21. Provide labor, materials and equipment necessary for complete installation of new concrete and asphalt as noted. Work shall include all new base material. Sawcut control joints in new concrete sidewalk areas.
22. Furnish and install new synthetic turf and silica sand infill as specified.
23. Furnish and install new poured-in-place rubber surfacing as noted on drawings and specifications.
24. Furnish and install new basketball hoops, concrete footings, and padding.
25. Provide new topsoil and seed as indicated on drawings and provide all required lawn maintenance as specified. Seed all general areas disturbed during construction and maintain lawns until final acceptance.
26. Furnish and install new trees as indicated. Provide planting maintenance as specified until final acceptance.
27. Provide all cleanup as it relates to Scope of Work.
28. Provide all required closeout documents upon completion of project.

END OF SECTION 00 2413

SECTION 00 3113 – SCHEDULE AND PHASING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Attention is directed to Division 00 Procurement and Contracting Requirements, and to Division 01 General Requirements which are hereby made a part of this section.

1.2 MILESTONE SCHEDULE

- A. The following are the milestone schedule dates for the listed work and will become part of the Contract Documents. A Master Construction Schedule will be developed after award of contract(s) with Contractor input.

MILESTONE ACTIVITY	SCHEDULED START	SCHEDULED COMPLETION
Proposal A: Site Work	May 17, 2027	July 9, 2027

- B. It is expressly agreed that time is of the essence for the completion of Work and Contractor agrees to perform the Work within the designated time specified. Contractor is responsible for any damage and expenses arising or resulting from the failure of Contractor to perform the Work in accordance with the specifications and milestone schedule. Close coordination will be required between all construction trades to ensure construction operations can be completed within the scheduled time.

1.3 CONSTRUCTION SCHEDULE PROCESS

- A. Contractor shall commence work in the field within five (5) days upon receiving a “Notice to Proceed” from Foresite Design, Inc. Contractor shall be responsible for performing and completing the Work to the approval of the Owner and Foresite Design, inc.
- B. Contractor shall submit to Foresite Design, Inc. within fifteen (15) days upon Award of Contract, information including but not limited to scheduling, anticipated work activities and working days, shop drawings and shall also note issues relating to availability of materials.
- C. If Contractor delays progress for any reason other than delays specifically excused under the Contract Documents, Contractor shall take any and all necessary actions to expedite its Work and maintain the project schedule at no additional expense to the Owner or Foresite Design, Inc.
- D. Contractor agrees that it shall have no claim against the Owner or Foresite Design, Inc. for an increase in awarded contract price nor for a payment or allowance of any kind for damage, loss, or expense arising from delays, regardless of whether the delay is the basis for an extension of time. This provision includes claims from damages, loss, or expense arising from interruptions to necessary suspension of Contractor’s Work to enable others to perform their work.
- E. The Contractor shall be back-charged an observation fee of \$1,000.00 per day for each day that

the Contractor fails to meet the projected deadlines, weather permitting, and through no fault of the Owner, or Foresite Design, Inc.

1. Observation Fees, as agreed upon by Owner, Contractor and Architect, will be deducted from Contractor's direct Contract with the Owner and fees paid by the Owner to Foresite Design, Inc.

END OF SECTION 00 3113

TO BE COMPLETED BY BIDDER:

Project: Garfield Thrive Track

	Proposal A – Site Work
--	------------------------

COMPLETE LIST OF SUBCONTRACTORS BIDDER WILL BE USING:

Company Name	Company Name
Contact Name	Contact Name
Address	Address
City, State Zip	City, State Zip
Phone #	Fax #
Company Name	Company Name
Contact Name	Contact Name
Address	Address
City, State Zip	City, State Zip
Phone #	Fax #
Company Name	Company Name
Contact Name	Contact Name
Address	Address
City, State Zip	City, State Zip
Phone #	Fax #

(USE ADDITIONAL SHEETS AS REQUIRED)

PROPOSAL ____ -- _____

This document serves as guarantee by the contractor that all products, devices, materials, etc. used or intended for use in the project are as approved for use in the Specifications issued by Foresite Design, Inc. for LIVONIA PUBLIC SCHOOLS – GARFIELD SKILLS CENTER THRIVE TRACK. Furthermore, no additional formal shop drawings will be necessary unless specifically requested by Livonia Public Schools or Foresite Design, Inc. Items listed below are approved products and no substitutions have been made without written permission by Foresite Design, Inc. (please attach). By signing this document, the contractor is committed to use products required by the contract documents.

LIST SPECIFICATION #, ITEM, MANUFACTURER AND MODEL #

Spec Section	Item	Manufacturer	Model #

Contractor: _____

Signature: _____

Date: _____

Print Name: _____

Title: _____

Reviewed by: _____

Date: _____

SECTION 00 7300 – SUPPLEMENTARY CONDITIONS

STANDARD FORM

The Standard Form of General Conditions of the Contract for Construction, AIA Document A201 - 2007, issued by the American Institute of Architects, is a part of this specification. Copies are on file and may be obtained at the office of the Architect.

TABLE OF ARTICLES

1.	General Provisions	8.	Time
2.	Owner	9.	Payments and Completion
3.	Contractor	10.	Protection of Persons and Property
4.	Administration of the Contract	11.	Insurance and Bonds
5.	Sub-Contractors	12.	Uncovering and Correction of Work
6.	Separate Contracts	13.	Miscellaneous Provisions
7.	Changes in the Work	14.	Termination of Contract

The following supplements modify, change, delete from or add to the above named documents. Where any article of the General conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these supplements, the unaltered provisions of that article, paragraph, subparagraph or clause shall remain in effect.

ARTICLE 1

GENERAL PROVISIONS

1.1 DEFINITIONS

1.1.2 The Contract

- 1.1.2.1 The work shall be performed under separate or combined contracts. It is the duty of each Contractor to coordinate his work with that of each other Contractor. A complete set of drawings and specifications will be made a part of the Contract Documents for each Contractor.

1.1.4 The Project

- 1.1.4.1. The work covered in this project manual consists of construction and other related items, as set forth in the Instruction to Bidders, all pursuant to completion of the Stevenson High School Tennis Renovations 2025.

- 1.1.6.1 The term "product" as used in these Supplementary Conditions includes material, systems and equipment.
- 1.1.7.1 The term "Project Manual" as used in these Supplementary Conditions is the volume which includes the Bidding Requirements, Conditions of Contract and the Specifications.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

- 1.2.3.1 No responsibility either direct or implied is assumed by the Architect for omission or duplications by the Contractor or his Sub-contractor due to real or alleged error in arrangements of matter in these Contract Documents. It is the intent that the Drawings and Specifications include everything necessary for the completion of the project and to be consistent with each other. It is hereby agreed and understood that work shown on the Drawings and not mentioned in the Specifications, or vice versa, is to be included the same as if it were mentioned in both the Drawings and the Specifications, with no extra charge to the Owner. If any part of the Drawings and/or Specifications are inconsistent, incorrect, or obscured in their meaning, these discrepancies shall be brought to the attention of the Architect in writing before execution of the Contract. Where there is conflict regarding the quality of any equipment or material, the one having the better quality shall be used unless directed by the Architect.

In submitting his proposal, the Contractor agrees to furnish all labor and supervision necessary to produce the construction required by the Contract Documents and all materials and equipment incorporated or to be incorporated in such construction.

- 1.2.4 The organization of the Specifications is done with the intent of defining the work for multiple Contract performance. The extent of responsibility for Contractor performance is overlapping from one technical section to another. It is the responsibility of each Contractor to cooperate and coordinate his work with other Contractors as necessary to meet all interface conditions standard to the industry and obvious to the intended extent of the work on this particular project.

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

- 1.5.1.1 Drawings and Specifications provided to those not party to the contract are to be returned immediately upon request of the Architect.

ARTICLE 2

OWNER

2.1 GENERAL

2.1.1.1 The Owner of this Project is:

Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.3.1 The Owner shall obtain and pay for those items described (if any) set forth in the General Requirements.

2.2.4.1 The Owner shall issue all instruction to the Contractor through the Architect.

2.4 OWNER'S RIGHTS TO CARRY OUT THE WORK

2.4.1 The written notice will arrive in the form of, two (2) "forty-eight (48) hour notices" prior to Owner's carrying out the work. The method of notification is distributed via an email transmittal and the original will be sent 1st Class Mail.

ARTICLE 3

CONTRACTOR

3.7 PERMITS, FEES AND NOTICES

3.7.1.1 The individual contractor will be responsible for securing and paying for permits pertaining to their area of work, and other items as set forth in the general requirements. Costs and arrangements for governmental inspection shall be the responsibility of the Contractor.

3.9 SUPERINTENDENT

3.9.1 The contractor shall provide adequate supervision over the work involved in his portion of the project. The Contractor shall designate a representative through which all communications shall be made. This representative shall work closely with the Architect in the performance of the work and his communications shall be binding on the part of the Contractor. Important communications shall be confirmed in writing.

3.9.1.1 All work shall be of the highest quality and in strict accordance with Manufacturer's published specifications and to Owner's satisfaction. Unacceptable workmanship will not be tolerated or permitted to continue.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

- 3.10.1.1 The Contractor and all Sub-Contractors, suppliers and manufacturers shall schedule materials, deliveries and installation expeditiously, and provisions to this effect shall be included in all subcontracts.
- 3.10.2.1 The Projected Construction Schedule as endorsed or modified by the Contractor, is part of the Contract Documents. This schedule constitutes the Contractor's commitment to expedient performance.
- 3.10.2.2 Modification to the Schedule as a result of allowable time extensions or increased scope of work shall be accepted by the Contractor as inherent to the construction process and shall not qualify as a basis for extra compensation from the Owner.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

- 3.11.1.1 The drawings marked to record all changes and of underground installations made during construction, shall be delivered to the Architect upon completion of the work. Receipt of as-built drawings by the Architect is a condition for Final Payment.
- 3.11.1.2 The prints for record drawings will be a set of black and white prints provided by the Architect at start of construction. The Contractor shall maintain the set in good condition and shall use colored pencils to mark up the set in a legible manner to show:
 - 3.11.1.2.A Significant deviations made during construction.
 - 3.11.1.2.B Significant details not previously shown on drawings.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- 3.12.5 Shop drawings and samples shall be submitted to the Architect, dated and marked to show the names of the project, Architect, Contractor, originating Sub-contractor, Manufacturer or Supplier, and separate Retailer if pertinent. Shop drawings shall completely identify Specification section and locations at which materials or equipment are to be installed. Reproductions of Contract Drawings are acceptable as Shop Drawings only when specifically authorized in writing by the Architect.

Submission of shop drawings and samples shall be accompanied by a transmittal letter containing Project name, Contractor's name, number of drawings and samples, titles and other pertinent data.

- 3.12.5.1 Each Contractor shall provide the necessary record drawing information in timely and efficient manner.

3.12.5.2 Submission of shop drawings for approval shall consist of five (5) prints. One (1) print will be returned to the Contractor marked per Paragraph 3.12.11.1 following.

3.12.5.3 Unless otherwise specified, the number of shop drawings and the number of samples which the Contractor shall submit for record is the number that the Contractor requires to be returned plus five (5) copies for drawings and three (3) for samples which will be retained by the Architect/Owner.

If the shop drawing affects the work of another contractor(s) the Contractor shall provide additional copies as directed by the Architect.

3.12.8.1 The Contractor shall conscientiously supply all information required when submitting Shop Drawings and Samples. Information pertaining to delivery and expediting will be part of his submittal. This data is vital to field performance; consequently, the submittal will be returned unless complete information is provided.

3.12.11 Grading of shop drawings shall be as follows:

- A. No Exception Taken: No corrections, no marks.
- B. Reviewed and Noted.: Minor amount of corrections; all items can be fabricated without further correction; checking is complete and all corrections are obvious without ambiguity.
- C. Re-submit: Minor amount of corrections; noted items must not be fabricated without further corrections, checking is not complete, details of items noted by checker are to be further clarified before full approval can be given; items not noted to be corrected can be fabricated under this stamp.
- D. Disapproved: Drawing or equipment is not in accordance with the contract. Submit new drawings covering equipment which meets specifications. Drawings will be returned unstamped with notification on letter of transmittal.

3.13 USE OF SITE

3.13.1 The control of the site will be by the Owner. The Contractor shall cooperate with him in all matters involving use of the site.

3.14 CUTTING & PATCHING

3.14.2 Where cutting of existing work is necessary, same shall be straight, true and of proper size. No excessive cutting will be permitted nor shall any piers or other structural members be cut without the consent of the Architect. The Contractor shall not endanger any work by cutting, excavating or otherwise and shall not cut or alter the work of any

other Contractor without the consent of the Architect.

3.14.2.1 The cutting of all existing work shall be performed by the Contractor requiring same except that the cutting of openings shall be performed by workmen skilled relative to the material being cut.

3.14.2.2 The patching of all exposed work shall be performed by workmen skilled relative to the material being patched.

3.14.2.3 All patching shall be done in a neat, workmanlike manner with materials to match existing.

3.14.2.4 Where cutting or patching is required of one Contractor because of negligence of another Contractor then the cost for same shall be borne by the negligent Contractor.

3.15 CLEANING UP

3.15.2 If the Contractor fails to clean up within 7 days after receipt of notice by the Architect, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.15.2.1 Each Contractor shall perform clean up of his own work including knocked down boxes and other containers. Debris shall not be buried on the site.

3.17 ROYALTIES, PATENTS AND COPYRIGHTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Architect harmless from loss on account thereof.

3.19 SUBSTITUTIONS

3.19.1 After the contract has been executed, the Architect will consider a formal request for substitution of products for those specified, under the following conditions:

- A. The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract Documents including product identification and description, performance and test data, references and samples where applicable, and an itemized comparison or proposed substitution with the products specified or named by Addenda, with data relating to Contract time schedule, design and artistic effect where applicable, and its relationship to separate contracts.
- B. The request is accompanied by accurate cost data on the proposed substitution in comparison with the product specified, whether or not modification of the Contract

Sum is to be a consideration.

- 3.19.2 Requests for substitution based on Clause 3.19.1 above, when forwarded by the Contractor to the Architect, are understood to mean that the Contractor:
- A. Represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified.
 - B. will provide the same guarantee for the substitution that he would for that specified.
 - C. certifies that the cost data presented is complete and includes all related costs under this contract, but excludes costs under separate contracts and the Architect's redesign costs, and that he waives all claims for additional costs related to the substitution which subsequently became apparent; and
 - D. will coordinate the installation of accepted substitute, making such changes as may be required for the work to be complete in all respects.

Substitutions will not be considered if:

- A. They are indicated or implied on the shop drawings submissions without the formal request required in Clause 3.19 above; or
- B. For their implementation they require a substantial revision of the Contract Documents in order to accommodate their use.

ARTICLE 4

ADMINISTRATION OF THE CONTRACT

4.1 THE ARCHITECT

- 4.1.1.1 Requests concerning interpretations during the construction period shall be made to the Landscape Architect. The term "Architect" means the Landscape Architect or the Landscape Architect's representative.

The Landscape Architect for this project is Foresite Design, Inc., 3269 Coolidge Highway, Berkley, MI 48072. (248) 547-7757.

4.5 MEDIATION

- 4.5.1 Binding mediation will be entered into only if mutually agreed upon by both the Owner and Contractor.

ARTICLE 6

CONSTRUCTION BY OWNER OR
BY SEPARATE CONTRACTORS

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

6.1.1 Delete:

"...and waiver of subrogation."

6.1.3.1 A pre-construction conference will be held to review schedule, in the event separate contracts are issued all work must be completed as outlined in the bidding documents. Contractor shall coordinate their Work with other trades in a manner that is in the best interest of the Owner and the overall project.

ARTICLE 7

CHANGES IN THE WORK

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.10 Add:

"The following fees apply to Changes in the Work in accordance with Subparagraph 7.3.6:

- a. 10 percent overhead and profit on the net cost of materials and labor done by the Contractor;
- b. 5 percent overhead and profit on the net cost of materials and labor done by any Subcontractor.

ARTICLE 8

TIME

8.2 PROGRESS AND COMPLETION

8.2.4 During the course of the work, the Architect will condone reduced crew size or even total absence on the part of the Contractor, providing such reduced activity is mutually agreed to and will not slow down or interfere with the overall progress of the work. However, when work is available and is required to maintain the Construction Schedule or assist an interface situation, performance by the Contractor is mandatory. If performance is not maintained by the contractor, the Owner will give the Contractor two (2) forty-eight (48) hours notices before taking over completion of work as covered in Article 2.4.1.

- 8.2.4.1 The Contractor will keep accurate daily records of performance on all Contracts involved in the project. The comparison of these records with the Contractor's commitment to the Construction Schedule will determine his effort in pursuit or total project completion.

8.3 DELAYS AND EXTENSIONS OF TIME

- 8.3.1.1 If a delay on the part of one Contractor directly affects the progress of others, then time extensions shall be granted to those directly affected. Necessarily, however, the granting of time extensions shall not increase the required working time span for any Contractor, only the completion date.
- 8.3.2 All claims for extension of time shall be made in writing to the Architect no more than seven (7) days after the occurrence of the delay; otherwise, they shall be waived. In the case of a continuing cause of delay, only one claim is necessary.

ARTICLE 9

PAYMENTS & COMPLETION

9.2 SCHEDULE OF VALUES

- 9.2.1 The Architect shall review the schedule of values, submitted by the Contractor. The schedule of values shall be prepared in such a manner that each major item of work and each subcontracted item of work is shown as a single line item on AIA Document G702, Application and Certificate for Payment, Continuation Sheet, G703.

9.3 APPLICATIONS FOR PAYMENT

- 9.3.1 Substitute the following:

No later than the 25th day of each month, the Contractor shall submit to the Architect an itemized Application for Payment, supported by such data substantiating the contractor's right to payment as the Owner and Architect may require.

- 9.3.1.3 Until final payment, the Owner will pay ninety percent (90%) of the amount due to the Contractor on account of progress payments. If the manner of completion of the work and its progress are, and remain, satisfactory to the Architect, and in the absence of other good and sufficient reasons and shown to be fifty percent (50%) or more complete in the Application retainage, on presentation by the Contractor of Consent of Surety for each application, the landscape architect shall certify any remaining progress payments to be paid in full.

- 9.3.1.4 The full contract retainage may be reinstated if the manner of completion of the

work and its progress do not remain satisfactory to the Architect, or if the surety withholds his consent, or for other good and sufficient reasons.

9.3.1.5 The form of Application for Payment shall be AIA Document G702, Continuation Sheet, G703.

9.3.1.6 At the time the payment is submitted, the Contractor will present to the Architect in triplicate and original, a Sworn Statement and a Waiver of Lien in the amount of the payment. Waivers from Sub-contractors, and Suppliers representing major expenditures shall also be required. **If these documents are not attached, the pay application will not be processed.**

9.3.1.7 Final payment will be made within 30 days after the Contractor has achieved final completion as determined by Owner and supplied necessary submittals/warranties/guarantees as may be required elsewhere in the contract document. 10% of value of Work completed and acceptable will be retained by Owner until final payment.

9.6 PROGRESS PAYMENTS

9.6.1 The Owner shall make payment to the Contractor on or before the twentieth (20th) day of the month following the Contractor's submission of Application for Payment and after the Architect has issued a Certificate for Payment.

9.8 SUBSTANTIAL COMPLETION

9.8.1.1 The Architect will prepare a Certificate of Substantial Completion when he determines that the work of each individual Contract is substantially complete.

9.8.4.1 The Contractor shall finish all items on the list within thirty (30) days of the acceptance of the Certificate of Substantial Completion. If completion is not obtained within thirty (30) days, the Owner will give the Contractor two (2) forty-eight (48) hours notices before taking over completion of work as covered in Article 2.4.1.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1.1 The Architect will issue a final Certificate for Payment after he finds the work acceptable under Contract Documents and the Contract fully performed.

9.10.2.1 Final payment, covering each individual Contract, will be made by the Owner to the Contractor thirty days after Substantial Completion of the work unless otherwise stipulated in the Certificate of Substantial Completion, provided the work has then been completed, the Contract fully performed, and a final

Certificate for Payment has been issued by the Architect.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor shall adequately protect building, service drives, lawn, shrubs, trees etc. from damage, including water damage, during the process of performing required Work. Contractor shall repair or be responsible for the costs to repair, all property damaged during the performance of this Contract. Damages to the building will be addressed immediately and sent to Contractor in writing by Owner.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.8 Contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. Safety shall be the responsibility of the Contractors. All contractor related personnel shall be instructed daily to be ever mindful of the full time requirement to maintain a totally safe environment for the facilities' occupants including students, staff, visitors and the occurrence of the general public on or near the site.

ARTICLE 11

INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 In the first line following the word "maintain", insert the words "In a company or companies licensed to do business in the state in which the Project is located."

11.1.1.9 Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises - Operations (including X-C-U). (For underground work only)
2. Independent Contractor's protective
3. Products and completed operations
4. Contractual - including specified provisions for the Contractor's obligations under Paragraph 3.18.
5. Owned, non-owned and hired motor vehicles.
6. Broad form coverage for property damage.

Add the following:

11.1.2.1 Add the following minimum limits:

1. Worker's Compensation & Employers' Liability

A.	Each Accident	\$	1,000,000
B.	Disease-Policy Limit	\$	1,000,000
C.	Disease-Each Employee	\$	1,000,000

2. Comprehensive General Liability

A.	Bodily Injury		
	Each Person	\$	1,000,000
	Each Occurrence	\$	1,000,000
B.	Personal Injury		
	Each Person	\$	1,000,000
	Aggregate	\$	2,000,000
	General Aggregate	\$	2,000,000
C.	Property Damage		
	Each Person	\$	1,000,000
	Each Occurrence	\$	1,000,000
	Aggregate	\$	2,000,000

3. Automobile Liability

A.	Bodily Injury		
	Each Person	\$	1,000,000
	Each Occurrence	\$	1,000,000
B.	Property Damage		
	Each Occurrence	\$	1,000,000

4. Independent Contractors
Same limits as above

5. Products and Completed Operations

Same limits as above

- 11.1.2.2 The Contractor will require all Sub-contractors to maintain similar insurance coverage.
- 11.1.2.3 In addition to the General Liability coverage required by Article 11.1.2.1, the Contractor will maintain during the period of this Contract Umbrella Liability Insurance covering the risk of losses of \$ 1,000,000.00 in excess of the limits stated in Article 11.1.2.1.
- 11.1.3.1 Furnish one (1) copy of Certificates herein required for each copy of the Agreement; specifically set forth evidence of all coverage required by Subparagraph 11.1.1. and 11.1.2. Furnish the Owner copies of any endorsements that are subsequently issued amending coverage or limits.
- 11.1.3.2 All Certificates for insurance shall name the Owner and Architect as additionally insured.
- 11.1.3.3 **The following language shall be indicated on all certificates of insurance from successful bidder: Livonia Public Schools, its elected or appointed officials, employees and volunteers, Plante Moran Cresa, and Foresite Design, Inc. are included as insured with regards to damages and defense of claims arising from: (a) activities performed by or on behalf of the named insured, or (b) products and completed operations of the named insured, or (c) premises owned, leased, or used by the named insured".**

11.3 PROPERTY INSURANCE

- 11.3.5 Delete the last sentence in its entirety:

"All separate policies shall provide this waiver of subrogation by endorsement or otherwise."

- 11.3.7 Delete this section in its entirety:

"The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written

where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged."

11.3.9 Add the following sentence:

In waiving rights of recovery under terms of this Subparagraph, the term "Owner" shall be deemed to include his employees, the Architect, and their employees as the Owner's representative as provided in the Contract Documents.

11.3.11 If the Owner finds it necessary to occupy or use a portion or portions of the work prior to Substantial Completion, such occupancy shall not commence prior to a time mutually agreed to by the Owner and the Contractor and concurred with by the insurance company or companies. This insurance shall not be canceled or lapsed on account of such partial occupancy.

11.5 OWNER'S PROTECTIVE INSURANCE

11.6.1 The Contractor shall provide Owner's Protective Insurance on same limits as specified in 11.1.1 and 11.1.2 above, naming the Architect as additionally insured.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered or sent via the telephone facsimile machine to the last known number to the party giving notice.

13.5 TESTS AND INSPECTIONS

13.5.1 The Owner shall pay for all testing.

13.8 NO SMOKING

13.8.1 No smoking is permitted in the building or on school grounds.

13.9 SECURITY

13.9.1 Contractors shall observe the following procedure when working in a school building, unless otherwise instructed:

1. Proceed to the office, identify yourself, state reason for being in the building, and receive visitors pass.
2. Complete work, then revisit the office to check out prior to leaving the building/premises.

13.10 ENVIRONMENTAL SAFETY/RESPONSIBILITY

13.10.1 It shall be the responsibility of the Contractor or sub-contractor to pay any and all costs incurred from the clean up related to any environmental hazard created by means of contamination caused by accident or neglect of the Contractor or sub- contractor.

It shall be the responsibility of the Contractor or sub-contractor to dispose of any environmentally hazardous product(s) and/or material in accordance with the EPA, DNR, and local applicable laws and regulations.

It shall be the responsibility of the Contractor or sub-contractor, if required, to purchase permits and notify the proper authorities prior to commencing said project or, should a "release" take place, to notify proper authorities of any such release.

It shall be the responsibility of the Contractor or sub-contractor to maintain on site a blood borne pathogen plan and all necessary safety supplies associated with any spill or clean up that may occur.

13.11 RIGHT TO KNOW

13.11.1 In accordance with **MIOSHA** regulations pertaining to the "**Michigan Right to Know Law**" the owner has posted Material Safety Data Sheets for any hazardous chemicals in their workplace. The Contractor shall designate a coordinator to oversee the institution and maintenance of a similar program for the areas in which the construction work will take place. The program must encompass all **MIOSHA** Regulations with regards to the "**Michigan Right to Know Law**" for all hazardous chemicals which will be used on site during the course of construction.

13.12 ASBESTOS FREE CERTIFICATION

No asbestos containing material shall be purchased or installed as a part of this project. The Contractor shall be required to certify that no asbestos containing materials have been replaced in this project. **Approved certification shall be on file with the Owner prior to consideration for final payment.**

13.13 AFFIRMATIVE ACTION

Livonia Public Schools as an Equal Opportunity Affirmative Action Employer, Complies with the

federal and state laws prohibiting discrimination, including Title IV and Title VII (with amendments) of the 1964 Civil Rights Act, Title IX of the Educational Amendment of 1972, Section 504 of the Rehabilitation Act of 1973 and Veterans Readjustment Act of 1974 as amended 38 USC20-12 and the Americans With Disabilities Act of 1990. It is the policy of the school board that no person, on the basis of race, sex, height, weight, color, religion, nation origin or ancestry, age, marital status, disability or veteran status, shall be discriminated against in employment, educational programs and activities, or admission.

END OF SECTION 00 7300



FILE TRANSFER AGREEMENT

Project: LIVONIA GARFIELD SKILLS CENTER THRIVE TRACK

Project Number:

Specific Type of Work:

FORESITE DESIGN, INC. (FDI) AGREEMENT FOR THE TRANSFER OF INSTRUMENTS OF SERVICE (ELECTRONIC FILES) TO _____.

As per your request, we will provide electronic files for your convenience and use in preparing for your specific work related to the above referenced project, subject to the following terms and conditions:

Hard Copy Instruments

These electronic files are not construction documents. Differences may exist between these electronic files and corresponding hard-copy construction documents. We make no representation regarding the accuracy or completeness of the electronic files you receive. In the event that a conflict arises between the signed or sealed hard-copy construction documents prepared by us and the electronic files, the signed or sealed hard-copy documents shall govern. You are responsible for determining if any conflicts exist. By your use of these electronic files, you are not relieved of your duty to fully comply with the contract documents, including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate your work with that of other contractors for the project.

If addendums, bulletins, construction change directives, change orders, and/or any other change is formally issued to the contract documents, it is your responsibility to request updated CAD files if so needed. FDI will not automatically forward the updated files to you.

Electronic Data Transfer

Our electronic files are compatible with: AutoCAD Release 2010 and 2004. We make no representation as to the compatibility of these files with your hardware or your software beyond the specified release of the referenced specifications. Other software programs may have been used in the development of the drawings and design of the project. FDI will not release any of this associated software for use with the electronic files.

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Furthermore, you shall, to the fullest extent permitted by law, indemnify and hold us harmless against all damages. Liabilities or costs, including reasonable attorneys' fees and defense costs, arising out of or resulting from your use of these electronic files.

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If an electronic file is requested and provided by FDI, it is specifically understood and agreed that use of electronic media provided by FDI is done so at the sole risk of the user and the user is responsible for testing for and eliminating computer viruses from any files provided by FDI.

Under no circumstances shall delivery of the electronic files for use by you be deemed a sale by us, and we make no warranties, either expressed or implied, of merchantability and fitness for any particular purpose. In no event shall we be liable for any loss of profit or any consequential damages as a result of your use or re-use of these electronic files.

Architect:

Agreed by:

(signing below indicates that we have read and agree to both pages of this agreement)

Foresite Design, Inc.

Company Name

Michael Sims
President

Authorized Signature and Title

Date: _____

Date: _____

SECTION 01 2300 - ALTERNATES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates as proposed by the Landscape Architect. The bidder proposes the following Voluntary Alternates for the sums to be deleted from the Base Bid as stated below:

1. Voluntary Alternates or Substitutions proposed by Bidders will not form the Base Bid Proposal Price.

- B. VOLUNTARY ALTERNATE NO. 1:

Which would save the Owner:	
	Dollars

- C. VOLUNTARY ALTERNATE NO. 2:

Which would save the Owner:	
	Dollars

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Proposal Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the work, No other adjustments are made to the Contract Sum.

- B. Voluntary Alternate: Bidders proposing voluntary alternates and substitutions will not be recognized as part of the Base Bid Price. Owner may review voluntary proposal with the successful Bidder.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into the project.
 - 1. Include as part of each alternate, miscellaneous products, equipment, and similar items incidental to or required for a complete installation whether or not indicated as part of the alternate.
- B. Notification: Immediately following award of Contract, notify each party involved of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 2300

SECTION 01 3523 - SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION

- A. Safety is the responsibility of each individual Contractor. Each Contractor shall comply with all local safety ordinances and MI-OSHA regulations and requirements while performing the Work.
- B. Each Contractor is required to submit Material Safety Data Sheets (MSDS) to the Construction Manager, to be used for reference only, prior to transporting the material/chemical on site. In addition, it is the responsibility of each Contractor to maintain an accessible MSDS file for their employees, subcontractors, and suppliers on site.
- C. Each Contractor shall submit evidence of an Employer Safety Program that complies with current MI-OSHA regulations and requirements prior to beginning any contract Work.
- D. The Contractor and their Sub-Contractor(s) and suppliers shall take all necessary precautions to ensure the safety of the public and of workers on the job, and to prevent accidents or injury to any persons, on about, or adjacent to the premises where the Work is being performed. The Contractor and the Sub-Contractor(s) and suppliers shall comply with Federal or State OSHA regulations and all other laws, codes, ordinances, and regulations relative to safety and the prevention of accidents.
- E. The Contractor shall designate a responsible representative at the job site as a Safety Representative who shall be responsible for the promotion of safety and prevention of accidents, and shall enforce all applicable laws, ordinances, codes, rules, regulations and standards pertaining to safety and prevention of accidents.
- F. Each Contractor shall submit their Experience Modification Rating (EMR) to the Construction Manager. In addition, the Contractor is responsible to provide to the Construction Manager a listing of any MIOSHA violations or citations they have received in the past 5 years.
- G. Upon award of Contract, Contractor must provide Construction Manager with a 'Safety Manual'. Record copy of safety manuals will be retained onsite. Safety Manual shall include the following, but not limited to:
 - 1. Loss Control Program.
 - 2. Hazard Communication Program.
 - 3. Respiratory Protection Program.
 - 4. Necessary Forms Needed to Adequately Perform Job.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 3523

SECTION 01 4100 - REGULATORY REQUIREMENTS

PART 1 GENERAL

1.1 PERMITS AND INSPECTION FEES

- A. The Contractor will secure and pay for all general building permits.
- B. All soil erosion and DEQ permits, mechanical, and electrical permits shall be applied for, secured, and paid for by the Contractor requiring such permits.
- C. Any other specialized permits or inspection fees (i.e. utility taps or fees) shall be applied for, secured, and paid by the Contractor requiring such permits.

1.2 INSPECTIONS

- A. Any Contractor requiring special inspection by the State or other agency shall arrange and schedule the inspection and give a minimum of 48 hour notice to the Construction Manager, Architect, or Engineer.
- B. Partial occupancy permits may be applied for by the Owner. All Contractors will cooperate and assist in securing and maintaining partial occupancy permits.
- C. Mechanical and electrical Contractors shall review their specifications to comply with all special testing and inspections.
- D. Where the Contract Documents require inspections, tests or approvals of the Work to be made by an independent testing agency or laboratory or an independent professional consultant, the independent testing agency or laboratory or independent professional consultant shall be satisfactory to the Architect, Engineer and Construction Manager.
- E. Each contractor shall inspect work of others which will receive or is adjacent to their work before commencing their work. Do not proceed until conditions which would result in a less than satisfactory installation are corrected. Commencing work shall constitute as acceptance of the work or others by the contractor as satisfactory to receive their work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 4100

SECTION 01 5600 - CLEANING

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work Included: Each Contractor shall, throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not limited to, General Conditions, Supplementary Conditions, and Section in Division 1 of these Specifications.
 - 2. In addition to Standards described in this Section, comply with requirements for cleaning as described in other pertinent Sections of these Specifications.

1.2 QUALITY ASSURANCE

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Each Contractor shall provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.
- B. Each contractor shall provide portable toilets for their employees unless otherwise advised by the Owner.

2.2 COMPATIBILITY

- A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

A. General; the Contractor shall:

1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing protection of materials from weather.
2. Not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work either inside the building nor on the property surrounding the work site.
3. At least once a week, and more often if necessary completely remove all scrap, debris, and waste material from the building and facility. If a dumpster is required for this work, it shall be paid for by the Contractor(s).
4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pickup all scrap, debris, and waste material. Remove items to the place designated for their storage. Contractor shall dry sweep street(s) affected by construction traffic as directed, for the duration of the construction.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy or otherwise service arrangements to meet the requirements as noted above. Contractor shall water/wet sweep street(s) affected by construction traffic once a week, for the duration of the construction.
3. Maintain the site in a neat and orderly condition at all times.

C. Structures:

1. Weekly, and more often if necessary, sweep sidewalks, City roads, as directed.
 - a. "Clean: for the purposes of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort, hand-held broom, and heavy-duty vehicle sweeper.
2. Protect existing structures, finishes and materials. Should work occur near existing structures or finishes, Contractor shall ensure materials are left clean. Any damage caused by the Contractor shall be repaired or replaced by Contractor as directed by the Architect, at no additional cost to the Owner.
 - a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Architect, may be injurious to the finished material.

3.2 FINAL CLEANING

- A. "Clean" for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality equipment and materials.
- B. Prior to completion of Work, remove from the job site, all tools, surplus materials, equipment, scrap, debris and waste. Location of surplus materials for Owner use shall be coordinated with Owner prior to Contractor leaving site.

END OF SECTION 01 5600

SECTION 01 5629 - TEMPORARY PROTECTIVE WALKWAYS

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work Included: Each Contractor shall, throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.

1.2 SCOPE OF WORK

- A. The work under this section of the specifications shall include providing all labor, materials, and equipment necessary for the installation of heavy-duty composite protective mats for temporary access roads and pavement protection.

1.3 QUALITY ASSURANCE

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness and protection are being met. Work shall include ensuring interlocking decking attachment points have not been released from the decking.

PART 2 PRODUCTS

2.1 PRODUCTS

- A. Proposed products shall utilize one of the following:
 - 1. Dura-Base® as manufactured by Newpark Mats

9320 Lakeside Blvd., Suite 100 The Woodlands, TX 77381 (877) 628-7623

- 2. MEGADECK ® HD as manufactured by Signature Systems

1201 Lakeside Parkway, Suite 150 Flower Mound, TX 75028 (800) 931-7301
--

- B. Alternative System may include 1" Steel Plates over bridging material as detailed.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install pre-manufactured HDPE mat material per manufacturer's written installation instructions and details. Materials include a geotextile fabric base material, 3/4" plywood, and 2" foam sheets placed beneath the mats or steel plates.
- B. Pre-manufactured matting shall be installed in a manner to connect to each other and form a tight and secure load-distributing surface.
- C. Provide a smooth transition from the mat road to an existing surface, which may include utilizing the manufacturer's Ramp Component or mounding aggregate gravel material against the edge of the mat. Should the mat road meet an existing road where traffic enters and exists at hard angles, wings should be constructed to accommodate the turning radius of vehicles.

3.2 MAINTENANCE

- A. Construction matting or steel plates should be kept clean from debris, oils or materials from entering any nearby drainage points. This may include power-washing to restore optimal traction to maintain a clean worksite.
- B. Should a holding pin become damaged that it can no longer hold part of the mats, it should be replaced so the mat grid does not shift. Should damage to the mats occur where the damage appears irreparable, remove the damaged mat and replace with another mat.
- C. Should the mats or steel plates become slick with mud during heavy rainfall or if ice forms during cold weather, sand should be spread on the surface to aid traction. If snow accumulates on the surface, plow or shovel the snow to clear the mats, while minimize the impact to any protruding edges. Ensure the plow blade does not scrape the surface of the mat.

3.3 CLEAN-UP

- A. The Contractor shall remove the temporary construction access road matting or plates in a manner so as not to damage the surface below.
- B. Remove and dispose of all excess materials or debris from the site.
- C. Inspect the existing surrounding and protected surface areas for damage or debris. Contractor shall powerwash or clean the existing surfaces to remove all fine debris.

END OF SECTION 01 5629

SECTION 01 7301 - FIELD ENGINEERING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK INCLUDED

- A. Upon receipt of contract award, contractors are responsible to provide and pay for additional field engineering services required including all survey work.
- B. All survey work related to the project shall be completed by one (1) Surveyor.

1.3 QUALIFICATIONS

- A. Registered Professional Surveyor, acceptable to Owner, Construction Manager and Engineer.

1.4 SURVEY/ EXISTING CONDITIONS PLAN

- A. Survey documents provided are based on past survey work and historic drawings and field verification. Contractor shall field verify horizontal and vertical site conditions. Any discrepancies in documents shall be immediately reported to Owner's Representative, Construction Manager, and Engineer prior to the start of construction.

1.5 SURVEY REFERENCE POINTS

- A. Contractor shall establish control points prior to starting site work. Contractor shall protect and preserve all control and reference points during construction.
- B. Make no changes or relocation without prior written notice to Owner's Representative, Construction Manager, and Engineer.
- C. Report to Owner's Representative, Construction Manager, and Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- D. Contractor shall be required to replace project control points which may be lost or destroyed.

1.6 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.

1.7 SUBMITTALS

- A. Submit name and address of Surveyor to Construction Manager.
- B. On request of Construction Manager, Owner's Representative or Engineer, submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by Registered Surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.
- D. Provide "As-Built" drawings reflecting any changes illustrated on the contract documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 7301

SECTION 01 7700 - PROJECT CLOSEOUT

PART 1 GENERAL

1.1 SUMMARY

- A. Comply with requirements stated in Conditions of the Contract and in the Specifications for administrative procedures in closing out the work.

1.2 SUBSTANTIAL COMPLETION

- A. Refer to General Conditions of the Contract for Construction.
- B. When the Project is determined by the Landscape Architect to be sufficiently complete to permit utilization for the intended use, the Landscape Architect will issue a Certificate of Substantial Completion.
- C. To receive the Certificate of Substantial Completion, Contractor shall perform the following:
 - 1. Submit to the Architect a notice declaring that work is believed to be substantially complete.
 - 2. Submit a list of work items that remain to be completed or corrected and the date this work will be accomplished.
- D. Architect will visit the project to evaluate the request for issuance of Certificate of Substantial Completion.
 - 1. If the Architect concurs that the Project is substantially complete, the Architect will deliver a Certificate of Substantial Completion and a list of work items necessary for completion or correction prior to the request for inspection for final completion.
 - 2. If the Architect determines that the work is not substantially complete, the Architect will deliver to the Contractor a written statement including reasons.
 - 3. Complete work on the items required by the Architect for achieving substantial completion and make additional written requests for issuance of Certificate of Substantial Completion until the Architect determines that sufficient work has been performed.

1.3 CLOSEOUT SUBMITTALS

- A. When the Architect has determined and the Construction Work is acceptable under the Contract Documents and the Contract fully performed, prepare and submit final Application for Payment to the Architect together with the (1) copy of the following:
 - 1. A letter recommending acceptance of Project and indicating all punch list items are complete.

-
2. Project Record Documents, Warranties and Bonds.
 3. Sworn Statements and Waivers.

- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

1.4 FINAL APPLICATION FOR PAYMENT

- A. Submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 7700

SECTION 01 7823 - OPERATING, MAINTENANCE AND WARRANTY DATA

PART 1 GENERAL

1.1 SUMMARY

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract.
- B. Prepare operating, maintenance and warranty data as specified in this Section and as referred in other pertinent sections of Project Manual.
- C. Instruct Owner's personnel in the maintenance of products and in the operation of equipment and systems.
- D. Related Sections:
 - 1. Specification Section 01 7800 Project Closeout.
 - 2. Specification Section 01 7839 Project Record Documents.

1.2 QUALITY ASSURANCE

- A. Preparation of data shall be done by personnel with the following qualifications:
 - 1. Trained and experience in maintenance and operation of the described products.
 - 2. Completely familiar with requirements of this Section.
 - 3. Skilled as a technical writer to the extent required to communicate essential data.
 - 4. Skilled as a draftsman competent to prepare required drawings.

1.3 FORM OF SUBMITTALS

- A. Prepare data in the form of an instructional manual for use by the Owner's personnel.
- B. Format shall conform to the following:
 - 1. Digital: Flash Drive.
 - 2. Text: Manufacturer's printed data, or neatly typewritten.
 - 3. Drawings:
 - a. As-Built drawings of site.
 - 4. Provide PDF for each separate product, or each piece of equipment.
 - a. Provide typed description of product, and major component parts of equipment.
 - b. Provide in organized fashion.
 - 5. Cover: Identify each volume with typed or partial title "OPERATING, MAINTENANCE AND WARRANTY INSTRUCTIONS". List:
 - a. Title of Project.

-
- b. Identity of separate structure as applicable.
 - c. Identity of general subject matter covered in manual.

1.4 CONTENT OF MANUAL

- A. Arrange in the following systematic order:
 - 1. Contractor, name of responsible principal, address and telephone number.
 - 2. A list of each product required to be included, indexed to the content of volume.
 - 3. List, with each product, the name, address and telephone number of:
 - a. Contractor or installer.
 - b. Maintenance contractor, as appropriate.
 - c. Identify the area of responsibility of each.
 - d. Local source of supply for parts and replacement.
 - e. Include warranty information as specified.
 - 4. Identify each product by product name and other identifying symbols such as set in Contract Documents.

1.5 SUBMITTAL SCHEDULE

- A. Submit one copy of completed data in final form within thirty days of substantial completion, Copy will be returned with comments.
- B. Submit two copies of approved data in final form within ten (10) days after comments are received.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 7823

SECTION 01 7839 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Fully cooperate with the Architect to accomplish the following.
- B. These requirements supplement the requirements set forth in the General Conditions.
- C. Maintain at each site one record copy, as applicable, of:
 - 1. Drawings and data with addenda marked in.
 - 2. Specifications with addenda marked in.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Architect/Engineer Supplemental Instructions, Proposal Requests or written instructions.
 - 6. Approved shop drawings, product data and samples.
 - 7. Field test records.

1.2 MAINTENANCE OF RECORD DOCUMENTS AND SAMPLES

- A. Store record documents and samples in Contractor's field office in files and racks. Provide locked cabinet or secure storage space for storage of samples.
- B. Maintain record documents in a clean, dry, legible condition and in good order. Do not use documents for construction purposes.
- C. Make record documents and samples available at all times for inspection by Architect or Owner.

1.3 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Continuously record information and changes.
- C. Drawings: Legibly mark to record actual construction.
 - 1. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 3. Field changes of dimension and detail.

-
- 4. Changes made by Field Order or by Change Order.
 - 5. Details not on original contract drawings.
- D. Specifications and Addenda: Legibly mark each section to record:
- 1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.
 - 2. Changes made by Field Order or Change Order.
- E. Shop Drawings and Submittals: Label each set by corresponding specification section. At the completion of the project, provide the Owner with one complete set, reviewed and stamped by Architect, organized by Specification Section in the following formats:
- 1. Paper (various sizes) folded to 8-1/2" x 11" and boxed with project name and completion data clearly labeled on exterior.
 - 2. Scanned PDF copy on a compact disk, ordered by specification section.

1.4 SUBMITTAL

- A. Deliver Record Documents to the Owner at contract close-out.
- B. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date.
 - 2. Project Title.
 - 3. Title and number of each Record Document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 7839

SECTION 02 4113 - DEMOLITION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. The work under this section of the specifications shall consist of the removal and disposal of all items as indicated on the drawings. Contractor shall furnish all labor, materials and equipment to complete the work according to the drawings and specifications.
- B. Related Sections:
 - 1. Section 31 2000 Earthwork - Athletics.
- C. Section Includes:
 - 1. Clear and grub. Strip lawn and topsoil.
 - 2. Remove basketball hoops and footings.
 - 3. Salvage, stockpile, and restore existing gravel surface.
 - 4. Removal of asphalt pavement at basketball court. Existing stone base to remain and be protected.

1.3 SUMMARY

- A. Remove (Demolish): Detach items from existing conditions and dispose of them off-site unless noted to be salvaged and/or re-installed.
- B. Salvage: Detach items from existing conditions, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Re-Install: Detach items from existing conditions, in a manner to prevent damage, prepare for re-use, and re-install where indicated.
- D. Existing to Remain: Leave exiting items that are not to be removed and that are not otherwise indicated to be salvaged or re-installed.

1.4 QUALITY ASSURANCE

- A. Contractor's personnel responsible for demolition operations shall be experienced in this

type of work. Equipment is to be of suitable type, in good working condition, and operated by skilled trades.

1.5 MATERIAL OWNERSHIP

- A. Unless indicated otherwise, demolition related items and waste shall become the property of the Contractor.

1.6 FIELD CONDITIONS

- A. Conduct demolition activities so Owner's operations will not be disrupted.
- B. Existing conditions at the time of inspection for bidding purposes will be maintained by the Owner as far as practical.
- C. Notify Owner's Representative or Landscape Architect of discrepancies between existing conditions and Drawings before proceeding with demolition operations.
- D. Hazardous Materials: Hazardous Materials are not expected to be encountered during the Work.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect against damage during demolition operations.

PART 2 PRODUCTS

2.1 SOILS MATERIALS

- A. Satisfactory Soils: Refer and comply with requirements noted in Section 31 2000 Earthwork.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Survey of Existing Conditions: Contractor shall review and be familiar with demolition items noted in Project Documents. Prior to demolition operations, Contractor shall record existing conditions by use of measured drawings or preconstruction photo / video.

3.2 UTILITY SERVICES

- A. Existing Services to Remain: Maintain services as indicated to remain and protect from damage.
- B. Existing Services to be Removed, Relocated or Abandoned: Locate, identify, disconnect, and/or cap utility services to be demolished.
 - 1. Contractor shall enlist the services of a public utility locating company (MISS DIG) and a private utility locating company to assist in identifying any known public or private utility lines within the construction area.

3.3 DEMOLITION GENERAL

- A. Site Access: Conduct demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied spaces.
- B. Salvaged Items:
 - 1. Clean salvaged items and pack/crate for transport or storage.
 - 2. Store items in a secure area until delivery to Owner.
 - 3. If Contractor is required to transport items to Owner's storage area, protect items from damage during transport.
- C. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition suitable for re-use.
 - 2. Reinstall items as indicated on the Drawings. Comply with installation requirements for new materials or equipment. Provide supports and miscellaneous materials necessary to make item functional for reuse.
- D. Existing Items to Remain:
 - 1. Protect existing items to remain against damage during demolition operations. When permitted, items may be removed to a suitable storage location during demolition, cleaned, and re-installed to the original location after demolition is complete. Coordinate with Owner's Representative.

3.4 MATERIAL DISPOSAL

- A. Remove waste materials from site and dispose in an approved landfill waste facility.
 - 1. Obtain permission from applicable regulatory authority for disposal of debris to waste disposal site. Contractor is responsible for all demolition related costs or manifests.
 - 2. Promptly remove cleared debris from the site. Do not allow demolished materials to accumulate onsite.
 - 3. Remove and transport material debris in a manner that prevents spillage onto adjacent surfaces.
 - 4. Burning: Do not burn demolished materials.

3.5 SITE RESTORATION

- A. Below-Grade Areas: Backfill below-grade areas and voids resulting from demolition operations with satisfactory materials according to backfill requirements noted in Section 31 2000 Earthwork.
- B. Fence Post / Footing Removal & Backfill:
 - 1. In excavated areas, backfill shall be excavated soil material, free of rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetable matter, and other deleterious matter. Existing materials may be used for backfill, provided no silt is mixed with material. Backfill shall be placed in compacted layers of 8" maximum depth, using a "jumping jack or pogo stick" style compactor to achieve 95% compaction.
 - 2. Fill Material: Fill material shall be clean, hard, durable, uncoated particles of sand or sand gravel mixture, provided that there shall be a substantial excess of sand-screenings. Peastone is also acceptable backfill material.
 - 3. Holes shall not be left open for more than 10 hours.
- C. Site Grading: Uniformly grade area of demolition to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent and new surfaces.

END OF SECTION 02 4113

SECTION 03 3000 - CAST IN PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 31 2000 Earthwork - Athletics

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials and equipment necessary to construct cast-in place concrete pavement for parking lots, curbs and gutters, sidewalks, and wheel stops.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM C 94-97 - Standard Specification for Ready Mixed Concrete.
 - b. ASTM C 171-69 (1975) - Standard Specification for Sheet Materials for Curing Concrete.
 - c. ASTM C 309-74 - Standard Specification for Liquid Membrane Forming Compound for Curing Concrete.
 - d. ASTM D 1751-73 - Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
 - 2. MDOT current Standard Specifications for Construction.

1.4 SUBMITTALS & TEST REPORTS

- A. Submit aggregate and concrete mix designs proposed for review. Contractor is to confirm that materials provided meet the required specifications and are to provide material certification to the Architect. Material certifications shall indicate that products meet or exceed the specified requirements indicated on the plans and the regulating authority.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installer shall be experienced with at least five (5) years in business who has completed concrete pavement work similar to the design, materials and requirements indicated for this project.
- B. Manufacturer Qualifications: Manufacturer of ready-mix concrete products complying with ASTM C94 requirements for production facilities and equipment and approved by governing jurisdictions for State Department of Transportation.
 - 1. Manufacturer must be certificated according to the National Ready Mix Concrete Association's Plant Certification Program.
- C. Testing Agency Qualifications: The independent testing agency shall be qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from a single source.

1.6 ENVIRONMENTAL REQUIREMENTS AND PROJECT CONDITIONS

- A. Allowable concrete temperatures.
 - 1. Cold Weather: Maximum and minimum, ASTM C94.
 - 2. Hot Weather: Maximum concrete temperature - 90 degrees F (23 degrees C).
- B. Do not place concrete during rain, sleet or snow.

PART 2 PRODUCTS

2.1 FORMS

- A. Form Materials: Plywood, metal, metal framed plywood, or other approved panel materials to provide a full-depth, continuous, smooth exposed surface.
 - 1. Use flexible or curved forms for conditions that require curved finishes.
- B. Form Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect the concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. Reinforcement Bars: ASTM A 615/A, 615M, Grade 60, deformed billet steel, unfinished.
- B. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated flat sheets, unfinished.

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- C. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 deformed bars, assembled with clips.
 - D. Epoxy-Coated Reinforcement Bars: ASTM A 775/A 775M. with ASTM A 615/A 615M, Grade 60 deformed bars.
 - E. Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60. Cut bars true to length with ends squared and free of any burrs.
 - F. Tie Bars: ASTM A 615/A 615M, Grade 60 deformed.
 - G. Epoxy Coated Joint Dowel Bars: ASTM A 775/A 775M. with ASTM A 615/A 615M, Grade 60, plain steel bars.
 - H. Bar Supports: Bolsters, chairs, spaces, and other devices necessary for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRS' I's Manual of Standard Practice from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete.
 - I. Epoxy Repair Coating: Liquid two-part epoxy repair coating, compatible with epoxy coating on reinforcement.

2.3 MATERIALS

- A. Use the same brand and type of cementitious material from the same manufacturer throughout the entire project. All material to meet current MDOT specifications.

2.4 CONCRETE MIXES

- A. Prepare mix design, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by lab trial mixes.
- B. Use a qualified testing agency for preparing and reporting proposed mix designs for the testing batch.
- C. Provide mixes for sidewalks, curbs, gutters, and roads meeting the following properties:
 - 1. Compressive Strength (28 days): 3500psi, unless indicated otherwise.
 - 2. Maximum Water to Cement Ratio: 45 percent by weight.
 - 3. Maximum Aggregate Size: 1.5 inches (38mm).
- D. Cementitious Material: Limit percentages, by weight of cementitious materials other than portland cement according to current ACI 301 requirements for concrete exposed chemicals used for de-icing.
- E. Air-entraining admixtures shall be used at manufacturer's prescribed rates to result in concrete at point of placement, with an air content of 5.0 to 8.5 percent.

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- F. Slump: two (2) to three (3) inches.

2.5 CONCRETE MIXING

- A. Ready-Mixed Concrete: Comply with requirements and ASTM C94 and ASTM C1116.
 - 1. When air temperature is between 85 degrees F and 90 degrees F, reduce mixing and delivery time from 75 minutes to 90 minutes; when air temperature is above 90 degrees F, reduce mixing and delivery time to 60 minutes.
- B. Project Site Mixing: Comply with requirements and measure, batch, and mix concrete materials and concrete according to ASTM C94. Mix concrete materials in appropriate drum-type batch machine mixer.

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify the earthwork is completed to correct line and grade. Notify the Owner/Landscape Architect of any incomplete work by previous contractors.
- B. Check that sub-grade is smooth, compacted, and free of frost or excessive moisture.
- C. Do not commence work until conditions are satisfactory.

3.2 WEATHER PROTECTION

- A. Cold weather: When the mean daily air temperature is 40 degrees F. or below, provide suitable protection for concrete work to maintain a minimum concrete temperature of 50 degrees F. for five (5) days (or 70 degrees F. for three (3) days). After the protection period, do not let concrete cool more than 20 degrees F. in each successive day.
- B. Hot weather: Place concrete according to recommendations in ACI 305R when hot-weather conditions exist.
- C. Wet weather: Unless adequate protection is provided, do not place concrete in rain, sleet or snow.

3.3 JOINTS

- A. Construct all joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles, unless noted otherwise.
- B. At locations where new concrete abuts existing concrete, building walls and slabs, place expansion joint material and joint sealants.

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- C. Expansion Joints: Place 1 inch wide expansion joints at maximum 40 foot intervals, if not indicated on drawings. Joints to be full depth of pavement and joint sealant placed at all expansion joints.
 - D. Install all dowel bars and support assemblies at joints if indicated on the plans. Coat one-half of dowel length to prevent concrete bonding to one side of the joint.
 - E. Contraction Joints: form any weakened plane contraction joints, sectioning concrete into areas. Construct ¼ inch wide contraction joints for a depth equal to one-third of the concrete thickness. Maximum spacing of the joints shall be 8'-0".
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with tool to a 3/8" radius. Repeat any grooving of joint after application of surface finishes.
 - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond blades. Joint cuts not to exceed 1/8 inch wide, when cutting will not tear or damage the surface and develop a contraction cracks.
 - 3. Doweled Contraction Joints: install dowel bars and support assemblies at joints where indicated.
 - F. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after floating with an edging tool at a 3/8 inch radius.

3.4 INSTALLATION

- A. Contractor shall install the first section of sidewalk as a quality sample in place. Upon approval of sample by Landscape Architect, further installation can proceed.
- B. The sub-grade upon which concrete is to be placed shall be prepared by excavation or filling with suitable earth to such depth below the finished grade line, that when tamped or rolled until smooth, firm and hard, the sub-grade will be uniform and at the required depth below finished grade line.
- C. Unsuitable sub-grade soils shall be replaced as directed.
- D. Gravel backfill, when specified in the drawings, shall be constructed to the required depth and thoroughly compacted.
- E. Cast in Place Concrete.
 - 1. Set forms to line and grade.
 - 2. Install forms over full length of walk and oil before use.
 - 3. Forms shall be set accurately to line and grade. If the forms are set more than 0.01 foot (3mm) above or below grade or more than 0.01 foot (6mm) from prescribed alignment, they shall be corrected before any concrete is placed.
 - 4. Flexible or curved forms of proper radii shall be used on all curves having a radius of 100 feet or less.
 - 5. Form contraction joints by tooling.

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6. Install expansion joint material behind walks at abutment curbs and adjacent structures with expansion joints every 100 feet (30m) or as detailed. Retaining wall shall have expansion joints every 25 feet.
 7. Provide sawcuts in concrete every 10 lineal feet. Sawcut depth shall be no more 3/4" deep and 1/8" in width.
 8. Place top of expansion joint material flush with walk surface, unless noted otherwise on plans.
 9. Place concrete with mechanical vibrators.
 10. Consolidate concrete with mechanical vibrators.
 11. Round edges of walks at top with finishing tool, 1/4" to 3/8" radius. 1" radius for retaining wall.
 12. Finished exposed walk surfaces with wood float followed by brushing with broom, smooth band of 12", unless otherwise shown on drawings.
 13. Apply plastic sheeting or curing material and cure for seven (7) days.
 14. Apply plastic sheeting or curing material.
 15. Do not allow free drop of more than five (5) feet. Use elephant trunk when necessary.

- F. Slip form concrete to the same quality standards as cast in place.
 1. Construct concrete curb with slip form curb machine.
 2. Apply curing material and cure for seven (7) days.
 3. Saw expansion and contraction joints after concrete has sufficiently hardened.

3.5 FIELD QUALITY CONTROL

- A. Slump Tests: Make slump tests whenever concrete is being poured at the direction of the Owner.
- B. Compression Tests: Prepare standard test cylinders during the placing of concrete in accordance with ASTM 31 and ASTM 172. One set (three (3) cylinders) is required for each day's pour.
- C. Maintain two (2) cylinders at 50 to 70 degrees F. and protect from loss of moisture at the job site for a period of not over 48 hours, then deliver to the laboratory for curing and testing at seven (7) and twenty-eight (28) days, respectively. Place third cylinder near the in place concrete and cure completely at the job in the same manner as the in place concrete. Deliver this cylinder to the laboratory for testing at twenty-eight (28) days. Cure and test cylinders in accordance with ASTM C31, C39 and C192. Submit test reports to the Landscape Architect in duplicate.

3.6 PAVING TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:
 1. Elevation variation: 1/4 inch.
 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 3. Surface Variation: gap below 10 foot long, unlevelled straightedge not to exceed 1/4 inch.

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4. Maximum cross slope for walks, ramps, or platforms: 2%.
 5. Maximum longitudinal walk slopes not requiring landings and handrails: 5%.
 6. Maximum longitudinal ramp slopes: 8.33% (1 on 12 slope).

3.7 PROTECTION OF FINISHED SURFACES

- A. All finished surfaces of concrete shall be protected so as to prevent damage. Marking temporary nailing or other damaging use of surfaces will be prohibited.

3.8 PATCHING

- A. Patch to match material, color and texture of surrounding area.
- B. Replace defective work if patching is not acceptable to the Landscape Architect.

3.9 REPAIR/REPLACE

- A. Within first year of placement, concrete will be replaced at no additional cost to the Owner, if horizontal and/or vertical cracks exceed 1/8" in width.
- B. Hairline cracks do not qualify for concrete replacement.

3.10 CLEAN-UP

- A. The Contractor shall remove excess excavated material from the site of the work. Spread and finish grade within five (5) feet of pad edge. Finish grading is incidental to pad installation. Contractor shall clean up and dispose of rubble and construction satisfactory to the Owner and Landscape Architect.

END OF SECTION 03 3000

SECTION 06 1050 - TURF WOOD NAILER

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 03 3000 Cast In Place Concrete.
 - 2. Section 03 3053 Concrete Turf Anchor.

1.2 SCOPE

- A. Provide all material, labor, and equipment necessary to install the timber and cleanup as detailed on the drawings and herein.

PART 2 PRODUCTS

2.1 TIMBER EDGING

- A. Southern Pine or Douglas Fir pressure preservative treated with alkaline copper quaternary (ACQ) or Copper Azole (CA) preservatives in accordance with American Wood Preservers Associates (AWPA) standard C17 for ground contact use. Provide lumber sizes as indicated on drawings.
- B. All hardware shall meet a minimum requirement established ASTM standard A153 and ASTM standard A653 (Class G-185).

2.2 WOODEN NAILER FASTENERS

- A. Approved items for Wood Nailer Installation:
 - 1. 3/8" x 4" Zinc-Plated Hex Head Screw Anchor (DeWalt PFM1411280, or equivalent).

PART 3 EXECUTION

3.1 DEMOLITION, EXCAVATION AND REMOVALS

- A. Strip all existing topsoil, infield mix, etc. from work area. Stockpile sufficient material for restoration of perimeter area. Legally dispose of excess material off site.

3.2 GRADING

- A. Grade area to elevations and slopes as indicated on the drawings. Grade shall be such that when finished grade is established, the work area and the perimeter shall be free of standing water.

3.3 INSTALLATION OF TIMBER EDGING

- A. Install wood nailer using only the specified fasteners listed in Section 2.2 above.
- B. Fasteners shall be placed in the middle (vertical) of nailer board. Fastener shall be no closer than 6" from end of board.
- C. Fasteners spacing shall not be more than 24".
- D. Contractor shall maximize use of treated lumber and minimize cuts to corners.

3.4 RESTORATION AND CLEAN UP

- A. Clean-up all excess materials and remove from site. Adjoining areas to be the same as prior to construction, and properly graded to allow water to drain away from surface.

END OF SECTION 06 1050

SECTION 11 6813 - PLAYGROUND SAFETY SURFACING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections.
 - 1. Section 32 1123 Aggregate Drainage Layer.

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all materials, labor, tools and equipment for the installation of the poured-in-place resilient playground surfacing. It is the primary intent of the specification to provide a seamless, porous safety surface (No rolled or pre-manufactured tiles will be accepted).

1.3 QUALITY ASSURANCE

- A. Manufacturer shall have completed a minimum of twenty-five (25) surfacing projects, with the same product, in the last 10 years. Provide to the Architect, when requested, a list of references of similar scope, that are a minimum of 5 years old. The twenty five projects shall have been contracted and installed by the company bidding the job.
- B. All CPSC guidelines must be achieved.
- C. All appropriate ASTM standards must be achieved.
- D. All ADA requirements must be met.

1.4 SUBMITTALS

- A. Submit with bid, all manufacturer's literature, polyurethane resin and EPDM supplier information, specification data and MSDS sheets.
- B. Submit with bid, ASTM F1292 Impact Attenuation Test Certification for the poured-in-place system to be installed.
- C. Submit with bid, ASTM E108 Fire Test results. (Product shall exhibit a minimum result of a Class A Rating.).

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- D. Submit with bid, results of ASTM E303 Skid Resistant Test Data.
 - E. Submit with bid, Statement of Warranty for a minimum 5 year period with detailed Warranty Claim requirements of the owner and specific procedures to be followed by the manufacturer in terms of response and repair of warranty claims.
 - F. Submit a sample measuring 12" x 12" x 1" thickness of proposed surface.

1.5 SURFACE INSTALLER SHALL BE RESPONSIBLE FOR:

- A. Protection of surface until fully cured.
- B. All material used shall be handled, shipped and installed as outlined in the Material Safety Data Sheets and according to current OSHA Standards.
- C. Disposal of all products as per current EPA Regulations.
- D. Submission of an affidavit acknowledging each crew member, to be assigned to this project has read the Material Safety Data Sheets and is familiar with all safety procedures and the proper handling of all materials.
- E. Submission of the Material Safety Data Sheets prior to the material arrival. Submission shall be in triplicate and the job superintendent shall maintain a copy on the site at all times.

1.6 TESTING

- A. The installation Contractor will be responsible for all tests that fail the above standards. The Owner reserves the right to submit the surface to the above tests at any time during the length of the guarantee. Consideration will be given to the time and use of the surface.
- B. The Owner shall reserve the right to submit the surface to the following tests to determine the surface performance. Any section of the surface that is found to be unacceptable by any aforementioned standard shall be removed and replaced in a proper workmanship-like manner.
- C. The sample size shall be approximately one (1) square foot. The samples shall be taken for testing and not replaced. A sample shall be taken for every four thousand (4,000) square feet. If the surface is acceptable, the Owner will accept the responsibility of the testing cost and the replacement cost for surface areas.

PART 2 PRODUCTS

2.1 SURFACING MANUFACTURERS

A. The following surfacing systems are acceptable:

1. SPECTRAPOUR, by Spectraturf, Inc.

310 Reed Circle Corona, CA 91719 800-875-5788

2. TotTurf, by Robertson Recreational Surfaces

PO Box 577 East Aurora, NY 14052 716-652-2039

3. PLAYBOUND, by Surface America

P.O. Box 157 Williamsville, NY 14231 800-999-0555

2.2 MATERIALS

- A. Polyurethane Binder: 100% MDI based polyurethane binding agent.
- B. Impact/Cushion Course: shall be SBR rubber or a mixture of SBR and EDPM rubber bonded by a polyurethane binder applied to 100% of the rubber and installed to the thickness designated on the plans.
- C. Wearing Course: shall be a mixture of black and colored EDPM granules bonded by a polyurethane binder applied to 100% of the granules and applied to a thickness designated on the plans. Final colors shall be approved by Owner. STRAND, SHAVED, CHIPPED OR SHREDDED RUBBER IS NOT ACCEPTABLE IN THE WEARING COURSE.

PART 3 EXECUTION

3.1 BASE REQUIREMENTS

- A. The base shall have the specific minimum slope (2% cross slope) and shall vary no more than $\frac{1}{4}$ " when measured in any direction with a 10' straight edge.
- B. Crushed stone base layer is to be a minimum 4" thick and have a 95% compaction rate.

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- C. The base must be approved by surface installer prior to installation of playground surface.
 - D. The surface installer shall supply and install a geotextile fabric on compacted stone base.

3.2 PREPARATION

- A. The entire surface shall be clean and free from any foreign and loose materials.
- B. Installation shall occur when the minimum ambient surface temperature is 60F or higher and the temperature will not fall below 40F.
- C. The binder/rubber mixture shall not be applied within twelve (12) hours after a rainfall nor with the forecast of rain within twenty-four (24) hours. In the event of showers or rainfall, the placed surface shall be first covered with burlap and then visqueen for total protection.
- D. No solvents or emulsifier agents shall be used in the binding to extend the curing of the mixture. The contractor shall submit all shipment documents and proper material volumes.
- E. Each layer shall be allowed to cure for approximately 12 hours in warm, dry ambient temperatures.

3.3 INSTALLATION

- A. Total depth of surface shall be $\pm 1.25"$, as detailed in plans. Base layer shall have a nominal thickness of $3/4"$ and the wear layer shall have a nominal thickness of $1/2"$.
- B. Cushion course must be composed of recycled rubber and be free of foreign matter. The cushion course will then be poured in place by means of screeding and hand-trowelled to maintain a seamless application. All rubber in the cushion course will be of a select quality and consistent blend of recycled rubber to achieve maximum porosity and minimum residue. Rubber quality and sizings will be reviewed during the submittal process.
- C. Wearing course shall be composed of EDPM rubber granules only. The course will be poured in place by means of screeding and hand-trowelled to maintain a seamless application. All rubber shall remain consistent in gradation and size. Color tinted binder will not be allowed.
- D. Edges shall be flush with edge of curbing, to provide a safe transition. Surface shall be sloped to drain as indicated on plans.

3.4 PROTECTION OF SURFACE

- A. Surface installer shall be responsible for the protection of the surface until fully cured.

3.5 POST-INSTALLATION TESTING

- A. Surface installer shall be responsible for field testing the surface within five (5) days of installation and prior to use.
- B. Testing to be performed as outlined in ASTM F1292.
- C. Gmax must not exceed 200; HIC must not exceed 1000 from the drop height stipulated by the Architect prior to bid award.

END OF SECTION 11 6813

SECTION 11 6824 - BASKETBALL EQUIPMENT

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 03 3000 Cast In Place Concrete.
 - 2. Section 31 2000 Earthwork - Athletics.

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials, and equipment necessary to install new basketball poles and backboards with hoops.

1.3 QUALITY ASSURANCE

- A. Warranty Guarantee: The Contractor and any Sub-contractors hereunder guarantee their respective work against defective materials or workmanship for a period of two (2) years from the date of filing notice of completion and an acceptance by the Owner.
- B. Product Testing: All material installed under this specifications shall be subject to testing by Owner at his expense. Any material so inspected and found to be not in strict conformance with this specification shall be promptly removed and replaced by the Contractor at his expense.

1.4 SUBMITTALS

- A. Submit manufacturer literature, identifying the particular items to be installed. Manufacturer information should include photographs, and applicable technical information.

PART 2 PRODUCTS

2.1 BASKETBALL ITEMS

A. Manufacturer and Products:

ITEM	MANUFACTURER	MODEL No.	QUANTITY
Basketball Hoop	Bison Inc.	PR52XL	2 Total
Pole Pads	Bison, Inc.	BA79KPP-BK	2 Total

2.2 CONCRETE

A. Concrete shall conform to Section 03 3000 Cast In Place Concrete.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not install equipment until site grading is complete.

3.2 INSTALLATION

A. Basketball Items shall be installed as indicated on the drawings and per manufacturer's recommendations. This installation shall be in conformance of the National Federation High School Association specifications.

3.3 CLEAN UP AND DISPOSAL

A. Remove from the site all equipment, materials, and debris resulting from construction work including this section. Leave work area neat and clean and in a condition acceptable by the Landscape Architect and Owner. All work shall be complete, ready for use, at the time of final acceptance.

END OF SECTION 11 6824

SECTION 31 2000 - EARTHWORK (ATHLETICS)

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the provisions of the other parts.

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials, equipment, transportation, and services required to complete all earthwork as indicated on the drawings and specified herein. Adjustment of grades may be permitted, subject to prior approval by the Landscape Architect, providing the overall grading concept is maintained.

1.3 QUALITY ASSURANCE

- A. Excavation team shall be established and experienced with a minimum of 5 years experience constructing athletic fields.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. The contractor is expected to visit the site to determine all conditions to be encountered, protect improvements on adjoining properties, as well as those on the owner's property, and to restore any improvements damaged by his work to their original condition, as acceptable to the owner or other parties or authorities having jurisdiction.
- B. The contractor shall perform all work so as to permit the site to be free draining at all times and to prevent ponding. Contractor shall provide positive drainage for the entire site during the course of construction to eliminate standing water in excavated areas.

1.5 SAFETY CODES AND STANDARDS

- A. Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

1.6 LINES AND GRADES

- A. The plans indicate lines, grades and elevations of the finish work. In general, areas to be paved shall be excavated and/or filled, and graded to the bottom elevations of such pavements. Grass areas shall be finish graded prior to seeding. Sod/seed areas shall be rough graded to 2" below finish grade prior to placement of topsoil.

1.7 PROTECTION OF EXISTING TREES & VEGETATION

- A. Protect existing trees, and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stock piling construction materials or excavated materials within drip line, excess foot or vehicle traffic, or parking of vehicles within drip line. Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing. Provide protection for roots over 1.5 inches in diameter that are cut during construction operations. Coat the cut faces with emulsified asphalt or other acceptable coating that is specially formulated for horticultural use on cut or damaged plant tissues. Temporarily cover all exposed roots with wet burlap to prevent roots from drying out, provide earth cover as soon as possible. Repair or replace trees and vegetation damaged by construction operations in a manner acceptable to the Landscape Architect. Tree damage repair shall be performed by a qualified tree surgeon.

PART 2 PRODUCTS

2.1 BACKFILL AND FILL MATERIALS

- A. Backfill shall be excavated soil material, free of rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetable matter, and other deleterious matter. Existing materials may be used for backfill, provided no silt is mixed with material. Backfill consists of placement of acceptable soil material in layers, in excavations, to required subgrade elevation, for each area classification listed below.
- B. Fill Material: Fill material shall be clean, hard, durable, uncoated particles of sand or sand gravel mixture, provided that there shall be a substantial excess of sand-screenings.

2.2 TOPSOIL

- A. Existing onsite topsoil shall be screened and free of rock or gravel larger than 1" in any dimension, debris, waste, frozen materials, vegetable matter and other deleterious matter.
- B. Topsoil to have 5% organic peat content.
- C. Blend sand with screened topsoil to create a loamy-sand product.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavation consists of removal of material encountered to obtain required subgrade elevations.
 - 1. Excavation for Ditches: Cut ditches to cross-sections and grades as shown. Deposit excavated materials a sufficient distance from the edge of ditches to prevent cave-ins or material from sliding into ditch. Keep ditches free of leaves, sticks, and other debris until final acceptance of work.
 - 2. Removal of Unsatisfactory Soil Materials: Excavate unsatisfactory soil materials encountered that extend below required elevations, to additional depth directed by the Geotechnical Engineer and reviewed with Landscape Architect; refer to geotechnical evaluation report.
 - 3. Material Storage: Place excavated materials classified as unsatisfactory fill materials where directed by Owner's geotechnical consultant.
 - 4. Stability: Slope sides of excavations over five feet (5') deep to angle of repose of material excavated; otherwise shore and brace where sloping is not possible either because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfill by scaling, benching, shelving, or bracing. Take precautions to prevent slides or cave-ins when excavations are made in locations adjacent to backfill excavations, and when sides of excavations are subjected to vibrations from vehicular traffic or the operation of machinery or any other source. Stabilize earth subgrades under areas of paving and after excavating, but prior to filling, by discing four inches (4") deep and by compacting same as specified for fills. Remove soft or unstable soil below finish grade elevations and backfill such voids with compacted fill material.

3.2 DRAINAGE SWALES

3.3 BACKFILL AND FILL MATERIALS

- A. Surface Preparation.
 - 1. Remove vegetation, debris, unsatisfactory soil materials, obstruction and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than one (1) vertical to four (4) horizontal so that fill material will bond with existing surface. When the existing ground surface has a density less than that specified under "Compaction" (3.2 A 2) for the particular area classification, break up ground surface, pulverize, and compact to the required depth and percentage of maximum density.
 - 2. Compaction: Perform compaction of soil materials for fills and backfills using suitable soil compaction equipment for materials to be compacted and work area locations. Control soil compaction during construction for compliance with percentages of maximum density specified for each classification. All compaction tests shall be in accordance with

ASTM D1557 or AASHTO T180 C Modified Proctor Method.

3. Placement And Compaction: Place backfill materials in layers not more than eight inches (8") in loose depth. Before compaction, moisten or aerate each layer, as necessary, to provide the optimum moisture content. Compact each layer to required percentage of maximum density for each area classification. Do not place backfill or fill material on surfaces that are muddy, or frozen, or contain frost or ice. Thoroughly compact all fill and backfill by rolling each layer, following spreading, as closely as possible. Roll the areas in equal amounts in two directions. Provide compaction equipment or type best suited to achieve the desired results with the type of soil. In general, use sheeps foot and/or tamping type rollers on soils of a cohesive type; pneumatic wheeled or vibrating rollers on granular fill material, all as approved by the Landscape Architect. Operate compacting equipment on each layer until the entire area has been thoroughly and uniformly compacted to the required density.
4. Maximum Density Requirements: Provide not less than the following percentages of maximum density of the same soil material compacted at optimum moisture content, for the actual density of each layer of soil material in place. Any soils found unsuitable for specified compaction requirements shall be removed as directed by Owner.
5. Lawn or Unpaved Areas: Compact top six inches (6") of subgrade and each layer of backfill or fill material at eighty-five percent (85%) maximum density.
6. Grading: Preparation of subgrade: Rough grade all areas within the limits of site grading under this section, including adjacent transition areas. The rough grade shall be compacted as required. Shape the surface of future lawn areas to the line grade and cross-section with the surface not more than 0.10 feet above or below a subgrade elevation. Take extreme care in the grading of swale areas to insure free movement of surface runoff. Ponding shall be non-existent or at a minimum.

3.4 FINISH GRADING

A. Sub-Soil Preparation.

1. Fine grade sub-soil systematically to eliminate uneven areas and low spots. Remove debris, roots, branches, stones, etc., in excess of two inches (2") in size. Remove sub-soil which has been contaminated with petroleum products.
2. Bring sub-soil to required levels, profiles and contours suitable for receiving the required finish surfaces. Make changes in grade gradual; blend slopes into level areas. Maximum slope 4:1 unless otherwise indicated.
3. Cultivate sub-grade to a depth of six inches (6") where topsoil is to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted sub-soil.
4. Compact sub-soil at the following percentages to a depth of 12 inches:
 - a. 95% Modified Proctor where asphalt/concrete is to be placed.
 - b. 80% Modified Proctor where topsoil is to be placed.

B. Placing Topsoil.

1. Place to the following depths, up to finished grade elevations:
 - a. Four inches (4") for sodded and seeded areas.
 - b. Use topsoil in relatively dry state. Place during dry weather.

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- c. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles, and contours of finish grades shown on the plans.
 - d. Topsoil shall be worked to a smooth, uniform surface and compacted firmly. Any lumps or depressions which occur shall be regraded and re-rolled until a satisfactory grade is obtained. Areas adjacent to existing lawn shall be notched so new sod will be at the same grade. Immediately before seeding or sodding, rework the surface until it is fine, pulverized smooth seed or sod bed, varying not more than 1/8" in 10'.
 - e. Remove all stones, roots, grass, weeds, debris, and other foreign material while spreading.
 - f. Manually spread topsoil around trees, plants and buildings to prevent damage which may be caused by grading equipment.
 - g. Compact placed topsoil to 85% Modified Proctor.

END OF SECTION 31 2000

SECTION 31 3219 - GEOTEXTILE FABRIC

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.

1.2 SCOPE

- A. The work under this section shall consist of furnishing all labor, materials and equipment for the installation of the geotextile fabric.

1.3 SUBMITTALS

- A. Manufacturer's Literature: Furnish to Landscape Architect, when required, copies of manufacturer's specifications, and installation instructions for geotextile fabric. Include photographs, catalogue cuts, samples as may be required to show compliance with these specifications.

PART 2 PRODUCTS

2.1 GEOTEXTILE FABRIC

- A. The product shall be Mirafi - 600x, LINQ Industrial Fabrics - GTF-300, CSI Geoturf - W315 or an approved equivalent.
- B. The geotextile shall be of woven construction and consist of long-chain polymeric yarns. The yarns must be composed of at least 95% propylene or ester polymers. The fibers shall be produced in a manner which achieves a stable network. The geotextile shall conform to the mechanical and hydraulic property requirements listed below:

MINIMUM AVERAGE			
PROPERTY	VALUE	UNIT	TEST PROCEDURE
Grab Tensile Strength	315	lbs.	ASTM D-4632
Grab Tensile Elongation	15	%	ASTM D4632
Wide Width Tensile	175/175	lbs/in	ASTM D4595
Wide Width Elongation	15/8	%	ASTM D4595
Mullen Burst	600	Psi	ASTM D3786
Puncture	145	lbs	ASTM D4833
Trapezoidal Tear	120	lbs	ASTM D4533
UV Resistance	70	% @ 500 hr	ASTM D4355
Apparent Opening Size (max)	40	AOS	ASTM D4751
Permittivity	.055	1/sec	ASTM D4491
Flow Rate	4.0	gpm/ft ²	ASTM D4491

PART 3 EXECUTION

3.1 INSTALLATION

- A. The geotextile fabric shall be furnished and stored in a wrap which will protect the geotextile fabric from ultraviolet radiation and abrasion. The geotextile fabric shall be covered with the appropriate soil cover within two weeks of its placement.
- B. Should the geotextile fabric be damaged during construction, the torn or punctured section shall be repaired by placing a piece of fabric that is sufficiently large enough to cover the damaged area plus two feet (2') of adjacent undamaged geotextile fabric in all directions.
- C. Fabric shall be installed on dry soil as per manufacturer.

-
- D. Overlap the fabric as recommended by the manufacturer.
 - E. Installation and Unit Price shall include overlap quantities.

END OF SECTION 31 3219

SECTION 32 1123 - AGGREGATE DRAINAGE LAYER

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 31 2010 Earthwork - Athletics.

1.2 SCOPE

- A. The work under this section of the specification shall consist of furnishing all labor, materials and equipment to produce, place, spread, compact and finish to proper grade and cross section all aggregate base courses according to the drawings and specifications.

1.3 QUALITY ASSURANCE

- A. Reference Standards: American Society for Testing and Materials (ASTM):

C117	Method for Materials Finer than 75-m (No. 200) Sieve in Mineral Aggregates by Washing
C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
F1551	Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials
F2898-11	Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method

- B. Contractor shall have previously installed twelve (15) artificial infill turf bases for turf fields larger than 80,000 square feet in the last three (3) years.
 - 1. The contractor is responsible for fine grading, installation of the perimeter nailing system (as necessary), and installation of the dynamic stone base.
- C. Firms must have been in business under the same ownership for at least five (5) years and shall have been installing similar sports fields for that entire period.
- D. Contractor shall provide a sieve analysis prior to placement for every 150 ton of stone delivered to site. Material should be tested by a third-party construction testing firm administered through the project.

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- E. Contractor will be required to provide product pit tickets to designated Owner's Representative for each load of material brought to and intended for job to ensure conformance to the approved Sieve Analysis. Material non-compliant with approved submittal shall be rejected.
 - F. The synthetic turf manufacturer/installer shall perform an inspection of the field base onto which the synthetic turf system is to be installed to examine the finished surface for required compaction, permeability and grade tolerances. Earthwork contractor is responsible for correcting deficient items noted by the turf manufacturer/installer prior to acceptance. The turf installer will accept the aggregate stone base in writing when the Owner's representative provides test results for compaction, permeability and planarity that are in compliance with the project plans and specifications. After any discrepancies between the required materials, application and tolerance requirements noted have been corrected, the synthetic turf installer should submit a written certification of acceptance of the base for installation of synthetic turf system.

1.4 SUBMITTALS

- A. Submit to the Landscape Architect a sieve analysis of the proposed stone to be installed. Sieve analysis shall be dated within 14 days of submission.

1.5 ACCEPTABILITY OF THE WORK

- A. Grade: Grade conformance tests shall be conducted on the entire surface. The surface shall have positive drainage of 0.50% inclination.
- B. Planarity: After completion of the compacting operations, the compacted aggregate base shall be tested with a 10' straightedge. Measurements shall be made perpendicular to and across the field at a distance not to exceed 25' feet. The grade will not vary by 1/8" from proposed grades, elevations and slopes provided.
- C. The grade of the aggregate base shall be evaluated with a "string test".
- D. Aggregate shall be tested as per ASTM F1551-09 or ASTM 2898-11 at a minimum of 8 locations after final grade as been achieved and accepted.
- E. Foresite Design commits to being onsite for a maximum 3 hours during string check. Any additional time required will be billed as an Additional Service to be compensated by the Base Contractor or Construction Manager. Hourly rates are between \$125 - \$190 depending on which personnel are present.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Aggregate base material shall conform to specifications for 100% crushed 100% limestone and shall be placed and compacted to the minimum depth shown on plans. Crushed concrete, slag, etc. shall not be allowed. DOT standard classifications do not conform. Modifications of standard DOT aggregate classification maybe required to meet specification. On-site mixing will not be an acceptable method for providing this material.

Aggregate Sieve Analysis	Percent Passing	
	Base Material	Finishing Stone (Not to exceed 1" compacted depth)
1 1/2"	90-100	
1"	75-100	
3/4"	65-95	100
3/8"	40-75	85-100
1/4"	25-65	75-100
No. 4	15-60	60-90
No. 8	0-40	35-75
No. 16	0-20	10-55
No. 30	0-7	0-40
No. 60	0-5	0-15
No. 100	0-3	0-8
No. 200	0-2.0	0-2.0
LBW	Maximum 2.5	Maximum 2

- B. The hydraulic conductivity of the aggregate shall be such that is capable of draining the entire synthetic surface at a minimum of 10"/hr for the carpet and 14"/hr including aggregate drainage stone with perforated under drain system acting as the main water displacement conductor. The aggregate shall maintain its finished grade elevations. Migration of fines and subsequent loss of finished tolerances will not be accepted.
- C. Material shall be tested by a testing agency selected by the Owner to ensure compliance with the submitted documentation (ASTM D422 particle size analysis and ASTM 2898 or F1551-09/DIN 18-035:6, permeability to water). A minimum of 8 tests shall be performed at random locations selected by Owner's representative.

PART 3 EXECUTION

3.1 SUB-GRADE CONSTRUCTION

- A. The sub-grade shall be so constructed as to have uniform stability for a width at least equal to that of the proposed improvements plus of the proposed anchoring system. It shall be brought to an elevation and cross section such that, after being rolled, the surface will be at the required elevation. At the time the sub-grade is prepared, the fill area shall have been constructed to the full width and to at least the elevation of the finished sub-grade.
- B. The material present in the next six (6) inches below the elevation of the sub-grade shall be scarified, mixed and recompact, or otherwise treated to produce a uniform condition. Stones over four (4) inches in size shall be removed from the loosened portion of the sub-grade and disposed as directed by the project representative.
- C. Depressions that develop during the following shall be filled with suitable material, and the rolling shall continue until the sub-grade is uniformly firm, properly shaped and substantially true to grade and cross section. It shall be so maintained until the pavement is place.
- D. Material, other than sand, which will not compact readily under roller shall be removed and replaced with material which will compact readily and that portion of the sub-grade shall be rolled again.
- E. The rolling of the sub-grade shall extend for at least twelve (12) inches outside of each edge of the proposed turf boundaries when possible. Piles or ridges of earth or material that would seriously interfere with the operations of finishing the pavement shall not be left on the shoulders.
- F. During the process of construction sub-grade, the soil shall be maintained in a condition sufficiently moist to facilitate compaction and produce a firm, compact surface.
- G. If, in the preparation of the sub-grade, it becomes necessary to excavate below the elevation of the earth shoulders, ditches or drains shall be provided at frequent intervals to permit ready drainage of surface water from sub-grade to side ditches.
- H. If ruts or other objectionable irregularities form in the sub-grade during construction, the Contractor shall reshape and re-roll the sub-grade before the drainage course is laid. The material used for filling ruts or other depressions shall be of such character as to make it equally desirable for sub-grade purposes as the material presented in the sub-grade.
- I. When the sub-grade is being prepared for placement as an aggregate base course, the elevation of the most finished surface, at the time the next layer is placed, shall not vary by more than 0.02 foot above or below the prescribed elevation at any point where measurement is made.

3.2 AGGREGATE DRAINAGE COURSE

- A. Base course construction shall proceed as follows only after the qualified testing firm has approved the sub-grade construction and the gravel tests.
- B. The base shall be constructed in layers of not more than three (3) inches (75mm) compacted thickness when conventional rolling equipment is used.
- C. If vibratory or other approved special equipment is used, the thickness of every compacted layer may be increased to a maximum of eight (8) inches (200mm).
- D. The finished surface of any aggregate drainage layer shall not vary more than 1/8" from the elevations, grades and cross sections on the drawings.
- E. Compacted full profile aggregate drainage stone base dimensions shall be a minimum of 8". The thickness of the finishing stone shall not exceed one (1) inch of compacted depth.
- F. It shall be the contractor's responsibility to maintain a uniform consistent stone base gradation during the installation process. This shall include but not limited to keeping aggregate base at optimum moisture content (5%, + 1%) and/ or providing, placing, and compacting a ½ " layer of stone chips.
- G. Installation shall be accomplished using automated laser grade control, equipment, with dual-slope capabilities.
- H. PK nails, or equivalent, shall be placed on turf nailer system. Do not set flush into nailer. Allow enough to loop grade line onto nail for grade verification. String Check.
- I. Contractor shall have on-site, prior to Landscape Architect arrival, the following equipment:
 - 1. One (1) ton steel drum rover - rubber tired equipment not acceptable.
 - 2. 50 ton 3/8" stone chips.
 - 3. Topdresser - to distribute 3/8" stone chips.
 - 4. Two (2) 48"/38" aluminum landscape rakes.
 - 5. 24" wide broom.
 - 6. There must be enough personnel to operate all equipment simultaneously.
- J. It will be the contractor's obligation and responsibility to have all of the above items in place prior to grade verification by Landscape Architect.

3.3 COMPACTION REQUIREMENTS

- A. Sub-grade shall be compacted to not less than ninety-two percent (92%) of maximum density at not less than seventy-five percent (75%) of optimum moisture content.
- B. Aggregate drainage layer shall be compacted to not less than eighty-five percent (85%) of maximum density. Using conventional rolling equipment, moisture content shall not be less than ninety percent (90%) nor more than one hundred-ten percent (110%) of optimum

moisture content. Using vibrating equipment, moisture content shall not be less than seventy-five (75%) of optimum moisture content.

- C. Maximum density shall be determined in accordance with AASHTO Modified Method of Test for the Compaction and Density of Soil, Designation T-180, and the optimum moisture content shall be that corresponding to the maximum density in the above test.
- D. Contractor shall maintain optimum moisture content during the installation, (placement, grading, compacting, etc.) of the aggregate base materials.

3.4 ROLLERS

- A. Smooth steel-wheeled rollers shall be self-propelled and have a total weight not less than 8 tons. The compression (driving) roller shall exert a pressure of not less than 250 lbs. per inch width of the roller.
- B. Pneumatic-tire rollers shall have a compacting width of sixty (60) inches (1.5m) or more and shall be capable of varying the weight from 100 to 250 lbs. per inch of rolling width.

END OF SECTION 32 1123

SECTION 32 1124 - AGGREGATE BASE COURSE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.

1.2 SCOPE

- A. The work under this section of the specification shall consist of furnishing all labor, materials and equipment to produce, place, spread, compact and finish to proper grade and cross section all aggregate base courses according to the drawings and specifications.

1.3 SUBMITTALS

- A. Submit to the Landscape Architect a sieve analysis of the proposed stone to be installed.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Aggregate base material shall conform to DOT specifications for 21AA 100% crushed limestone and shall be placed and compacted to the minimum depth shown on plans. Crushed concrete, slag, etc. shall not be allowed.

Aggregate Sieve Analysis	Percent Passing
1½"	100
1"	85-100
½"	50-75
No. 8	20-45
No. 200	4-8

PART 3 EXECUTION

3.1 SUB-GRADE CONSTRUCTION

- A. The sub-grade shall be so constructed as to have uniform stability for a width at least equal to that of the proposed pavement plus one (1) foot on each side. It shall be brought to an elevation and cross section such that, after being rolled, the surface will be at the required elevation. At the time the sub-grade is prepared, the fill area shall have been constructed to the full width and to at least the elevation of the finished sub-grade.
- B. The material present in the next six (6) inches below the elevation of the sub-grade shall be scarified, mixed and re-compacted, or otherwise treated to produce a uniform condition. Stones over four (4) inches in size shall be removed from the loosened portion of the sub-grade and disposed as directed by the project representative.
- C. Depressions that develop during the following shall be filled with suitable material, and the rolling shall continue until the sub-grade is uniformly firm, properly shaped and substantially true to grade and cross section. It shall be so maintained until the pavement is place.
- D. Material, other than sand, which will not compact readily under roller shall be removed and replaced with material which will compact readily and that portion of the sub-grade shall be rolled again.
- E. The rolling of the sub-grade shall extend for at least twelve (12) inches outside of each edge of the proposed turf boundaries when possible. Piles or ridges of earth or material that would seriously interfere with the operations of finishing the pavement shall not be left on the shoulders.
- F. During the process of construction sub-grade, the soil shall be maintained in a condition sufficiently moist to facilitate compaction and produce a firm, compact surface.
- G. If, in the preparation of the sub-grade, it becomes necessary to excavate below the elevation of the earth shoulders, ditches or drains shall be provided at frequent intervals to permit ready drainage of surface water from sub-grade to side ditches.
- H. If ruts or other objectionable irregularities form in the sub-grade during construction, the Contractor shall reshape and re-roll the sub-grade before the pavement is laid. The material used for filling ruts or other depressions shall be of such character as to make it equally desirable for sub-grade purposes as the material presented in the sub-grade.
- I. When the sub-grade is being prepared for placement as an aggregate base course, the elevation of the most finished surface, at the time the next layer is placed, shall not vary by more than 0.05 foot above or below the prescribed elevation at any point where measurement is made.

3.2 AGGREGATE BASE COURSE

- A. Base course construction shall proceed as follows only after the qualified testing firm has approved the sub-grade construction and the gravel tests.
- B. The base shall be constructed in layers of not more than three (3) inches (75mm) compacted thickness when conventional rolling equipment is used.
- C. If vibratory or other approved special equipment is used, the thickness of every compacted layer may be increased to a maximum of eight (8) inches (150mm).
- D. The finished surface of any aggregate base course shall not vary more than 0.02 foot (15mm) from the elevations, grades and cross sections on the drawings.
- E. Compacted stone base dimensions shall be a minimum of 6".

3.3 COMPACTION REQUIREMENTS

- A. Sub-grade shall be compacted to not less than ninety-two percent (92%) of maximum density at not less than seventy-five percent (75%) of optimum moisture content.
- B. Aggregate base course shall be compacted to not less than ninety-five percent (95%) of maximum density. Using conventional rolling equipment, moisture content shall not be less than ninety percent (90%) nor more than one hundred-ten percent (110%) of optimum moisture content. Using vibrating equipment, moisture content shall not be less than seventy-five (75%) of optimum moisture content.
- C. Maximum density shall be determined in accordance with AASHTO Modified Method of Test for the Compaction and Density of Soil, Designation T-180, and the optimum moisture content shall be that corresponding to the maximum density in the above test.

3.4 ROLLERS

- A. Smooth steel-wheeled rollers shall be self-propelled and have a total weight not less than 8 tons. The compression (driving) roller shall exert a pressure of not less than 250 lbs. per inch width of the roller.
- B. Pneumatic-tire rollers shall have a compacting width of sixty (60) inches (1.5m) or more and shall be capable of varying the weight from 100 to 250 lbs. per inch of rolling width.

END OF SECTION 32 1124

SECTION 32 1811 - SYNTHETIC TURF (LANDSCAPE)

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents, including General and Supplementary Conditions. Drawings shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 32 1123 Aggregate Drainage Layer.

1.2 SYSTEM DESCRIPTION

- A. Provide all labor, materials, equipment, and tools necessary for the complete installation of landscape synthetic grass as shown on plans. The system shall consist of, but not necessarily be limited to, the following:
 - 1. Synthetic grass consisting of fibers that are nominal 1-1/4". Turf fiber construction consisting of polyethylene monofilament and slit film fibers and thatch system, tufted to a 3- layer stabilized woven polypropylene fabric (primary backing), with a secondary backing (stitch binder) of urethane.
 - 2. Anti-microbial coated silica sand shall be provided as a ballast layer per manufacturer's recommendations.
- B. Performance Requirements:
 - 1. Shock Attenuation (ASTM F1292):
 - a. Gmax: Less than 200.
 - b. Head Injury Criteria: Less than 1000.
 - c. Flammability (ASTM D2859): Pass.
 - d. Water Permeability: >45"/hr.
 - e. Accessibility: Comply with requirements of ASTM F1951.
- C. Work included in this Section includes grading necessary to shape and drain the area and base preparation and installation of the synthetic grass in areas shown on Drawings.

1.3 QUALITY ASSURANCE AND REFERENCE STANDARDS

- A. Bidders shall submit a color roll of standard manufacturer colors with their bid.
- B. Following acceptance of bids and evaluation of all product related information submitted with bid and requested additionally, the Owner reserves the right to award to the Contractor

based on factors other than low bid.

- C. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- D. ASTM F1492 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
- E. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- F. ASTM F2223 Standard Guide for ASTM Standards on Playground Surfacing.
- G. Passes the Federal Flammability Standard DOC FF 1-70.
- H. All finished installations shall conform to all applicable current ASTM guidelines.
- I. Qualifications: Utilize an installer approved and trained by the manufacturer of the playground surfacing system, having experience with other projects of the scope and scale of the work described in this section.
- J. Certifications: Certification by manufacturer that installer is an approved applicator of the playground surfacing system.

1.4 SUBMITTALS

- A. All submittals shall be provided within 14 days after Notice to Proceed.
- B. General: Submit listed submittals in accordance with Conditions of the Contract and Submittal Procedures Section.
- C. Product Data: Submit manufacturer's product data and installation instructions.
- D. Verification Samples: Submit manufacturer's standard verification samples of 6" x 9" minimum.
- E. Quality Assurance/Control Submittals: Submit the following:
 - 1. Certificate of qualifications of the playground surfacing installer.
- F. Closeout Submittals: Submit the following:
 - 1. Warranty documents specified herein.

1.5 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with

identification labels intact.

- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

1.6 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C) and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in steady or heavy rain.

1.7 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty:
 - 1. Manufacturer 10 year limited product warranty on turf from the date of purchase. The product shall be free from defects in material and workmanship resulting in premature wear or color loss.
- C. Supplier's warranty excludes: any Product defect, damage or failure that is the direct result of Product abuse, misuse or negligent maintenance; and Product damage caused directly or indirectly by acts of third parties, including, without limitation, negligence of owner/operator, vandalism, machinery, animals, flood, chemical reaction, improper sub- surface preparation and/or installation, improper cleaning methods, and acts of God.

PART 2 PRODUCTS

2.1 MATERIALS - SYNTHETIC GRASS LANDSCAPE SURFACE

- A. Basis of Design: Sprintplay "Optimum" , or approved equal.
- B. Synthetic grass: 1-1/4".
 - 1. Face Weight: 65 oz/sy.
 - 2. Face Yarn Type: Polyethylene.
 - 3. Grass Zone Denier: Slit Firm- 5,500, Monofilament- 12,000.
 - 4. Grass Zone Color: Dual Fiber Field/Olive Green.
 - 5. Thatch Zone Color: Field Green/Beige.
 - 6. Pile Height: 1-1/4 inches.
 - 7. Tufting Gauge: 3/8".
 - 8. Tuft Bind: >8 lbs/force.
 - 9. Primary Backing: 3-part Non-woven/Woven/Woven 8.5 oz. Polypropylene.
 - 10. Secondary Backing: Polyurethane with ProFlow™ 20 oz.

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11. Total Product Weight: 95 oz/sy.
 12. Finished Roll Width 15 feet.

- C. Adhesive: Anti-microbial coated Silica Sand, minimum 3 lbs.
- D. Adhesive: Synthetic Turf Adhesive per manufacturer's recommendations.

PART 3 EXECUTION

3.1 CERTIFICATION OF BASE CONSTRUCTION

- A. GENERAL: A written "Certification of Acceptance of the Base Construction" is required from the artificial turf/surfacing system prior to proceeding with any installation work under this section of the specifications.
- B. SCOPE: This certification shall include but not be limited to the acceptance of:
 1. The base construction finish surface is completely acceptable for the application of work specified under this section.
 2. The materials and method of installation for the aggregate stone base construction is in conformance with the manufacturer's current recommendations for the application of the turf to be installed under this section.
 3. The aggregate stone base construction is totally suitable for work to proceed with the assurance that the final installation of the work under this section will result in a high quality athletic sub-base. In order to provide these assurances and the Certificate of Acceptance, the turf system installer shall cooperate and communicate fully, at all times, with the construction manager. This contractor shall inspect the base construction work and verify that conditions and tolerances required for application of the artificial turf system are being met and that the Owner's representative has provided test results for compaction, porosity and planarity.
 4. All discrepancies between the required materials, application and tolerance requirements noted by the installer shall be brought immediately to the attention of the Contractor and Landscape Architect. Failure to immediately inform the contractor and Landscape Architect of any prior work which does not meet the required specifications for installation of the artificial turf surfacing system shall be considered an acceptance by the installer of the non-conforming work. Any additional work later required to bring the base to acceptable conditions shall be preformed by this installer at no additional cost to the Owner. Any discrepancies in the prior work which does not meet the specifications and noted in writing to the Owner and Landscape Architect shall be preformed immediately at no additional cost to the Owner.

3.2 INSTALLATION OF THE TURF

- A. GENERAL: All installation shall be done in strict accordance with the manufacturer's current printed installation instructions approved by the Landscape Architect.

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- B. REPLACEMENT: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Landscape Architect and at no additional cost to the Owner.
 - C. SYNTHETIC GRASS: Place turf and cut to fit configuration as shown on Drawings. Splice seams. All seams must be attached with splicing film/fabric and adhesive as approved by the manufacturer for this type of installation of their product.
 - D. INFILL: Apply layers of synthetic grass infill evenly with a spreader and broom the turf fibers with stiff bristle broom to stand fibers up and allow infill to settle into the bottom. Broom in infill approximately 3 1/2 pounds per square foot.
 - E. Anchoring/Edging: Edges of turf will be secured to ground with mechanical fasteners, stakes or edging.
 - F. BONDING OF MATERIAL SURFACES.
 - 1. The adhesive bonding of all system material components shall provide a permanent, tight, secure and hazard free playing surface.
 - G. WORK QUALITY: All seams shall be flat and tight, with no separation or fraying. Submit seaming procedures to Architect for review, prior to installation. Any deviations to the plans shall be brought to the attention of the Architect prior to installation, Seams that appear separated shall be corrected immediately.

3.3 CLEANING

- A. Contractor shall be responsible for clean up on a daily basis of all materials utilized. Upon completion of installation, all surrounding areas, including turf area, shall be clean and in "play" condition.
- B. Contractor shall utilize magnetic bar to remove any metal objects within the field prior to infill and after infill, before final acceptance.
- C. All turf remnants of desirable size shall become property of the Owner. Contractor will be responsible to neatly place attic stock on pallets and deliver to a suitable location as directed by Owner.

END OF SECTION 32 1811

SECTION 32 9119 - TOPSOIL

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 31 2000 Earthwork - Athletics.
 - 2. Section 32 9230 Lawn - Athletic

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials and equipment necessary to place and spread topsoil to required depths as indicated on Contract Documents.
- B. Contractor shall make all attempts to salvage and stockpile usable topsoil from site.

1.3 QUALITY ASSURANCE

- A. Testing and inspection: At the discretion of the Landscape Architect, Contractor shall employ a qualified independent testing laboratory, specializing in soils engineering. Testing facility, or lab, shall have American Association of Laboratory Accreditation (AALA).
 - 1. Provide and pay for testing and inspection during topsoil operations. Laboratory, inspection services and Soils Engineer shall be acceptable to the Landscape Architect.
 - 2. Test representative material samples for proposed use.
 - 3. Topsoil: (Supplied by Landscape Contractor).
 - a. pH factor.
 - b. Mechanical analysis.
 - c. Percentage of organic content.
 - 4. Recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting.
 - 5. Test reports shall be made available to the Owner and Landscape Architect.

1.4 PROJECT CONDITIONS

- A. Underground and surface utility lines are to be located in field prior to construction.

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- B. Protect existing trees, plants, lawns and other features designated to remain as part of the landscaping work. Protect existing trees to drip line.
 - C. Promptly repair damage to adjacent facilities caused by topsoil operations. Cost of repair at Contractor's expense.
 - D. Promptly notify the Landscape Architect of unexpected sub-surface conditions.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil: Natural, friable fertile soil characteristic of productive soil in the vicinity, reasonably free of stones larger than 1", clay lumps, roots and other foreign matter.
 - 1. Proposed topsoil material for shall be screened and acceptable to Landscape Architect.
 - 2. Utilize and screen on-site stockpiled topsoil as required to complete the work.
- B. Provide topsoil as required to complete job. Topsoil must meet testing criteria results specified. All processing, cleaning and preparation of this stored topsoil to render it acceptable for use is the responsibility of this Contractor.
- C. Supplied topsoil, shall be fertile, friable and representative of local productive soil, capable of sustaining vigorous plant growth and free of clay lumps, subsoil, noxious weeds or other foreign matter such as stones, roots, sticks and other extraneous materials: not frozen or muddy.
 - 1. Ph of soil to range between 5.0 and 7.5.
 - 2. Mechanical Analysis.
 - a. Sand: 70-85%.
 - b. Silt: 10-20%.
 - c. Clay: 10-15%.
- D. Provide earth crowning where indicated on drawings.
- E. Crowning/mounding to be free flowing in shape and design, as indicated, and to blend into existing grades gradually so that toe of slope is not readily visible. Landscape Architect to verify final contouring before planting.
- F. Regardless of finish grading elevations indicated, it is intended that grading be such that proper drainage of surface water will occur and that no low areas created to allow ponding. Contractor to consult with Owner or Landscape Architect regarding minor variations in grade elevations before rough grading is completed.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine rough grades and installation conditions performed by General Contractor. Do not start topsoil work until unsatisfactory conditions are corrected and site is accepted by Landscape Contractor.

3.2 PREPARATION

- A. Establish extent of grading by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels and elevations.
- B. Do not cover or enclose work of this Section before obtaining required inspections, tests, approvals and location recording.
- C. Use of equipment of excessive weight or excessive travel over grade will not be permitted.

3.3 SITE GRADING

- A. Perform grading within contract limits, including adjacent transition areas, to new elevations, levels, profiles, and contours indicated. Provide subgrade surfaces parallel to finished surface grades. Provide uniform levels and slopes between new elevations and existing grades.
- B. Contractor shall utilize low pressure ground track equipment or flotation tires for moving soil, to prevent compaction and/or damage to the soil structure during construction.
- C. Grade surfaces to assure areas drain away from structures and to prevent ponding and pockets of surface drainage. Provide subgrade surfaces free from irregular surface changes and as follows:
 - 1. Rough grading: Plus or minus 0.10 ft. subgrade tolerance. Finish required will be that ordinarily obtained from either blade-grader or scraper operations.
 - 2. Provide subgrade surface free of exposed boulders or stones exceeding 4" in greatest dimension in paved areas; 2" lawn areas.
 - 3. Lawn and planting areas: Allow for 4" average depth of topsoil at lawn areas, except as otherwise indicated on the drawings.

3.4 FINISH GRADING

- A. Uniformly distribute and spread stockpiled topsoil. Provide 4" average depth at lawn areas, 12" at planting areas. Provide additional imported topsoil as required to complete the work. Use loose, dry topsoil. Do not use frozen or muddy topsoil. Place during dry weather.
- B. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain

levels, profiles, and contours of subgrades.

- C. Remove stones, roots, weeds, and debris while spreading topsoil materials. Rake surface clean of stones 1" or larger in any dimensions and all debris. Provide surfaces suitable for soil preparation provided under lawn and planting work.
- D. Manually install topsoil at trees to remain. Avoid damage to root systems.
- E. Maintenance:
 - 1. Protect finish graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded, and damaged areas.
 - 2. Where completed areas are disturbed by construction operations or adverse weather, scarify, re-shape, and compact to required density.

3.5 DISPOSAL OF WASTE MATERIALS

- A. Stockpile, haul from site, and legally dispose of waste materials, including excess excavated materials, rock, trash, and debris.
- B. Maintain disposal route clear, clean, and free of debris.

3.6 CLEANING

- A. Upon completion of earthwork operations, clean areas within contract limits, remove tools and equipment. Provide site clear, clean, free of debris, and suitable for site work operations.

END OF SECTION 32 9119

SECTION 32 9227 - GENERAL LAWN RESTORATION

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 31 2000 Earthwork - Athletics
 - 2. Section 32 9119 Topsoil.

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials and equipment necessary for restoring disturbed lawn areas and maintaining lawns until final acceptance.

1.3 QUALITY ASSURANCE AND WARRANTY GUARANTEE

- A. Grass seed shall meet the tolerance for germination and purity of the Official Seed Analysis of North America.
- B. Submit all seed tags after completion of seeding.
- C. The Contractor, and its Subcontractors, shall provide a staff adequate to coordinate and expedite the work properly and shall maintain competent supervision of its own work to insure compliance with contract requirements.
- D. Contractor responsible for seeding and fertilizing shall inspect the finish grade for acceptability prior to application. Areas of discrepancy shall be identified and Landscape Architect or Owner's Representative shall be notified.
- E. It is the responsibility of the Contractor to establish a dense lawn of permanent grasses, free from lumps, depressions and settlement. Any part of the area that fails to show a uniform germination shall be re-seeded and such re-seeding shall continue until a dense lawn is established. Damage to seeded areas resulting from erosion and through no fault of the Owner shall be repaired by the Contractor, at his expense.
 - 1. Guarantee shall extend for one year from the date of acceptance.

1.4 SUBMITTALS

- A. Submit product data for seed and fertilizer to Landscape Architect for approval, prior to application.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 PRODUCTS

2.1 SEED

- A. Seed shall be provided from one of the following suppliers:
 - 1. EcoGreen Supply- 616-877-5326.
 - 2. Site One Landscapes - (800) 347-4272.
 - 3. Target Specialty - (248) 437-1427.
 - 4. BFG - (800) 243-4769- closed.
 - 5. Rhino Seed & Supply - (800) 482-3130.
 - 6. Lacrosse Seeds - (800) 647-8873.
- B. Contractors shall seed all areas disturbed during construction and not otherwise developed or indicated to be sodded. Topsoiling, finish grading and fertilization is to remain the same.
*Seed shall be new crop, cleaned, and comprising of the following varieties:
 - 1. Athletic Field Seed blend shall consist of a minimum of 3 of the listed bluegrass varieties and one of the listed ryegrass varieties. Blend shall be 80% Kentucky Bluegrass and 20% Perennial Ryegrass by weight. Only Elite bluegrasses (according to NTEP characteristics ratings) will be allowed on Athletic surfaces. No "named common" types will be accepted. Elite varieties coated with XALT will be allowed at same seeding rates.
 - 2. General Seeding Areas: "Varieties Named" blend shall be 50-60% Kentucky Bluegrass and 40-50% Perennial Ryegrass by weight for irrigated fields. A "Varieties Named" blend of 60-70% bluegrass, 30-40% perennial ryegrass for non-irrigated fields, and a blend of 20-40% bluegrass, 20-40% perennial ryegrass and 20-30% creeping red fescue for general turf areas.(VNS-varieties not stated- blends will not be accepted).

3. General Seeding Areas

Seed Varieties	Purity	Germination
Shannon or Bluestar Kentucky Bluegrass	95%	85%
Gaelic or Corsair Kentucky Bluegrass	95%	85%
Lunar or Avalanche Kentucky Bluegrass	95%	85%
Yellowstone Kentucky Bluegrass	95%	85%
Gray Star or Salinas Perennial Ryegrass	98%	85%
SoxFan or Showtime Perennial Ryegrass	98%	90%
Expedite Perennial Ryegrass	95%	90%
Xcelerator Perennial Ryegrass	95%	90%
Charger 2 Perennial Ryegrass	98%	90%
Oracle Creeping Red Fescue	98%	85%
Fairmont Chewings Fescue	95%	85%
Marvel Creeping Red Fescue	95%	85%
Sword Hard Fescue	95%	85%
Minimus Hard Fescue	95%	85%

2.2 COMMERCIAL FERTILIZER

- A. Fertilizer shall be uniform in composition, free-flowing and suitable for application with approved spreader, granular or pelleted with 50 percent (50%) of total nitrogen derived from a synthetic or natural organic material, delivered in original unopened containers with the analysis, type and trade name attached to each container. The composition shall be:
1. Fertilizer "A": applied at the time of seeding at 50 lbs. per 8000 square feet.
 - a. 16-32-4 (14.3% Ammoniacal Nitrogen, 1.7% Urea Nitrogen, 32% Phosphorus, 4% Available Potassium (SOP).
 2. Fertilizer "B": applied 3-4 weeks after seeding at 50 lbs. per 8,000-10,000 square feet.
 - a. 22-16-6 (6.3% Ammoniacal Nitrogen, 15.7% Urea Nitrogen, 16% Phosphorus, 6% Soluble Potassium).
 3. Fertilizer "C" for enhanced establishment program (seed in lieu of sod).
 - a. Healthy Grow 4-2-2 CPM(2.15% Ammoniacal Nitrogen, 1.85% Water Insoluble Nitrogen, 2% Phosphoric Acid, 2% Sulfate of Potash, 8% Calcium. 0.8% Sulfur, endo and ecto mycorrhizae, sea plant meal, molasses meal, yucca).
 4. Fertilizer "D" for enhanced establishment program (seed in lieu of sod).
 - a. Healthy Grow 8-3-5 CPM(4.5% Ammoniacal Nitrogen, 3.5% Water Insoluble Nitrogen, 3% Phosphoric Acid, 5% Sulfate of Potash, 5% Calcium. 1.0% Iron, 0.3% Magnesium).
- B. Complete Soil testing for both fertility (including micronutrients, CEC, pH) and particle size is required on all new establishment sites.

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- C. A critical establishment fertilizer application comes at planting whereas fertilizer in a ratio of 2-4-1 is applied directly adjacent to the seed to compensate for the seeds inability to extract phosphorus and other nutrients out of the soil. Usually approx. 1lb. of P205 is applied with ½ lb. of N and ¼- ½ lb of K20 is applied. An analysis of 16-32-4 would be an example. Fertilizer ingredients with lower chloride index are preferred at seeding, such as Ammonium Sulfate and Sulfate of Potash.

PART 3 EXECUTION

3.1 PREPARATION

- A. Protect existing underground improvements from damage.
- B. Remove all foreign materials, plants, roots, stones, and debris larger than 1" in any dimension from site. Do not bury foreign material.
- C. Prior to placement of topsoil, loosen soil to a depth of four inches (4") in lawn areas by approved method of scarification and grade to remove ridges and depressions. Remove all stones or foreign matter from top two inches (2") of soil.
- D. If above steps have had rain in sufficient quantity to cause soil to recompact, entire steps are to be done prior to seeding.
- E. Where no grades are shown, areas shall have a smooth and continual grade between existing or fixed controls and elevations shown on plans. Roll, scarify, rake and level as necessary to obtain true, even lawn surfaces. All finish grades shall meet approval of the Owner.
- F. Grade lawn areas to finish grades, filling as needed or removing surplus dirt and floating areas to a smooth, uniform grade. All lawn areas shall slope to drain.

3.2 PREPLANT FERTILIZING

- A. Broadcast spread fertilizer "A" (or Alternates "C" and "D") after seeding at a rate of 2 lbs. of Phosphorus per 1000 square feet. (Apply Alternate "C" at 50 lbs. per 5000 square feet and Alternate "D" at 50 lbs. per 10,000 square feet.).

3.3 SEEDING

- A. Dates of Seeding:
1. Grass seed shall be sown in the fall from August 15th until October 15th or in the spring between March 1st and May 15th or at such other times as approved by the Landscape Architect. All seeding is to be done in dry or moderately dry soil and at times when the wind does not exceed a velocity of five (5) miles per hour.
 2. If special conditions exist, which may warrant a variance in the above dates, submit a

written request to the Landscape Architect stating the conditions and proposed variance. Permission for the variance will be given if, in the opinion of the Landscape Architect, the variance is warranted.

B. Seed Application:

1. Immediately before sowing the seed, the earth surface shall be re-worked until it is a fine, pulverized, smooth seedbed, showing not more than 1/4" variance from grade.
2. Apply seed mixture, as specified, at a rate of two and one half to four (2.5-4) lbs/1000 sq. ft. Apply seed in two directions where possible at a rate of 1.25-2 lbs. /1000 sq. ft. in each direction with seeder, using a cultipacker type seeder such as Brillion (or equal) mounted on tractor. Seed shall be uniformly spread over the previously fine graded and fertilized topsoil. The surface shall be dry when seed is planted. Hand sow seed around each irrigation system head. Hydro-seeding is not acceptable.
3. Mulching: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches (150mm) long.
4. Contractor shall return to site six (6) weeks after installation to evaluate germination. If germination of seed exceeds 70%, Contractor to remove mesh. If germination of seeds is less than 70%, mesh shall remain and Contractor shall reevaluate in ten (10) days.

C. Summer Seeding:

1. If seeding is authorized between June 1 and August 15, annual rye shall be sown separately in addition to specified seed mix. Sow at the rate of (one) 1 lbs./1000 sq. ft.
2. Cultipacker or approved similar equipment may be used to cover the seed and to firm the seed bed in one operation. In areas inaccessible to cultipacker, the seeded ground shall be lightly raked and rolled in two directions with a water ballast roller. Extreme care shall be taken during seeding and raking to insure that the seed is not raked from one spot to another.
3. The seeded areas are to be protected, watered, mowed and otherwise maintained until Owner Acceptance.

D. Post Seeding Fertilizer: Supply fertilizer "B" when grass reaches height of one (1) inch or 3 weeks after seeding at .75-1 lbs Phosphorus per 1000 square feet.

E. Maintenance.

1. Maintenance of all lawns consist of mowing, watering and repairing erosion. Maintenance of lawns shall commence when any portion of the seeding has been completed. Seeded lawns shall never reach a height of three (3) inches prior to a cutting and shall be cut to a height of two (2) inches.
2. If, for reasons beyond the Sub-contractor's control, the height of the grass has exceeded three (3) inches, the mower blades shall be raised so that at no time will more than 1/3 of the grass leaf surface be removed.
3. Contractor shall notify the Owner through the Landscape Architect in writing one (1) week in advance of the final lawn cutting to allow the Owner and the Landscape Architect to inspect the lawns and schedule his maintenance work. The Owner will accept the lawns after a minimum of three (3) cuttings if a uniform cover of grass is established and is acceptable to Owner and Landscape Architect. If a uniform stand of

grass is not established, contractor shall continue maintenance and cutting until lawn is accepted.

4. If an infestation of weeds or crab grass develops prior to acceptance of the lawn, the Contractor shall treat the infestation by hand weeding or chemical control. The chemical control shall be furnished and installed by the contractor as recommended by the manufacturer and approved by the Landscape Architect. At least two weeks shall elapse after chemical control is applied before a request or inspection for acceptance is made to the Landscape Architect.

3.4 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Architect:
 1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over a 10 square foot and bare spots not exceeding 5 by 5 inches.
 2. Use specified materials to reestablish turf that does not comply with the requirements and continue watering and maintenance until turf is satisfactory.
 3. If the lawn is not acceptable after 18 months, the owner shall contract with an independent contractor, of their choosing, to complete the work.

3.5 CLEAN UP AND DISPOSAL

- A. Remove from the site all equipment, materials, and debris resulting from construction work including this section. Leave work area neat and clean and in a condition acceptable by the Landscape Architect and School District. All work shall be complete, ready for use, at the time of final acceptance.

END OF SECTION 32 9227

SECTION 32 9300 - EXTERIOR PLANTS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections:
 - 1. Section 32 9119 Topsoil.

1.2 SCOPE

- A. This work under this section specifications shall consist of the following:
 - 1. Preparation of subsoil and topsoil.
 - 2. Topsoil bedding.
 - 3. Trees.
 - 4. Mulch.
 - 5. Fertilizer.
 - 6. Pruning.
 - 7. Maintenance.

1.3 DEFINITIONS

- A. Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than sizes indicated; wrapped, tied, rigidly supported, and drum-laced as recommended by ANSI Z60.1.
- B. Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than sizes indicated.
- C. Bare-Root Stock: Exterior plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for kind and size of exterior plant required.
- D. Container-Grown Stock; healthy, 'vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required.

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- E. Fabric Bag-Grown Stock Healthy, vigorous, well-rooted exterior plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60. 1 for type and size of exterior plant.
 - F. Finish Grade: Elevation of finished surface of planting soil.
 - G. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
 - H. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
 - I. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

1.4 SUBMITTALS

- A. Nursery Source: For all nursery stock indicated on Plans.
 - 1. Submit list of growers for each plant species to be installed within 30 days following award of contract. Include substitution requests based on plant unavailability at that time. Substitution requests after this period will not be accepted.
- B. Submit material samples to Landscape Architect: peat moss, shredded hardwood bark mulch, planting accessories, pre-emergent herbicides, and plant fertilizers.
- C. Submit materials certification to Landscape Architect: Topsoil source and pH value, peat moss and plant fertilizer.
- D. Material Test Reports: For existing native surface topsoil and imported topsoil. Contractor shall be responsible to provide and pay for material testing. Testing agency shall be acceptable to the Landscape Architect.
- E. Planting Schedule: Indicating anticipated planting dates for exterior plants.
- F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of exterior plants.
 - 1. The Contractor, and its Subcontractors, shall provide a staff adequate to coordinate and expedite the work properly and shall maintain competent supervision of its own work to insure compliance with contract requirements.
 - 2. Installer Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when exterior planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 - 1. Report suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- D. Comply with sizing and grading standards of the latest edition of 'American Standard for Nursery Stock'. A plant shall be dimensioned as it stands in its natural position. Stock furnished shall be at least the minimum size indicated. Larger size is acceptable, at no additional charge. Larger plants shall not be cut back to size indicated.
- E. Before proceeding with work, check and verify quantities and dimensions. Report variations between Drawings and the site to the Landscape Architect before proceeding with work of this section. Plant totals are for convenience only and are not guaranteed. All plantings indicated on Drawings are required unless indicated otherwise.
- F. Evaluation: Landscape Architect may evaluate trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Landscape Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
 - 1. Notify Landscape Architect of sources of planting materials seven days in advance of delivery to site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver exterior plants freshly dug.
 - 1. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

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- B. Do not prune trees and shrubs before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
 - C. Take all precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected. Plants transported on open vehicles shall be covered to prevent wind burn.
 - D. Inspection certificates required by law shall accompany each shipment invoice or order to stock on arrival. The certificate shall be filed with the General Contractor's representative.
 - E. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Heel-in bare-root stock. Soak roots in water for two hours if dried out.
 - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - 3. Do not remove container-grown stock from containers before time of planting.
 - 4. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.7 COORDINATION

- A. Planting Restrictions: Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Evergreen Material: Plant Evergreen materials between September 1 and October 15 or in Spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-desiccant prior to planting operations.
 - 2. Deciduous material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in leaf, they shall be sprayed with anti-desiccant prior to planting operation.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.
- C. Coordination with Lawns & Irrigation: Plant trees and shrubs after finish grades are established and irrigation has been installed, and before planting lawns.
 - 1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

1.8 WARRANTY

- A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of: adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond the Contractor's control.
 - 1. Warranty Period: One year from date of Substantial Completion.
 - 2. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.
 - 3. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
 - 4. A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

1.9 MAINTENANCE

- A. Trees and Shrubs: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings.
 - 1. Maintenance Period: Six (6) months from date of Substantial Completion.
- B. Ground Cover and Plants: Maintain for the following maintenance period by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings:
 - 1. Maintenance Period: Three (3) months from date of Substantial Completion.

PART 2 PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.

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- E. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.2 SHADE AND FLOWERING TREES

- A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.
 - 1. Provide balled and burlapped trees.
 - 2. Branching Height: One-third to one-half of tree height.
- B. Small Upright or Spreading Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60 1; stem form as follows:
 - 1. Stem Form: Single stem.
 - 2. Provide balled and burlapped trees.
- C. Multistem Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:
 - 1. Stem Form: Clump.
 - 2. Provide balled and burlapped trees.

2.3 DECIDUOUS SHRUBS

- A. Form and Size; Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.
 - 1. Provide balled and potted and container-grown trees.

2.4 CONIFEROUS EVERGREENS

- A. Form and Size: Normal-quality, well-balanced, coniferous evergreens, of type, height, spread, and shape required, complying with ANSI Z60.1.
- B. Form and Size: Specimen-quality, exceptionally heavy, tightly knit, symmetrically shaped coniferous evergreens and the following grade:
 - 1. Provide balled and potted and container-grown trees.

2.5 BROADLEAF EVERGREENS

- A. Form and Size: Normal-quality, well-balanced, broadleaf evergreens, of type, height, spread, and shape required, complying with ANSI Z60. 1.
 - 1. Provide balled and burlapped trees or container-grown shrubs.

2.6 PLANTS

- A. Annuals: Provide healthy, disease-free plants of species and variety shown or listed. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.
- B. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.
- C. Fast-Growing Vines: Provide vines of species indicated complying with requirements in ANSI Z60.1 as follows:
 - 1. Two-year plants with heavy, well-branched tops, with not less than 3 runners 18 inches or more, in length, and with a vigorous well-developed root system.
 - 2. Provide field-grown vines. Vines grown in pots or other containers of adequate size and acclimated to outside conditions will also be acceptable.
- D. Groundcover Plants: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.
 - 1. Groundcover shall be grown in its container for one year prior to installation.

2.7 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep. Do not obtain from agricultural land, bogs or marshes.
 - b. Amend topsoil as necessary.

2.8 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: Class T, with a minimum 99 percent passing through No. 8 sieve and a minimum 75 percent passing through No. 60 sieve.
 - 2. Provide lime in form of ground dolomitic limestone. Use to adjust soil pH only, under discretion of Landscape Architect.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.

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- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
 - D. Aluminum Sulfate: Commercial grade, unadulterated.
 - E. Perlite: Horticultural perlite, soil amendment grade.
 - F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
 - G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

2.9 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
- B. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water absorbing capacity of 1100 to 2000 percent.
- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.10 FERTILIZER

- A. Bonemeal: Commercial raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

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- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 - 2. Composition Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.11 MULCH

- A. Shredded bark mulch shall be double-processed, dark shredded hardwood bark mulch that is clean and free of debris and sticks. Materials shall be uniform in size, shape, and texture. Submit samples to Landscape Architect for approval prior to installation. Install mulch to finish grade, level smooth, without ridges, humps or depressions. Shredded pallet and dyed mulch will not be accepted.
- B. All areas to receive mulch shall receive pre-emergent granular herbicide safe for perennials and grasses prior to installing mulch. Apply per manufacturer's recommendations.
- C. Hold mulch away from trunks of trees.
- D. Install to depth shown on plans.

2.12 WEED CONTROL BARRIERS

- A. Nonwoven Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum.
- B. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, 4.8 oz./sq. yd.

2.13 STAKES AND GUYS

- A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches by length indicated, pointed at one end.
- B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- C. Guy Cable: 5-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.
- D. Hose Chafing Guard; Reinforced rubber or plastic hose at least 1/2 inch in diameter, black, cut to lengths required to protect tree trunks from damage.
- E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

2.14 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Trunk-Wrap Tape: Two layers of crinkled paper cemented together with bituminous material, 4-inch- wide minimum, with stretch factor of 33 percent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, and la' and existing exterior plants from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain Landscape Architect's acceptance of layout before planting. Make minor adjustments as required.
- D. Lay out exterior plants at locations directed by Landscape Architect Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
 - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

3.3 TREE AND SHRUB EXCAVATION

- A. Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - 1. Excavate approximately three times as wide as ball diameter for balled and burlapped,

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- 2. balled and potted, container grown, or fabric bag-grown stock.
 - 2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
 - 3. If drain tile is required under planted areas, excavate to top of porous backfill over tile.
 - B. Subsoil removed from excavations may not be used as backfill.
 - C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch- diameter holes into free-drawing strata or to a depth of 10 feet, whichever is less and backfill with free-draining material.
 - D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
 - E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.4 TREE AND SHRUB PLANTING

- A. Set balled and burlapped stock plumb and in center of pit or trench with top of root ball 1 inch above adjacent finish grades.
 - 1. Place stock on setting layer of compacted planting soil.
 - 2. Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 3. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
- B. Set container grown stock plumb and in center of pit or trench with top of root ball 1 inch above adjacent finish grades.
 - 1. Carefully remove root ball from container without damaging root ball or plant.
 - 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
 - 3. Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.
 - 4. Wrap trees of 2-inch caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.

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- C. Set fabric bag-grown stock plumb and in center of pit or trench with top of root ball 1 inch above adjacent finish grades.
 - 1. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
 - D. Set and support bare-root stock in center of pit or trench with root collar or trunk flare 1 inch below adjacent finish grade. Spread roots without tangling or turning toward surface, and carefully work backfill around roots by hand. Puddle with water until backfill layers are completely saturated. Plumb before backfilling, and maintain plumb while working backfill around roots and placing layers above roots. Tamp final layer of backfill. Remove injured roots by cutting cleanly; do not break.
 - 1. Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.
 - 2. Wrap trees of 2-inch caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.
 - 3. Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.
 - 4. Wrap trees of 2-inch caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.

3.5 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

3.6 GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:
 - 1. Use 2 stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper; 3 stakes for trees less than 14 feet high and up to 4 inches in caliper. Space stakes equally around trees.
- B. Guying and Staking: Guy and stake trees exceeding 14 feet in height and more than 3 inches in caliper, unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches long, driven to grade.
 - 1. For trees more than 6 inches in caliper, anchor guys to pressure-preservative-treated deadmen 8 inches in diameter and 48 inches long buried at least 36 inches below grade. Provide turnbuckles for each guy wire and tighten securely.
 - 2. Attach flags to each guy with, 30 inches above finish grade.
 - 3. Paint turnbuckles with luminescent white paint.

3.7 PLANTERS

- A. Planters: Place a layer of gravel at least 4 inches thick in bottom of planters, cover with nonwoven fabric, and fill with planter soil mix. Place soil in lightly compacted layers to an elevation of 1-1/2 inches below top of planter, allowing natural settlement.
 - 1. Planter Soil Mix: One part topsoil, one part coarse sand, one part peat, and 3 lb of dolomitic limestone per cubic yard of mix.

3.8 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants as indicated on plans.
- B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
 - 1. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- D. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.9 PLANTING BED MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches.
- B. Mulch backfilled surfaces of planting beds and other areas indicated.
 - 1. Organic Mulch: Apply 3 inch average thickness of organic mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

3.10 EDGING INSTALLATION

- A. Aluminum Edging: Install aluminum edging where indicated according to manufacturer's written instructions. Anchor with aluminum stakes spaced approximately 48 inches apart; driven below top elevation of edging.

3.11 CLEANUP AND PROTECTION

- A. During exterior planting, keep adjacent paving's and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.12 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 32 9300

SECTION 33 4615 - SUBDRAINAGE SYSTEMS - TURF DRAINTILE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.
- B. Related Sections.
 - 1. Section 31 2010 Earthwork - Athletics.
 - 2. Section 31 3219 Geotextile Fabric.
 - 3. Section 32 1811 Synthetic Turf - Landscape.

1.2 SCOPE

- A. The work under this section consists of furnishing all labor, materials and equipment to install the drainage system, couplings and accessories for the artificial turf subdrainage system.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - b. ASTM D3350 - Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
 - 2. American Association of State Highway and Transportation Officials (AASHTO):
 - a. AASHTO M294 - Standard Specification for Corrugated Polyethylene Pipe.

1.4 SUBMITTALS

- A. Manufacturer's Literature: Furnish to Landscape Architect, copies of manufacturer's specifications, maintenance, and installation instructions for each item specified herein. Include photographs, catalogue cuts, and other data as may be required to show compliance with these specifications.

PART 2 PRODUCTS

2.1 DRAINTILE - GENERAL

- A. High Density corrugated polyethylene (HDPE), tubular-style pipe and fittings. Note: refer to plans for areas requiring perforated pipe and areas requiring solid pipe.
- B. ADS N-12, or approved equal.
- C. Diameter of systems lateral and collector lines as shown on plans.

2.2 TRENCH MATERIAL

- A. Filter Aggregate: Evenly graded mixture of $\frac{3}{4}$ " diameter clean crushed stone.

PART 3 EXECUTION

3.1 INSTALLATION FOR CORRUGATED POLYETHYLENE TUBING

- A. Hand trim excavating to required elevations. Do not over excavate. Remove large stones or other hard matter which could damage drain tile.
- B. Place a two inch (2") thick bed of filter aggregate.
- C. Install the drainage tile on the filter aggregate bed.
- D. Ensure complete connection to storm sewer using perforated pipe.
- E. Cover the pipe with filter aggregate to top of trench and compact to 90% Modified Proctor.

3.2 INSTALLATION FOR "FLAT DRAIN" PIPE

- A. Install flat drain pipe horizontally, being sure to allow for a minimum of 8" of stone below turf material.
- B. Joints shall be made using manufacturers couplers prior to placing flat drain on subgrade. Use 2 coupling pins for each coupler. Couplers shall be placed under the fabric at the joint to prevent backfill infiltration. To accomplish this, split the fabric seam and lay back the fabric approximately 8". Install the coupler with 2 pins. Replace fabric over the coupler and secure the fabric with suitable tape.

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- C. End caps shall be used at all termination points to prevent soil infiltration into system.
 - D. Compact stone to appropriate modified proctor density value.

END OF SECTION 33 4615