

Grosse Pointe Public School System

Grosse Pointe, MI

**Grosse Pointe South
High School**

Track Reconstruction 2019

Specifications Prepared By:



3269 Coolidge Hwy.
Berkley, MI 48072
(248) 547-7757

RELEASE DATE: January 25, 2019

BIDS DUE: February 13, 2019 @ 3:00 P.M.

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PROJECT MANUAL

PROJECT: **Track Reconstruction 2019**
Grosse Pointe South High School
11 Grosse Pointe Boulevard
Grosse Pointe Farms, MI 48236

OWNER: **Grosse Pointe Public School System**
389 St. Clair Avenue
Grosse Pointe, MI 48230

LANDSCAPE ARCHITECT: **Foresite Design, Inc.**
3269 Coolidge Hwy.
Berkley, Michigan, 48072
(248) 547-7757

PROJECT NO.:

RELEASE DATE: January 25, 2019

BIDS DUE: February 13, 2019 @ 3:00 p.m.

LOCATION of BID OPENING: **Grosse Pointe Public School System**
390 St. Clair Avenue
Grosse Pointe, MI 48230

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ADVERTISEMENT FOR BID

Grosse Pointe Public School System, 11 Grosse Pointe Blvd., Grosse Pointe Farms, MI 48236 will receive sealed bid proposals until **3:00 p.m.** on February 13, 2019. Bids will be opened and publicly read aloud immediately following the deadline for submission for the following bid package:

**Grosse Pointe South High School
Track Reconstruction 2019**

***Remove and replace existing track base and asphalt, install acrylic structural spray surface and track markings ***

1. All bids must be addressed to:

**Grosse Pointe Public School System
389 St. Clair Avenue
Grosse Pointe, MI 48230**

Attn: Richard Van Gorder – TRACK PROPOSAL ENCLOSED

2. Sealed bids will be publicly opened and read aloud:

Place: **Grosse Pointe School System
390 St. Clair Avenue
Grosse Pointe, MI 48230**

Date: **February 13, 2019**

Time: 3:00 p.m.

3. Questions may be addressed to:

- a. Foresite Design, Inc.
Bruce Lemons, R.L.A. (248) 547-7757
- b. All questions must be submitted in writing utilizing "01 2619 Clarification Request" form. Clarifications requested orally will not be accepted.
- c. THERE IS TO BE NO COMMUNICATION, VERBAL OR WRITTEN, WITH THE OWNER DURING THE BIDDING PERIOD. FAILURE TO FOLLOW THIS INSTRUCTION MAY LEAD TO REJECTION OF CONTRACTOR'S BID.

4. Bidding Documents may be viewed on or after January 25, 2019:

- Places:
- a. grbx.com
 - b. cam-online.com
 - c. [by contacting: Christy@foresitedesign.com](mailto:Christy@foresitedesign.com)

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ADVERTISEMENT FOR BID

Digital Drawings (.PDF) are at no cost. Digital Drawings in Autocad format are NOT available during bidding. Bidders are responsible to pay for their own documents costs, included shipping and handling, and printing costs are non-refundable.

6. Bonding is required as follows:

Bid Bond: 5% of the Bid Amount

Performance Bond and Labor & Material Bond: 100% of the Contract Price

7. The Bid Bond

- a. Bid Security or Cashier's Check, or Certified Check in the amount of five percent (5%) of the bid amount shall be submitted with the "Bid Proposal Packet" and shall be made payable to Grosse Pointe Public School System and be submitted with the understanding that if his/her bid is accepted, he/she will enter into a formal contract with the Owner in accordance with the form of agreement AIA A101 and that the required Performance and Payment Bonds will be given. Bidders shall agree not to withdraw proposals for a period of sixty (60) days after date for receipt of bids.

8. The Performance Bond & Labor and Material Payment

- a. Accepted bidders will be required to furnish in the amount of one hundred percent (100%) of the Contract Price, satisfactory Performance Bond and Labor and Material Payment Bond by a T-listed bonding company, acceptable to Grosse Pointe Public School System, within (ten) 10 days of notifications of intent to enter into a contract with Grosse Pointe Public School System. Failure to do so will result in forfeiture of the proposal guarantee.

9. Additional Pertinent Information

This is a non-prevailing wage project. This project is not exempt from State Sales Tax and/or Use Tax. All materials and supplies incorporated and used in construction of the work and becoming a permanent part of this project will not be exempt from State Sales Tax and/or Use Tax. State Sales Tax/Use Tax shall be included in the bid price. All other taxes, fees, permits, etc. and shipping costs shall also be included.

All applicable insurance policies will be required of each accepted bidder.

10. Bidding Submittal Requirements

The Bid Proposal Packet shall be on forms furnished in these documents.
THE BID PROPOSAL PACKET MUST BE SUBMITTED IN DUPLICATE.

The following Bid Proposal Packet information and Additional Information must be submitted in the following order.

1. Proposal Form
 - Unit Prices
 - Familial Disclosure Statement
 - Iran Economic Sanctions Act
2. Bid Security
3. Non-Collusive Affidavit

SECTION 00 1113
ADVERTISEMENT FOR BID

11. Tentative Construction Schedule:

Proposal A: Site Work

Start-	June 3, 2019
Complete-	July 13, 2019

Proposal B: All-Weather Surface

Start-	July 15, 2019
Complete-	July 29, 2019

All bid proposals shall be accompanied by the Affidavit of Compliance – Iran Economic Sanctions Act per Michigan Public Act No. 517 of 2012.

All bidders must provide familial disclosure in compliance with MCL 380.1267. The bid proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the Board of Education or Grosse Pointe Public School System. The School District will not accept a bid proposal that does not include this sworn and notarized disclosure statement.

All bid proposals shall be accompanied by the Affidavit of Compliance – Iran Economic Sanctions Act per Michigan Public Act No. 517 of 2012.

No bid(s) will be accepted after the above time and date. Bids received after the deadline will be returned unopened. Delivery of the bids is the responsibility of the bidder, whether by mail or in person. Also, the Grosse Pointe Public School System is not responsible for delays or failures of any other party.

The Owner reserves the right to accept or reject any or all bids and further reserves the right to award each proposal separately and to evaluate any or all bids on factors including but not limited to low bid and to the best advantage of the Grosse Pointe Public School System.

END OF SECTION 00 1113

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ADVERTISEMENT FOR BID

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SECTION 00 1115
SCOPE OF WORK

GENERAL NOTES (Applicable to All Bid Categories)

1. 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.
2. Contractor shall coordinate with other trades that affect the installation of the Work.
3. Bidders shall exclude costs of 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.
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.

SECTION 00 1115
SCOPE OF WORK

PROPOSAL A: SITE WORK

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

	Specification Section	02 3208	Soil Borings
	Specification Section	02 4113	Demolition
	Specification Section	03 3010	Portland Cement Concrete
	Specification Section	04 0513	Mortar
	Specification Section	31 1000	Site Preparation
	Specification Section	31 2000	Earthwork
	Specification Section	32 1124	Aggregate Base Course
	Specification Section	32 1217	Bituminous Asphalt Pavement
	Specification Section	32 1838	Acrylic Surface (Alternate)
	Specification Section	32 9227	General Lawn Restoration
	Specification Section	33 4413	Manholes, Catchbasins and Similar Structures
	Specification Section	33 4416	Polymer Concrete Trough Drain System
	Specification Section	33 4615	Subdrainage Systems

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. Layout points of reference will be provided prior to commencement of work.
3. Include all required permits and bonds.
4. **Schedule and provide any chemical testing the landfill may require.**
5. Protect existing asphalt/concrete from damage by equipment.
6. Provide temporary pavement measures for vehicle or walkway traffic.
7. Remove and legally dispose of all excess materials and debris generated by scope of work.
8. Coordinate work with other trades on site.
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: concrete, asphalt, stone, all-weather surface, field events, topsoil and unsuitable soil. Prepare and proof roll sub-grades, including sub-grade for paving and site concrete contractors.
10. Salvage and protect existing irrigation for re-use.
11. Powerwash all existing drain lines, trench drains and clean all sumps of catch basins as noted on plans.
12. Provide necessary dewatering associated with this work division.
13. Perform earthwork as necessary to establish grades, and site grading to within 0.1 feet of the sub-grades indicated.
14. Provide all earthwork as shown unless specifically noted to be completed by others. Work includes but not limited to rough grading, compacting and re-compacting, subgrade fine grading and positive drainage swales to existing and proposed catch basins as shown on drawings
15. Provide labor, materials and equipment necessary for a complete installation of asphalt paving.
16. Provide radius point markers as indicated.
17. Reworking of catch basins and manholes as shown on drawings.
18. Preserve and salvage existing collector pipe for re-use with new drainage system.
19. Furnish and install new site drainage as shown.
20. Powerwash new asphalt and concrete prior to installation of all-weather track surface.
21. **Alternate A-1:** Provide and install acrylic surface to North D-zone.

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SCOPE OF WORK

22. 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 a clean condition at all areas on site and free from dirt, mud, and gravel. Include sweeping of parking lots and public and private streets.
23. Provide five sets or 1 electronic set of material submittals for approval. If submittals comply with specifications, "Material Compliance Certificate" shall be used.
24. Note: Milestone Schedule. This trade will be required to confirm a detailed schedule prior to award of this contract.

Excluded Work:

1. All-Weather Track Surface
2. Track Markings

PROPOSAL B: TRACK SURFACE

CM Supplementary Conditions

General Conditions

Division 1 General Requirements

Division 2 Existing Conditions

Specification Section 32 1724

Track Markings

Specification Section 32 1826

All-Weather Synthetic Track Surface

Specification Section 32 1838

Acrylic Surface **(Alternate)**

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. Layout points of reference will be provided prior to commencement of work.
3. Coordinate work with other trades on site.
4. Contractor responsible to powerwash/powervac debris from existing track and field event pavement prior to installation of new surfacing.
5. Provide and install all-weather track surface to track and South D-zone.
6. **Alternate B-1:** Provide and install acrylic surface to North D-zone.
7. Contractor is responsible for protection of the fencing during spray applications.
8. Provide track markings as specified. Contractor shall coordinate markings with Owner prior to application.
9. 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 a clean condition at all areas on site and free from dirt, mud, and gravel. Include sweeping of parking lots and public and private streets.
10. Provide all required closeout documents upon completion of project.
11. Provide five sets of material submittal for approval.
12. **Note:** Milestone Schedule. This trade will be required to confirm a detailed schedule prior to award of this contract.

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SCOPE OF WORK

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SECTION 00 2113
INSTRUCTIONS TO BIDDERS

STANDARD FORM

The Standard Form of Instructions to Bidders, AIA Document A701, 1997 edition, issued by the American Institute of Architects, is part of this specification. Copies are on file and may be obtained at the office of the Architect.

TABLE OF ARTICLES

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| 1. Definitions | 6. Post-Bid Information |
| 2. Bidder's Representation | 7. Performance Bond and Payment Bond |
| 3. Bidding Documents | 8. Form of Agreement Between Owner and Contractor |
| 4. Bidding Procedures | 9. Description of Work |
| 5. Consideration of Bids | 10. Warranty & Indemnity |

The following includes modifications or additions to the above standard form which are applicable to this project.

ARTICLE 1DEFINITIONS

- 1.2 All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, are applicable to these Instructions to Bidders.
- 1.3 Addenda are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the bidding documents, including Drawings and Specifications, by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed. All changes in cost resulting from addenda shall be included in proposals.

ARTICLE 2BIDDER'S REPRESENTATION

- 2.1.3 Each bidder, by making his bid, represents that he has visited the site and familiarized himself with the local conditions under which the work is to be performed. No claims for extra compensation shall be allowed due to failure of any Bidder to examine the conditions that exist at the building site nor for conditions or difficulties encountered in the execution of the work which may have been avoided by such examination.

In submitting his proposal, the Bidder also:

- represents that he has reviewed the work outlined in the Description of Work and fully understands the scope of the work required by interfacing Bid Categories as well as that required by Bid Categories covered in his proposal;

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INSTRUCTIONS TO BIDDERS

- acknowledges that the scope of the work is not necessarily restricted to a single trade, specification division, or section and that his proposal includes the work of all trades within the Bid Category or Categories covered in his proposal;
 - agrees that his proposal, if accepted by the Owner, will be the basis for a contract directly with the Owner and to enter into such contract in accordance with the intent of the Contract Documents.
- 2.1.5 The Bidder shall familiarize himself, prior to bidding, with the work requirements of all other contractors which precede, interface, follow, or are concurrent with the work of this Category.

ARTICLE 3

BIDDING DOCUMENTS

3.3 SUBSTITUTIONS

- 3.3.1 Each Bidder represents that his bid is based upon the materials and equipment described in the Bidding Documents.
- 3.3.2 The successful Contractor must include without approved substitution, all materials and equipment which are specifically identified by manufacturer's name, model or catalog number in the respective Specification Section. Where more than one (1) product or material manufacturer is specified, the Bidder may use the one of his choice in his base bid. It is required that Bidder indicated his choice of material by identifying same in check list attached to his proposal together with the cost attributed to such material. This cost shall be a part of Base Bid, not in addition thereto.

Other substitutions will be considered only when:

- A. Request of substitution by the Bidder is made seven (7) days prior to the bid opening and approval for such request is given in the form of an Addendum.
- B. Offered as a voluntary alternate presented on the Bidder's letterhead together with the amount to be deducted from his base proposal. The Owner may accept or reject such voluntary alternate based upon his best judgment.
- 3.3.2.1 Each such request shall include a complete description of their proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data and any other data or information necessary for a complete evaluation.
- 3.3.2.2 The Owner shall receive the benefit of all cost differences resulting from any substitution.
- 3.3.2.3 Any revisions necessary after substitutions of equipment or materials have been approved shall be the full responsibility of the Contractor without extra cost to the Owner.
- 3.3.4 Refer to Article 3.19 of Supplementary Conditions regarding substitutions after Award of Contract.

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INSTRUCTIONS TO BIDDERS

ARTICLE 4

BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- 4.1.1 All bids must be prepared on the forms provided by the Architect and submitted in accordance with the Instructions to Bidders.

4.2 BID SECURITY

- 4.2.2 ANY BID NOT ACCOMPANIED BY A BID BOND, CERTIFIED OR CASHIER'S CHECK MAY BE REJECTED.

4.2.2.1 Either a CERTIFIED OR CASHIER'S CHECK on an open, solvent bank or a BID BOND issued by an approved bonding company payable to Grosse Pointe Public School System in an amount equal to five percent (5%) of the bid shall be submitted with each proposal as liquidated damages if successful Bidder fails to sign contract and file necessary general insurance within fifteen (15) days after Notice of Award from Architect or Owner.

4.2.2.2 The bonding company on issuing a bid bond thereby obligates themselves to furnish a Performance, Labor and Material Bond within (10) ten days, in the full amount of the contract should subject Bidder be Low Bidder.

4.2.2.3 The bid deposit of all except the three (3) lowest responsible bidders will be returned within three (3) days after the opening of bids. The bid deposit of the three (3) lowest responsible bidder will be returned within 48 hours after the contract and their required bonds have been finally approved by the Owner.

- 4.2.3 (d) Contractor fails to provide required bonding and submit post-bid information required to determine contract award.

4.3 SUBMISSION OF BIDS

- 4.3.2.1 Proposals shall be addressed as follows:

Grosse Pointe Public Schools
390 St. Clair Avenue
Grosse Pointe, MI 48230

Attn: Richard Van Gorder
TRACK PROPOSAL ENCLOSED

- 4.3.3 A bid is invalid if it has not been deposited at the designated location prior to the time and date for receipt of any bids indicated in the Advertisement for Bids, or prior to any extension thereof issued to the bidders.

- 4.3.5 The contractor shall include in the bid and contract price all Sales Taxes and Use Taxes currently imposed by Legislative enactment and as administered by the Department of Revenue on the Bid Date. If the Contractor is not required to pay or bear the burden, or obtains a refund or drawback in whole or in part of any Sales or Use Tax, Interest or Penalty

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thereon, which was required to be and was deemed to have been included in the bid and contract price, the contract price shall be reduced by the amount thereof and the amount of such a reduction whether as a refund or otherwise, shall insure solely to the benefit of the Owner.

- 4.3.6 If required, a Bidder shall submit to the Architect a properly executed Contractor's qualification statement prior to receipt of proposals. Requested material may include the following:

Bidder's performance record, list of construction equipment, financial statement covering a period of two (2) years and any additional information required to satisfy the Owner that the Contractor is qualified to fulfill the Contract.

- 4.3.7 Within one (1) hour after the completion of the opening of the bids, the General Contractors who submitted the three lowest bids must submit a list of the names of each subcontractor who will provide labor or a portion of the work or improvement to the Contractor for which he will be paid an amount exceeding 5 percent of the prime Contractor's total bid or \$40,000 whichever is greater. If the General Contractor fails to submit such a list within the required time, his bid shall be deemed not responsive.

4.4 MODIFICATION OR WITHDRAWAL OF BID

- 4.4.1 Unless otherwise provided in any supplement to these Instructions to Bidders, no Bidder shall modify, withdraw or cancel his bid or any part thereof for sixty (60) days after the time designated for the receipt of bids in the Advertisement for Bids.

4.4.2.1 Prior to receipt of the bids, Addenda will be mailed or delivered to each person or firm recorded by the Architect as having received the bidding documents and will be available for inspection wherever the bidding documents are kept available for that purpose. Addenda issued after receipt of bids will be mailed or delivered only to the selected bidder.

ARTICLE 5

CONSIDERATION OF BIDS

5.2 REJECTION OF BIDS

- 5.2.1 The Bidder acknowledges the right of the Owner to reject any or all bids and to waive any informality or irregularity in any bid received. In addition, the Bidder recognizes the right of the Owner to reject a bid if the Bidder failed to furnish any required BID SECURITY, or to submit the data required by the Bidding Documents, or if the bid is in any way incomplete or irregular.

5.3 ACCEPTANCE OF BID (AWARD)

- 5.3.1 Emphasis is placed upon the fact that the Owner's decision regarding award of contracts will be influenced by such factors as quality, completion time, construction features, his best judgment of value, etc., and not entirely upon cost, and further, shall reserve the right to accept or reject any or all bids and to waive irregularities in proposals.
- 5.3.3 Contracts will be awarded based upon proposals received for one Bid Category only or for

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INSTRUCTIONS TO BIDDERS

all work combined under a single proposal.

- 5.3.4 Time is the essence of the Contract. It is understood that the work is to be carried through to completion with the utmost speed, consistent with good workmanship. The work of all trades shall be complete on days indicated except for minor replacement, correction or adjustment items which will not interfere with the complete operation and utilization of all parts of the contract work. The time of completion will be an important factor in determining award of the contract. Failure to comply with the construction document will result in rejection of the bid and/or cancellation of award.
- 5.3.5 Amounts entered in Proposal for Breakdowns or Unit Costs are subject to award, unless specifically noted otherwise.

ARTICLE 6

POST-BID INFORMATION

6.3 SUBMITTALS

- 6.3.1 Upon request by the Architect, the selected Bidder, within seven (7) days thereafter, shall submit the following:
- 6.3.1.1 A designation of the work to be performed by the Bidder with his own forces. Not to exceed a 10% markup for self performed/subcontracted work, material, and labor
- 6.3.1.2 A list of names of the Sub-Contractors or other persons or organizations (including those who are to furnish the materials or equipment fabricated to a special design) proposed for such portions of the work as may be designated, the names of the Sub-Contractors proposed for the principal portion of the work.
- 6.3.1.3 A statement of costs for each major item or work included in the bid or in detail as requested by the Architect.
- 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the proposed Sub-Contractors to furnish and perform the work described in the divisions of the Specifications pertaining to such proposed Sub-Contractor's respective trades.
- 6.3.3 Prior to the Award of Contract, the Architect will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has reasonable and substantial objection to any person or organizations on such list and refuses in writing to accept such person or organization. The Bidder may, at this option, withdraw his bid without forfeiture of bid security, notwithstanding anything to the contrary contained in Paragraph 4.3.3. If the Bidder submits an acceptable substitute with an increase in his bid price to cover the difference in cost occasioned by such substitution the Owner may, at his discretion, accept the increased bid price or he may disqualify the Bidder.
- 6.3.4 Sub-Contractors, manufacturers, material suppliers and other persons and organizations proposed by the Bidder and accepted by the Owner and Architect must be used on the work for which they were proposed and accepted and shall not be changed except with written approval of the Owner or Architect. Failure to provide the information, as stated, will result in rejection of bid and/or cancellation of award (post-award).

ARTICLE 7

SECTION 00 2113
INSTRUCTIONS TO BIDDERS

PERFORMANCE BOND AND PAYMENT BOND

7.1 BOND REQUIREMENTS

- 7.1 The Owner shall require the Bidder to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising there under in such form and amount as the Owner may prescribe and with such sureties secured through the Bidder's usual sources as may be agreeable to the parties. Premiums shall be paid by the Bidder. The bonding companies are to be limited to those listed on U.S. Department of Treasury Circular 570. All surety bonds will be checked for validity before an Award will be made. If for any reason the bonds are not valid, the selected Contractor's Proposal will be null and void.

7.2 TIME OF DELIVERY AND FORM OF BONDS

- 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than (10) ten days from the date of intent to enter the contract, or if the work is commenced prior thereto in response to a letter of intent or Notice of Award, the Bidder shall, prior to commencement of the work, submit evidence satisfactory to the Owner that such bonds will be issued.

- 7.2.2.1 All successful Bidders, except those noted above, shall be required to furnish Performance and Labor and Material Bonds in the following amounts:

1. Performance Bond in the full amount of the contract insuring the faithful performance of all provisions of the contract and the satisfactory completion of the work embraced there under within the time agreed upon, and the covering of guarantees herein provided for. This bond shall also insure the Owner against defective material or workmanship in any work under the contract for a period of one (1) year after completion and acceptance of the project.
2. Payment Bond in the full amount of the contract for the protection of sub-contractors, labor and material men

- 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his Power of Attorney indicating the monetary limit of such power.

ARTICLE 10

WARRANTY AND INDEMNITY

10.1 WARRANTY

- 10.1 All work shall be guaranteed in writing against defects in workmanship and materials for one (1) year from issuance by the Board of Education's architect of the Certificate of Substantial Completion, or approval, acceptance and final payment by the Board of Education, whichever occurs first.

10.2 INDEMNITY

- 10.2 Contractor shall indemnify, defend and hold the Grosse Pointe Public Schools harmless from any damages to property or personal injuries resulting from or reasonably attributable to any defects in supplies or services provided by contractor hereunder.

SECTION 00 2300
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
Site Work	June 3, 2019	July 13, 2019
Track Surface	July 15, 2019	July 29, 2019

- B. Close coordination will be required between all construction trades to ensure construction operations can be completed within the scheduled time.
- C. 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.

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.

SECTION 00 2300
SCHEDULE AND PHASING

END OF SECTION 00 2300

SECTION 00 4200
PROPOSAL FORM

PROPOSAL FOR: TRACK RECONSTRUCTION 2019
GROSSE POINTE SOUTH HIGH SCHOOL
11 Grosse Pointe Boulevard
Grosse Pointe Farms, MI 48236

PROPOSAL TO: GROSSE POINTE PUBLIC SCHOOL SYSTEM
389 St. Clair Avenue
Grosse Pointe, MI 48230

Attn: Richard Van Gorder

ARCHITECT: FORESITE DESIGN, INC
3269 Coolidge Highway
Berkley, MI 48072
248-547-7757
Email: blemons@foresitedesign.com

SUBMITTING CONTRACTOR: _____

ADDRESS: _____

PHONE: _____ / FAX: _____

EMAIL: _____

1. BASE PROPOSAL

I have carefully examined the bidding documents which include the Instructions to Bidders, all General Conditions and Supplemental Conditions, all drawings title "**Grosse Pointe Public Schools**" and all various addenda numbered _____ to _____ as prepared by FORESITE DESIGN, INC. which cover the general and architectural trades, as well as the premises and conditions affecting this work.

The undersigned proposes to furnish all labor, materials and equipment, all utilities, transportation services and taxes for the general construction as indicated under each proposal in accordance with said documents for the sum or sums of:

Within one (1) hour after the completion of the opening of the bids, the General Contractors who submitted the three lowest bids must submit a list of the names of each subcontractor who will provide labor or a portion of the work or improvement to the Contractor for which he will be paid an amount exceeding 5 percent of the prime Contractor's total bid or \$40,000 whichever is greater. If the General Contractor fails to submit such a list within the required time, his bid shall be deemed not responsive.

A. PROPOSAL _____ COMPLETE

PROPOSAL _____: BASE BID \$ _____

Dollars

(written sum)

SECTION 00 4200
PROPOSAL FORM

B. COMBINATION BID FOR CATEGORIES _____ & _____ COMPLETE

\$ _____

Dollars

(written sum)

2. ALTERNATES

The Undersigned further proposes to execute the work specified in the respective technical division or indicated on the drawings for the sum added to (unless otherwise noted) the Base Proposal Amount as stated below:

A. ALTERNATE A-1: (Site Work) State the cost to be ADDED TO the Proposal A Base Proposal Amount to install acrylic surface material in the North D-zone.

ADD \$ _____

B. ALTERNATE B-1: (Track Surface) State the cost to be ADDED TO the Proposal B Base Proposal Amount to install acrylic surface material in the North D-zone.

ADD \$ _____

3. TIME OF COMPLETION

The undersigned understands and agrees that time is of the essence and that all services, the installation of all work and materials, provided for in the contract must be fully completed on or before the following dates:

Proposal A: Site Work

Start-	June 3, 2019
Complete-	July 13, 2019

Proposal B: All-Weather Surface

Start-	July 15, 2019
Complete-	July 29, 2019

4. SUPPLEMENTAL FEES

For additional work performed upon instruction by the Owner

- A. BY SUBCONTRACTORS of the Undersigned, add maximum 10% to the subcontractor's prices for its OH&P; and maximum 10% for all the charges of the Undersigned for its overhead and profit.
- B. BY PERSONS OTHER THAN THE SUBCONTRACTORS of the Undersigned, the charges will be actual cost of labor and materials (less all discounts) plus the fee of not more than 10%. This fee includes all the charges of the Undersigned for general conditions, overhead and profit, and the actual cost of insurance and taxes. It excludes bond fee.
- C. Each proposal covering extra work shall include a complete itemized material and labor breakdown.
- D. For all revisions involving deletion of Contract Work, it is agreed that full credit shall be given the Owner for such work deleted, including overhead and profit.

SECTION 00 4200
PROPOSAL FORM

5. VOLUNTARY ALTERNATES

The following alternates are offered at this time for the consideration of the Owner. If accepted, the Base Proposal will be changed by the amount listed.

- A. _____

 Add to or Delete from Base Proposal Amount: \$ _____
- B. _____

 Add to or Delete from Base Proposal Amount: \$ _____
- C. _____

 Add to or Delete from Base Proposal Amount: \$ _____

6. PRICE GUARANTEE

The Undersigned agrees that its proposal shall not be withdrawn and the price stated in the Proposal is guaranteed for sixty (60) consecutive days from the bid date.

7. TAXES

The undersigned acknowledges that the prices stated above include all applicable taxes of whatever character or description.

8. ADDENDA

If any Addenda covering changes to the Bidding Documents have been received during the bidding period, the bidder shall fill in their numbers and dates which acknowledge having received the same, and having included in this proposal the work involved.

- No. 1 Dated _____
 No. 2 Dated _____
 No. 3 Dated _____

9. NEGOTIATION

The Undersigned agrees that, should the overall cost exceed the funds available, it will be willing to negotiate with the Owner for the purpose of making further reductions in the Contract Work, and shall agree to give full credit for all such reductions in the work requested by the Owner, including full value of labor, materials, and subcontract work and reasonable proportionate reductions in overhead and profit, thereby arriving at an agreed upon Contract price.

10. UNIT PRICES

All unit prices quoted shall include the sum total of all additional costs of labor, material, overhead, profit, fees, general conditions, and such other costs incidental to the work described. Any increase in cost must be approved by the Owner in writing prior to work being performed.

For all revisions involving the deletion of Contract work, it is agreed that full credit shall be given the Owner for such work deleted on a unit basis as quoted hereinafter.

UNIT PRICING BID PROPOSAL A (SITE WORK)

- | | | | |
|----|--------------------------------|----------|---------------------|
| A. | Undercutting (w/o backfill) | \$ _____ | Per cubic yard (cy) |
| B. | Undercutting (trucked offsite) | \$ _____ | Per cubic yard (cy) |
| C. | Aggregate Base Course | \$ _____ | Per ton |
| D. | Bituminous Asphalt Pavement | \$ _____ | Per ton |

SECTION 00 4200
PROPOSAL FORM

E.	Sawcut Asphalt Track Edge	\$ _____	Per lineal foot (lf)
F.	8" Collector Pipe	\$ _____	Per lineal foot (lf)
G.	6" Perforated Drain Pipe w/ sock and peastone backfill	\$ _____	Per lineal foot (lf)
H.	2' x 4' Drainage Structure	\$ _____	Per unit
I.	Polymer Trough Drain (ACO System 4000)	\$ _____	Per lineal foot (lf)
J.	3" – 5" Stone	\$ _____	Per ton

UNIT PRICE BID PROPOSAL B (TRACK SURFACE)

A.	Polyurethane Bound, Black Base Mat	\$ _____	Per square foot (sf)
B.	Dark Blue Structural Spray	\$ _____	Per square foot (sf)

Any increased cost based on the unit prices must be approved by Owner's written change order prior to starting work. Quantities must be confirmed by a Testing Agency or Architect and the Owner.

11. LIQUIDATED DAMAGES PROVISION

Contractor shall complete the entire work and obtain a Certificate of Substantial Completion by the substantial completion date indicated on the Proposal Form. Contractor and Owner agree that if the Certificate of Substantial Completion is obtained later than the date, the following liquidated provisions apply. The project completion date shall be adjusted by an amount of time properly documented in Change Orders. If the Owner and Contractor do not agree with the adjustment in Contract time due to Change directives, such adjustment shall be determined by the Architect.

A. SITE OBSERVATION FEE

If the Contractor fails to obtain the Certification of Substantial Completion for the Project by the Project Completion Date (as adjusted pursuant to this paragraph), the Contract Sum payable to the Contractor will be reduced in the amount of \$1000.00 for each day that the issuance of the Certificate of Occupancy exceeds the Project Completion Date, weather permitting and through no fault of the Owner or Foresite Design, Inc.

12. RIGHTS RESERVED BY OWNER

The Owner reserves the unconditional right to waive any irregularities, reject any or all proposals or to accept proposals which in the judgment of the Owner will serve the best interests of the Owner. The Owner reserves the right to award to a Contractor based on factors other than low bid.

13. PROPOSAL GUARANTEE (BID BOND)

Is required: Refer to AIA Document A701-1997 "Instruction to Bidders"

Amount: 5% of contract sum

14. CONTRACT SECURITY (Performance and Labor & Material Payment Bond)

Is required: Refer to AIA Document A701-1997 "Instruction to Bidders"

Amount: 100% of contract sum

15. COLOR SAMPLES FOR ACRYLIC SURFACE AND ALL-WEATHER TRACK SURFACES MUST BE PROVIDED WITH BID.

SECTION 00 4200
PROPOSAL FORM

16. CONTRACT EXECUTION

The Undersigned agrees to execute a Contract for work covered by this Proposal as provided for in the Bidding Documents. The Undersigned declares the legal status indicated below:

() Individual

() Partnership, having the following partners:

1. _____
2. _____
3. _____

() Corporation, Incorporated under the laws of the State of _____

The Undersigned affirms that:

- A. This proposal is based upon the materials and construction, equipment, etc., named or described in the specifications.
- B. The address, given below, is the legal address to which all notices, directions, or other communications may be served or mailed.
- C. Its proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that the process quoted herein include all terms, insurance, royalties, transportation charges, allowances, taxes, use of all tools and equipment, overhead, profit, etc., necessary to fully complete the work in accordance with the Contract Documents.

- 17.** The Contractor shall hold harmless from and indemnify the Owner and Architect against all claims, suits, actions, costs, counsel fees, expenses, damages, judgments or decrees, by reason of any person or persons or property being damaged or by the Contractor, or any other employed under said Contractor, in any capacity during the progress of the work whether by negligence or otherwise.

The Undersigned agrees to live up to the above specifications and gives the Owner the right to deduct the cost of any damage caused by faulty work and any item conflicting with good workmanship from the final payment.

If notified of acceptance of this proposal, the undersigned agrees to execute a contract for the above work, for the above stated compensation, in form of the standard form of the AIA.

SECTION 00 4200
PROPOSAL FORM

FIRM NAME : _____

ADDRESS: _____

SIGNED: _____

NAME: _____

TITLE: _____

TELEPHONE: _____

FAX: _____

EMAIL: _____

DATE: _____

Return TWO (2) signed copies.

The Owner reserves the unconditional right to waive any informality or irregularity, reject any or all proposals, or to accept proposals which in the judgment of the Owner will serve its best interests, and to make in its judgment a determination as to the adequacy of the Contractor's qualifications, experience, and capability.

SECTION 00 4200
PROPOSAL FORM

CONTRACTOR QUALIFICATIONS

1. Years in Business: _____years
(This company and this business)
2. Minimum Experience – at least three (3) comparable (similar) projects of similar size and cost, with customer reference.

Project Name: _____

Location: _____

Cost: _____

Year: _____

Contact Name: _____ Title: _____

Phone: _____ Email: _____

Project Name: _____

Location: _____

Cost: _____

Year: _____

Contact Name: _____ Title: _____

Phone: _____ Email: _____

Project Name: _____

Location: _____

Cost: _____

Year: _____

Contact Name: _____ Title: _____

Phone: _____ Email: _____

SECTION 00 4200
PROPOSAL FORM

FAMILIAL RELATIONSHIP DISCLOSURE FORM MCL 380.1267 (d)

This form **MUST BE NOTORIZED** as a condition of being awarded business by the Grosse Pointe Public School System.

1. I, the Undersigned, being first duly sworn, depose and say; and my signature verifies, that there are no Owner(s), Principals, Officers, Agents, Employees, or Representatives of this firm that have any familial relationships with any members of the Grosse Pointe Public School Board, or its Superintendent, unless specifically noted below:

☐ **The following are the familial relationship(s) disclosed:**

	<u>Owner/Employee Name</u>	<u>Related to:</u>	<u>Relationship</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

(Attach additional pages if necessary to disclose familial relationships.)

2. I have personal knowledge and/or I have personally verified that the following are all of the familial relationships existing between the owner(s) and employees(s) of the aforementioned contractor and the school district's superintendent and/or board members
3. I have authority to bind the aforementioned contractor with the representations contained herein, and I am fully aware that the school district will rely on my representations in evaluating bids for the construction project.

☐ **There is no familial relationship that exists** between the owner(s) and employees(s) of the aforementioned contractor and the school district's superintendent and/or board members.

BIDDER'S FIRM NAME _____

BY (SIGNATURE) _____

PRINTED NAME AND TITLE _____

Subscribed and sworn before me, this _____

Seal:

Day of _____, 20____, a Notary Public

In and for _____ County, _____

Signature
NOTARY PUBLIC

My Commission expires _____

SECTION 00 4200
PROPOSAL FORM

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT
MICHIGAN PUBLIC ACT NO. 517 OF 2012

The undersigned, the Owner, or authorized officer of the below-named company (the "Company"), pursuant to the compliance certification requirement provided in the Grosse Pointe Public School System's Request for Proposal Bid ("RFP"), hereby certifies, represents, and warrants that the Company (which includes its officers, directors and employees) is not an "Iran Linked Business" within the meaning of the Iran Sanctions Act, Michigan Public Act No. 517 of 2012, and that in the event the Company is awarded a contract by the Grosse Pointe Public School System as a result of the aforementioned RFP, the Company is not and will not become an "Iran Linked Business" at any time during the course of performing any services under this contract.

The Company 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 two (2) times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the Grosse Pointe Public School System'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 proposal for three (3) years from the date that it is determined that a person has submitted a false certification.

PRINT:

Company Name _____

Street Address _____

City / State / Zip _____

Phone _____

Company Officer _____ Title _____

Officer's Signature _____ Date _____

STATE OF _____) ss

COUNTY OF _____

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

a Notary Public in and for _____ County, _____

Signature

NOTARY PUBLIC

Seal:

My Commission expires _____

END OF SECTION 00 4200

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SECTION 00 4336
LIST OF SUBCONTRACTORS

TO BE COMPLETED BY BIDDER:

Project: Track Reconstruction 2019

	Proposal A – Site Work
	Proposal B – Track Surface

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

(USE ADDITIONAL SHEETS AS REQUIRED)

SECTION 00 4336
LIST OF SUBCONTRACTORS

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PROPOSAL _____ - _____

LIST SPECIFICATION #, ITEM, MANUFACTURER AND MODEL #

[illegible]

Signature: _____

Print Name: _____

SECTION 00 6513
MATERIAL COMPLIANCE CERTIFICATE

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AIA[®] Document A201[™] – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

TABLE OF ARTICLES

1	GENERAL PROVISIONS
2	OWNER
3	CONTRACTOR
4	ARCHITECT
5	SUBCONTRACTORS
6	CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7	CHANGES IN THE WORK
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11	INSURANCE AND BONDS
12	UNCOVERING AND CORRECTION OF WORK
13	MISCELLANEOUS PROVISIONS
14	TERMINATION OR SUSPENSION OF THE CONTRACT
15	CLAIMS AND DISPUTES

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the

portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

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§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and

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completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

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§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

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

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the

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Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

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 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount

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for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or

encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

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§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

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§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment

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property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

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.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by

such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Additions and Deletions Report for AIA[®] Document A201[™] – 2007

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 10:01:04 on 01/05/2010.

There are no differences.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Heather Cobb, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 10:01:04 on 01/05/2010 under Order No. 3780522392_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2007 - General Conditions of the Contract for Construction, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Signed)

(Title)

(Dated)

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 Grosse Pointe South High School Track Reconstruction.
- 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.

SECTION 00 7300
SUPPLEMENTARY CONDITIONS

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:

Grosse Pointe Public School System
389 St. Clair Avenue
Grosse Pointe, MI 48230

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 a fax transmittal and the original will be sent 1st Class Mail.

SECTION 00 7300
SUPPLEMENTARY CONDITIONS

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.

SECTION 00 7300
SUPPLEMENTARY CONDITIONS

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.

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SUPPLEMENTARY CONDITIONS

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:

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SUPPLEMENTARY CONDITIONS

- 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

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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. 10 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.

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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 15th 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. Payment by the Owner will be made on or before the 20th day of the following month.

- 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.

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SUPPLEMENTARY CONDITIONS

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."

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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	\$	500,000
B.	Disease-Policy Limit	\$	500,000
C.	Disease-Each Employee	\$	500,000

2. Comprehensive General Liability

A.	Bodily Injury		
	Each Person	\$	500,000
	Each Occurrence	\$	1,000,000
B.	Personal Injury		
	Each Person	\$	500,000
	Aggregate	\$	2,000,000
	General Aggregate	\$	2,000,000
C.	Property Damage		
	Each Person	\$	500,000
	Each Occurrence	\$	500,000
	Aggregate	\$	2,000,000

3. Automobile Liability

A.	Bodily Injury		
	Each Person	\$	500,000
	Each Occurrence	\$	500,000
B.	Property Damage		
	Each Occurrence	\$	100,000

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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: Grosse Pointe Public Schools, its elected or appointed officials, employees and volunteers 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."

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SUPPLEMENTARY CONDITIONS

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.

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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

Grosse Pointe 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

SECTION 00 7300
SUPPLEMENTARY CONDITIONS

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SECTION 00 7400
AGREEMENT BETWEEN OWNER AND CONTRACTOR

The "Agreement between Owner and Contractor", AIA Document A105, Fifteenth Edition, 2017 is attached after this section.

END OF SECTION 00 7400

DRAFT AIA® Document A105™ – 2017

Standard Short Form of Agreement Between Owner and Contractor

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«Grosse Pointe Public Schools»«»
«389 St. Clair Avenue
Grosse Pointe, MI 48230»
«»
«»

and the Contractor:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location and detailed description)

«Grosse Pointe South Track 2019»
«Grosse Pointe South High School
11 Grosse Pointe Blvd
Grosse Pointe Farms, MI 48236»
«Reconstruction of track; new surface on track and D-zones.»

The Architect:
(Name, legal status, address and other information)

«Foresite Design, Inc.»«»
«3269 Coolidge Highway
Berkley, MI 48072»
«Telephone Number: 248-547-7757»
«»

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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ARTICLE 1 THE CONTRACT DOCUMENTS

The Contractor shall complete the Work described in the Contract Documents for the Project. The Contract Documents consist of

- .1 this Agreement signed by the Owner and Contractor;
- .2 the drawings and specifications prepared by the Architect, dated « », and enumerated as follows:

Drawings:

Number	Title	Date

Specifications:

Section	Title	Pages

- .3 addenda prepared by the Architect as follows:

Number	Date	Pages

- .4 written orders for changes in the Work, pursuant to Article 10, issued after execution of this Agreement; and

.5 other documents, if any, identified as follows:

<< >>

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The Contract Time is the number of calendar days available to the Contractor to substantially complete the Work.

§ 2.2 Date of Commencement:

Unless otherwise set forth below, the date of commencement shall be the date of this Agreement.

(Insert the date of commencement if other than the date of this Agreement.)

<< >>

§ 2.3 Substantial Completion:

Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion, as defined in Section 12.5, of the entire Work:

(Check the appropriate box and complete the necessary information.)

[<< >>] Not later than << >> (<< >>) calendar days from the date of commencement.

[<< >>] By the following date: << >>

ARTICLE 3 CONTRACT SUM

§ 3.1 The Contract Sum shall include all items and services necessary for the proper execution and completion of the Work. Subject to additions and deductions in accordance with Article 10, the Contract Sum is:

<< >> (\$ << >>)

§ 3.2 For purposes of payment, the Contract Sum includes the following values related to portions of the Work:
(Itemize the Contract Sum among the major portions of the Work.)

Portion of the Work

Value

§ 3.3 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and hereby accepted by the Owner:

(Identify the accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

<< >>

§ 3.4 Allowances, if any, included in the Contract Sum are as follows:

(Identify each allowance.)

Item

Price

§ 3.5 Unit prices, if any, are as follows:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item

Units and Limitations

Price per Unit (\$0.00)

ARTICLE 4 PAYMENTS

§ 4.1 Based on Contractor's Applications for Payment certified by the Architect, the Owner shall pay the Contractor, in accordance with Article 12, as follows:

(Insert below timing for payments and provisions for withholding retainage, if any.)

<< >>

§ 4.2 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate below, or in the absence thereof, at the legal rate prevailing at the place of the Project.

(Insert rate of interest agreed upon, if any.)

<< >> % << >>

ARTICLE 5 INSURANCE

§ 5.1 The Contractor shall maintain the following types and limits of insurance until the expiration of the period for correction of Work as set forth in Section 14.2, subject to the terms and conditions set forth in this Section 5.1:

§ 5.1.1 Commercial General Liability insurance for the Project, written on an occurrence form, with policy limits of not less than « One Million Dollars » (\$ « 1,000,000 ») each occurrence, « Two Million Dollars » (\$ « 2,000,000 ») general aggregate, and « Two Million Dollars » (\$ « 2,000,000 ») aggregate for products-completed operations hazard.

§ 5.1.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than « Five Hundred Thousand Dollars » (\$ « 500,000 ») per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 5.1.3 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided that such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 5.1.1 and 5.1.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 5.1.4 Workers' Compensation at statutory limits.

§ 5.1.5 Employers' Liability with policy limits not less than « Five Hundred Thousand Dollars » (\$ « 500,000 ») each accident, « Five Hundred Thousand Dollars » (\$ « 500,000 ») each employee, and « Five Hundred Thousand Dollars » (\$ « 500,000 ») policy limit.

§ 5.1.6 The Contractor shall provide builder's risk insurance to cover the total value of the entire Project on a replacement cost basis.

§ 5.1.7 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

ALL SUBCONTRACTORS MUST
CARRY THE SAME INSURANCE
LIMITS AS PRIMARY CONTRACTOR

Limits

As stated above

§ 5.2 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance and shall provide property insurance to cover the value of the Owner's property. The Contractor is entitled to receive an increase in the Contract Sum equal to the insurance proceeds related to a loss for damage to the Work covered by the Owner's property insurance.

§ 5.3 The Contractor shall obtain an endorsement to its Commercial General Liability insurance policy to provide coverage for the Contractor's obligations under Section 8.12.

§ 5.4 Prior to commencement of the Work, each party shall provide certificates of insurance showing their respective coverages.

§ 5.5 Unless specifically precluded by the Owner's property insurance policy, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, suppliers, agents, and employees, each of the other; and (2) the Architect, Architect's consultants, and any of their agents and employees, for damages caused by fire or other causes of loss to the extent those losses are covered by property insurance or other insurance applicable to the Project, except such rights as they have to the proceeds of such insurance.

ARTICLE 6 GENERAL PROVISIONS

§ 6.1 The Contract

The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a written modification in accordance with Article 10.

§ 6.2 The Work

The term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations.

§ 6.3 Intent

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

§ 6.4 Ownership and Use of Architect's Drawings, Specifications and Other Documents

Documents prepared by the Architect are instruments of the Architect's service for use solely with respect to this Project. The Architect shall retain all common law, statutory, and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. The instruments of service may not be used for other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Architect.

§ 6.5 Electronic Notice

Written notice under this Agreement may be given by one party to the other by email as set forth below.
(Insert requirements for delivering written notice by email such as name, title, and email address of the recipient, and whether and how the system will be required to generate a read receipt for the transmission.)

<< >>

ARTICLE 7 OWNER

§ 7.1 Information and Services Required of the Owner

§ 7.1.1 If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site.

§ 7.1.2 Except for permits and fees under Section 8.7.1 that are the responsibility of the Contractor, the Owner shall obtain and pay for other necessary approvals, easements, assessments, and charges.

§ 7.1.3 Prior to commencement of the Work, at the written request of the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence.

§ 7.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the Contract Documents, the Owner may direct the Contractor in writing to stop the Work until the correction is made.

§ 7.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, correct

such deficiencies. In such case, the Architect may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of correction, provided the actions of the Owner and amounts charged to the Contractor were approved by the Architect.

§ 7.4 Owner's Right to Perform Construction and to Award Separate Contracts

§ 7.4.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project.

§ 7.4.2 The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner.

ARTICLE 8 CONTRACTOR

§ 8.1 Review of Contract Documents and Field Conditions by Contractor

§ 8.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 8.1.2 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and verify field conditions; (2) carefully compare this and other information known to the Contractor with the Contract Documents; and (3) promptly report errors, inconsistencies, or omissions discovered to the Architect.

§ 8.2 Contractor's Construction Schedule

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work.

§ 8.3 Supervision and Construction Procedures

§ 8.3.1 The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work.

§ 8.3.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner, through the Architect, the names of subcontractors or suppliers for each portion of the Work. The Contractor shall not contract with any subcontractor or supplier to whom the Owner or Architect have made a timely and reasonable objection.

§ 8.4 Labor and Materials

§ 8.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work.

§ 8.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 8.5 Warranty

The Contractor warrants to the Owner and Architect that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 12.5.

§ 8.6 Taxes

The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed.

§ 8.7 Permits, Fees and Notices

§ 8.7.1 The Contractor shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work.

§ 8.7.2 The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the Architect in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

§ 8.8 Submittals

The Contractor shall promptly review, approve in writing, and submit to the Architect shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents.

§ 8.9 Use of Site

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents, and the Owner.

§ 8.10 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 8.11 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery, and surplus material; and shall properly dispose of waste materials.

§ 8.12 Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them, from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

ARTICLE 9 ARCHITECT

§ 9.1 The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 9.2 The Architect will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the Work.

§ 9.3 The Architect will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

§ 9.4 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor.

§ 9.5 The Architect has authority to reject Work that does not conform to the Contract Documents.

§ 9.6 The Architect will promptly review and approve or take appropriate action upon Contractor's submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 9.7 On written request from either the Owner or Contractor, the Architect will promptly interpret and decide matters concerning performance under, and requirements of, the Contract Documents.

§ 9.8 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from the Contract Documents, and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 9.9 The Architect's duties, responsibilities, and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

ARTICLE 10 CHANGES IN THE WORK

§ 10.1 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, and the Contract Sum and Contract Time shall be adjusted accordingly, in writing. If the Owner and Contractor cannot agree to a change in the Contract Sum, the Owner shall pay the Contractor its actual cost plus reasonable overhead and profit.

§ 10.2 The Architect may authorize or order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Such authorization or order shall be in writing and shall be binding on the Owner and Contractor. The Contractor shall proceed with such minor changes promptly.

§ 10.3 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to equitable adjustment.

ARTICLE 11 TIME

§ 11.1 Time limits stated in the Contract Documents are of the essence of the Contract.

§ 11.2 If the Contractor is delayed at any time in progress of the Work by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, or other causes beyond the Contractor's control, the Contract Time shall be subject to equitable adjustment.

§ 11.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party.

ARTICLE 12 PAYMENTS AND COMPLETION

§ 12.1 Contract Sum

The Contract Sum stated in this Agreement, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 12.2 Applications for Payment

§ 12.2.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for Work completed in accordance with the values stated in this Agreement. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or Architect may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and suppliers. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 12.2.2 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or other encumbrances adverse to the Owner's interests.

§ 12.3 Certificates for Payment

The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in part; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole. If certification or notification is not made within such seven day period, the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time and the Contract Sum shall be equitably adjusted due to the delay.

§ 12.4 Progress Payments

§ 12.4.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Contract Documents.

§ 12.4.2 The Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from the Owner, an amount determined in accordance with the terms of the applicable subcontracts and purchase orders.

§ 12.4.3 Neither the Owner nor the Architect shall have responsibility for payments to a subcontractor or supplier.

§ 12.4.4 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the requirements of the Contract Documents.

§ 12.5 Substantial Completion

§ 12.5.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the Architect and the Architect will make an inspection to determine whether the Work is substantially complete. When the Architect determines that the Work is substantially complete, the Architect shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 12.6 Final Completion and Final Payment

§ 12.6.1 Upon receipt of a final Application for Payment, the Architect will inspect the Work. When the Architect finds the Work acceptable and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment.

§ 12.6.2 Final payment shall not become due until the Contractor submits to the Architect releases and waivers of liens, and data establishing payment or satisfaction of obligations, such as receipts, claims, security interests, or encumbrances arising out of the Contract.

§ 12.6.3 Acceptance of final payment by the Contractor, a subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 13 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work and other persons who may be affected thereby, the Work and materials and equipment to be incorporated therein, and other property at the site or adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

ARTICLE 14 CORRECTION OF WORK

§ 14.1 The Contractor shall promptly correct Work rejected by the Architect as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 14.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of one year after Substantial Completion, correct work not conforming to the requirements of the Contract Documents.

§ 14.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 7.3.

ARTICLE 15 MISCELLANEOUS PROVISIONS

§ 15.1 Assignment of Contract

Neither party to the Contract shall assign the Contract as a whole without written consent of the other.

§ 15.2 Tests and Inspections

§ 15.2.1 At the appropriate times, the Contractor shall arrange and bear cost of tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.

§ 15.2.2 If the Architect requires additional testing, the Contractor shall perform those tests.

§ 15.2.3 The Owner shall bear cost of tests, inspections, or approvals that do not become requirements until after the Contract is executed. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 15.3 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules.

ARTICLE 16 TERMINATION OF THE CONTRACT

§ 16.1 Termination by the Contractor

If the Work is stopped under Section 12.3 for a period of 14 days through no fault of the Contractor, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed including reasonable overhead and profit, and costs incurred by reason of such termination.

§ 16.2 Termination by the Owner for Cause

§ 16.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 is otherwise guilty of substantial breach of a provision of the Contract Documents.

§ 16.2.2 When any of the above reasons exist, the Owner, after consultation with the Architect, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may

- .1 take possession of the site and of all materials thereon owned by the Contractor, and
- .2 finish the Work by whatever reasonable method the Owner may deem expedient.

§ 16.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 16.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 16.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

§ 16.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 17 OTHER TERMS AND CONDITIONS

(Insert any other terms or conditions below.)

« »

This Agreement entered into as of the day and year first written above.

(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)

« »

OWNER *(Signature)*

«Richard Van Gorder, »«Manager of Buildings and Grounds»

(Printed name and title)

CONTRACTOR *(Signature)*

« »« »

(Printed name and title)

LICENSE NO.:

JURISDICTION:



FILE TRANSFER AGREEMENT

Project:

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.

Because information presented on the electronic files can be modified, unintentionally or otherwise, we reserve the right to remove all indicia of ownership and/or involvement from each electronic display.

Data contained on these electronic files are part of our instruments or service and shall not be used by you or anyone else receiving these data through or from you for any purpose other than as a convenience in preparing your work for the above referenced project. Any other use or reuse by you or by others will be at your sole risk and without liability or legal exposure to us. You agree to make no claim and thereby waive, to the fullest extent permitted by law, any claim or

cause of action of any nature against us, our officers, directors, employees, agents or sub-consultants that may arise out of or in connection with your use of the electronic files.

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.

Computer Viruses

Computer viruses are a real and serious threat to all computer users. FDI takes steps to detect and eliminate computer viruses from our system and the diskettes that are made available to our clients and colleagues. Since computer viruses can attach at any time, FDI strongly urges its clients and colleagues to back-up their important data frequently and to take steps to detect viruses from any of the files that we make available. Even though FDI takes prudent steps to prevent the attachment of computer viruses to its electronic media, we cannot guarantee this.

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.

Service Fee

A service fee of \$ _____ shall be remitted to Foresite Design, Inc. prior to delivery of the electronic files.

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

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.

SECTION 01 2300
ALTERNATES

- 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

3.1 SCHEDULE OF ALTERNATES

- A. Alternate A-1 (SITE WORK): Provide and install acrylic surface material to North D-zone.
- B. Alternate B-1 (TRACK SURFACE): Provide and install acrylic surface material to North D-zone.

END OF SECTION 01 2300

SECTION 01 2619
CLARIFICATION REQUEST

**DUE FIVE DAYS PRIOR TO BID DUE DATE
NO LATE CLARIFICATION REQUESTS WILL BE ACCEPTED.**

DATE: _____

Project: TRACK RECONSTRUCTION 2019

	Proposal A – SITE WORK
	Proposal B – TRACK SURFACE

To: Foresite Design Inc.
3269 Coolidge Hwy.
Berkley, MI 48072
Office: (248) 547-7757

FROM:

Company Name

Contact Name

Address

City, State Zip

Phone # Fax #

CLARIFICATION:

1. _____

2. _____

3. _____

RESPONSE:

1. _____

2. _____

3. _____

SECTION 01 2619
CLARIFICATION REQUEST

**DUE FIVE DAYS PRIOR TO BID DUE DATE
NO LATE CLARIFICATION REQUESTS WILL BE ACCEPTED.**

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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:
 - Loss Control Program
 - Hazard Communication Program
 - Respiratory Protection Program
 - Necessary Forms Needed to Adequately Perform Job

END OF SECTION 01 3523

SECTION 01 3523
SAFETY REQUIREMENTS

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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.

END OF SECTION 01 4100

SECTION 01 4100
REGULATORY REQUIREMENTS

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SECTION 01 56 00
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

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.

SECTION 01 56 00
CLEANING

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 4100

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.

SECTION 01 7301
FIELD ENGINEERING

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 Applicable

PART 3 – EXECUTION – Not Applicable

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.

END OF SECTION 01 7700

SECTION 01 7700
PROJECT CLOSEOUT

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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. Size: 8-1/2" x 11"
 - 2. Paper: 20 pound minimum, white for typed pages
 - 3. Text: Manufacturer's printed data, or neatly typewritten
 - 4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text
 - b. Fold larger drawings to the size of the text pages
 - 5. Provide fly-leaf for each separate product, or each piece of equipment.
 - a. Provide typed description of product, and major component parts of equipment.
 - b. Provide indexed tab.
 - 6. 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

SECTION 01 7823
OPERATING, MAINTENANCE AND WARRANTY DATA

1.4 CONTENT OF MANUAL

- A. Arrange neatly typewritten table of contents for each volume, 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.

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.

SECTION 01 7839
PROJECT RECORD DOCUMENTS

- 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

END OF SECTION 01 7839

SECTION 02 3208
SOIL BORINGS

I. Disclaimer

- A. This information is not part of the contract documents and is being made available to bidders with the understanding that it represents the best available information regarding existing conditions and that no warranty or guaranty of such existing conditions is intended.
- B. The Owner and the Landscape Architect do not warrant conditions below the depths of the boring or that strata logged are necessary typical of the entire site, or that proportions of the various materials will not vary from those indicated.

II. On-Site Investigation

- A. Contractor shall visit site prior to bidding acquainting himself with site conditions
- B. Prior to bidding, Contractor may make his own sub-surface investigations to satisfy himself with site and sub-surface conditions, as his basis for bidding.
- C. Rock and debris excavation will be incidental with no direct compensation being made.
- D. The Contractor must contact and clear arrangements with the Owner prior to entering the premises.

III. Cores of Existing Asphalt

Coring data will not be guaranteed by either Owner or the Engineer. There is also no guarantee that the conditions revealed at the actual boring locations will be continuous over the entire site. The information is correct only for the time and place taken and is offered as general information only.

Cores of existing bituminous asphalt have been taken with the following results:

END OF SECTION 02 3208

Testing Engineers & Consultants, Inc.

Grosse Pointe Public School System
c/o Foresite Design, Inc.
3269 Coolidge Hwy.
Berkley, MI 48072

GEOTECHNICAL INVESTIGATION
FOR
ATHLETIC FIELD IMPROVEMENTS - TRACK
GROSSE POINTE SOUTH HIGH SCHOOL
11 GROSSE POINTE BOULEVARD
GROSSE POINTE FARMS, MICHIGAN

TEC Report: 59465

By:

Testing Engineers & Consultants, Inc.
1343 Rochester Road
PO Box 249
Troy, Michigan 48099-0249
(248) 588-6200

December 27, 2018



Testing Engineers & Consultants, Inc.

1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249
(248) 588-6200 or (313) T-E-S-T-I-N-G • Fax (248) 588-6232
www.testingengineers.com

Engineering Client Success

TEC Report: 59465

Date Issued: December 27, 2018

Grosse Pointe Public School System
c/o Mr. Bruce Lemons
Foresite Design, Inc.
3269 Coolidge Hwy.
Berkley, MI 48072

Re: Geotechnical Investigation for
Athletic Field Improvements – Track
Grosse Pointe South High School
11 Grosse Pointe Boulevard
Grosse Pointe Farms, MI

Dear Mr. Lemons:

Please find enclosed the results of a geotechnical investigation performed at the above referenced site. This geotechnical report presents our field and laboratory results; engineering analysis; and our recommendations for new pavement design as well as important construction considerations.

As you may know, Testing Engineers & Consultants, Inc. (TEC) has fifty-two years of experience in Quality Control Testing and Construction Inspection. We would be pleased to provide these services on this project.

Should you have any questions regarding this report, please let us know. It has been a pleasure to be of service to you.

Respectfully submitted,
TESTING ENGINEERS & CONSULTANTS, INC.

A handwritten signature in blue ink, appearing to read "C. Suhan", is positioned above the printed name of the signatory.

Carey J. Suhan, PE
Vice President, Geotechnical
& Environmental Services

CJS/kd
Enclosure

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All services undertaken are subject to the following policy. Reports are submitted for exclusive use of the clients to whom they are addressed. Their significance is subject to the adequacy and representative character of the samples and the comprehensiveness of the tests, examinations and surveys made. No quotation from reports or use of TEC's name is permitted except as expressly authorized by TEC in writing.

CONSULTING ENGINEERS & FULL-SERVICE PROFESSIONAL TESTING AND INSPECTION
OFFICES IN ANN ARBOR, DETROIT, AND TROY
FOUNDED IN 1966



Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

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APPENDIX

TEST BORING LOCATION PLAN

LOGS OF TEST BORINGS

SIEVE ANALYSIS RESULTS

GENERAL NOTES FOR SOIL CLASSIFICATION

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation for the proposed track improvements at Grosse Pointe South High School at 11 Grosse Pointe Boulevard in Grosse Pointe Farms, MI. Authorization to perform this investigation was given by Mr. Richard VanGorder, Director of Buildings and Grounds for the Grosse Pointe Public School System, in a signed copy of TEC Proposal 060-18-355 on October 29, 2018.

The purpose of this investigation was to obtain information necessary to determine basic engineering properties of soils at the site through a series of test borings and laboratory tests performed on the soil samples obtained during the field investigation. This information has been evaluated to provide the general recommendations for site development preparations, pavement designs and other geotechnical information.

2.0 FIELD INVESTIGATION

Six test borings were drilled on the site at the locations shown on the Test Boring Location Plan. The locations are accurate to within a short distance of the locations shown on the location plan included in the appendix. The test borings were drilled on November 28, 2018 with truck-mounted auger equipment to a depth of 5 feet.

Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively. These procedures specify that a standard 2-inch O.D. split-barrel sampler be driven by a 140-pound hammer with a free fall of 30 inches. The number of hammer blows required to drive the split-barrel sampler through three successive 6-inch increments is recorded on the Test Boring Log. The first 6-inch increment is used for setting the sampler firmly in the soil and the sum of the hammer blows for the second and third increments is referred to as the "Standard Penetration Index" (N). N values were obtained with an automatic trip hammer.

From the standard penetration test a soil sample is recovered in the liner sampler tubes that are located inside the split-barrel sampler. Upon recovery of a soil sample, the liner tubes are removed from the split-barrel sampler and placed in a container which is sealed to minimize moisture losses during transportation to the laboratory. Standard penetration tests are usually made at depths of 2 ½, 5, 7 ½ and 10 feet and at 5-foot depth intervals thereafter. These parameters may vary for a given project depending on the nature of the subsoils and the geotechnical information required.

In addition, pavement cores were taken at the six boring locations. The cores were obtained with a diamond tipped core barrel.

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

3.0 LABORATORY TESTING

The laboratory testing consisted of determining the unconfined compressive strength, the natural bulk density and the natural moisture content of the soil samples recovered in the liner sampler tubes. In the unconfined compression tests, the compressive strength of the soil is determined by axially loading a soil sample until failure is observed or 15% strain, whichever occurs first. The above referenced test data are recorded on the boring logs. Some test results may deviate from the norm because of variations in texture, imperfect samples, presence of pebbles and/or sand streaks, etc. The results are still reported although they may not be relevant.

The particle size distribution of one granular soil sample was also determined. The distribution provides soil classification information, subgrade support parameters and estimates of the permeability and permeability-related behavior of the granular soils. The results are included in the appendix.

In addition to the above tests, the Atterberg Limits of one fine-grained soil sample were determined. The Atterberg Limits are water contents at which cohesive fine-grained soils change behavior. They are used for soil classification, and they have been correlated to several important engineering properties of a soil. As such, they can be used to obtain inexpensive estimates of fine-grained soil behavior. The Atterberg Limits are included on Boring No. 4 in the appendix.

Samples taken in the field are retained in our laboratory for 60 days and are then destroyed unless special disposition is requested by the client. Samples retained over a long period of time are subject to moisture loss and are then no longer representative of the conditions initially encountered.

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 Subsoil Conditions

The soil conditions encountered in the borings are presented on the individual boring logs. Each log presents the soil types encountered at that location as well as laboratory test data, ground water data, and other pertinent information. Descriptions of the various soil consistencies, relative densities and particle sizes are given in the Appendix. Definitions of the terms and symbols utilized in this report may be found in ASTM D653.

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Grosse Pointe Public School System
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December 27, 2018

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4.1 Subsoil Conditions (Cont'd)

The pavement surfaces were covered with hot mix asphalt (HMA) that varied in thickness from 3 to 5 ½ inches.

The pavement was underlain by sand and crushed gravel fill that appeared to be an aggregate base resembling MDOT 21AA aggregate. The aggregate fill varied in thickness from 1 inch to 7 inches. Additional fill was encountered at Boring Nos. 3 and 6. The fill at Boring No. 3 consisted of firm dark gray clay with some silt and crushed gravel that extended to a depth of 3 feet below existing pavement surfaces. The fill at Boring No. 6 consisted of medium compact crushed asphalt that extended to a depth of 2.7 feet.

At Borings Nos. 1, 2 and 5, the underlying native soil was medium compact silty fine sand that extended to a depth of 3 feet below existing pavement surfaces. The silty sand was underlain by loose to very loose sand that extended to the terminal depth of the borings. The very loose sand was encountered at Boring No. 1 at a depth of 3 feet.

The underlying native soil at Boring No. 3 as medium compact sand that extended to the terminal depth of the boring. At Boring Nos. 4 and 6, the underlying native soil was stiff clay with some silt that extended to the terminal depth of the boring. Atterberg Limits tests indicate the clay is medium plastic.

Standard penetration values range from 3 to 23 blows per foot with unconfined compressive strengths of 5,930 and 6,180 pounds per square foot (psf). Bulk densities range from 111 to 143 pounds per cubic foot with moisture contents of 8 to 28 percent of the dry weight of the soil.

4.2 Ground Water Observations

Water level readings were taken in the bore holes during and after the completion of drilling. These observations are noted on the respective Test Boring Logs. Water was first encountered during drilling at Boring No. 2 at a depth of 4 ft. 9 in. below existing pavement surfaces. After completion of drilling and removal of the augers, water was measured at a depth of 3 ft. 2 in. No water was encountered in the other borings either during drilling or after completion of drilling.

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

5.0 ANALYSIS AND RECOMMENDATIONS

5.1 Proposed Project

The proposed project is to consist of improvements to the track that will be scheduled for Summer 2019. We understand that emergency repairs began in October 2018. Total reconstruction of the track is being considered.

5.2 Ground Water Conditions

The position of water levels found in test borings may vary somewhat depending on seasonal precipitation. At the level encountered in the one boring, it should present no unusual problems for the proposed improvements. Any seepage water encountered during construction should be controllable by direct pumping from excavations.

5.3 Recommended Earthwork Operations

Within the limits of the track area, following removal of the pavement, the subgrade should be rolled with a vibrating roller to consolidate any loose sand. This should be followed by a proofroll to identify soft or yielding areas. It may be possible to stabilize soft areas with crushed stone or concrete. Soft spots that cannot be stabilized should be removed and replaced with compacted engineered fill.

The exposed subgrade is generally medium compact silty sand, firm clayey fill or stiff clay. The moisture contents of the silty sand range from 11 to 17 percent. The moisture content of the clay at Boring No. 4 is 27 percent which is well above the anticipated optimum moisture content. Where the moisture contents are high, which is the case at Boring Nos. 1 and 4, it is expected that the subgrade will fail a proof roll. If work is performed in a dry period in the summer it may be possible to disk, dry and then re-compact the subgrade. Since this is highly weather dependent, we recommend budgeting about one foot of undercut and replacement with crushed stone.

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

5.3 Recommended Earthwork Operations (Cont'd)

Engineered backfill required for construction excavations or fill required to achieve desired grades should preferably consist of clean and well graded granular soils. The on-site granular material generally has a high silt content and is therefore, not recommended for use as engineered fill. Fill should be placed in uniform layers not more than 9 inches in thickness with the soils in each layer compacted to a minimum of 95% of the maximum density as determined by ASTM D1557. Fill should be at approximately the optimum moisture content during placement and compaction. Furthermore, frozen material must not be used as fill and fill should not be placed on frozen ground.

5.4 Pavement Recommendations

Since total reconstruction is being considered and because the existing aggregate base thickness is less than 6 inches at five locations, we recommend that total reconstruction of the track be considered.

It should be understood that all fill should be placed and compacted to at least 95% of ASTM D-1557 proctor value. The following pavement cross section with an appropriate rubberized surface treatment could be used over the prepared subgrade.

- 1 ½ inch bituminous concrete (MDOT 36A)
- 1 ½ inch bituminous concrete (MDOT 13A or 1100L)
- 6 inches untreated aggregate base (MDOT 21AA)

The pavement should be properly crowned and shaped in order to provide effective surface drainage and prevent water ponding. A 1.5 percent slope is recommended.

The pavement recommendations presented above are intended to provide a serviceable pavement for an extended period of time. However, all pavements show deterioration with time and require regular maintenance such as occasional repairs of cracks and pot holes. The need for such maintenance efforts is not necessarily indicative of premature pavement failure. The serviceable life of the pavement can be substantially reduced if maintenance and minor repair is not performed in a timely manner.

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

6.0 DESIGN REVIEW AND FIELD MONITORING

The evaluations and recommendations presented in this report relative to site preparation and pavements have been formulated on the basis of assumed and provided data relating to the location, type and finished grades for the proposed project and adjacent areas. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsoil conditions.

When the plans are finalized, a consultation should be arranged with us for a review to verify that the evaluations and recommendations have been properly interpreted.

Soil conditions at the site could vary from those generalized on the basis of test borings made at specific locations. It is therefore recommended that Testing Engineers & Consultants, Inc. be retained to provide soil engineering services during the site preparation, and pavement phases of the proposed project. This is to observe compliance with the design concepts, specifications and recommendations. Also, this provides opportunity for design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.



Gary E. Putt, P.E.
Senior Project Engineer



Carey J. Suhan, P.E.
Vice President, Geotechnical
& Environmental Services

GEP/CJS/kd
I:\gs\Job Files\Boring Master.doc

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

APPENDIX

Test Boring Location Plan

Logs Of Test Borings

Sieve Analysis Results

General Notes For Soil Classification

1

REFERENCES

Appendix

1000

**GROSSE POINTE
PUBLIC SCHOOLS**

380 ST. CLAIR
GROSSE POINTE, MI 48230



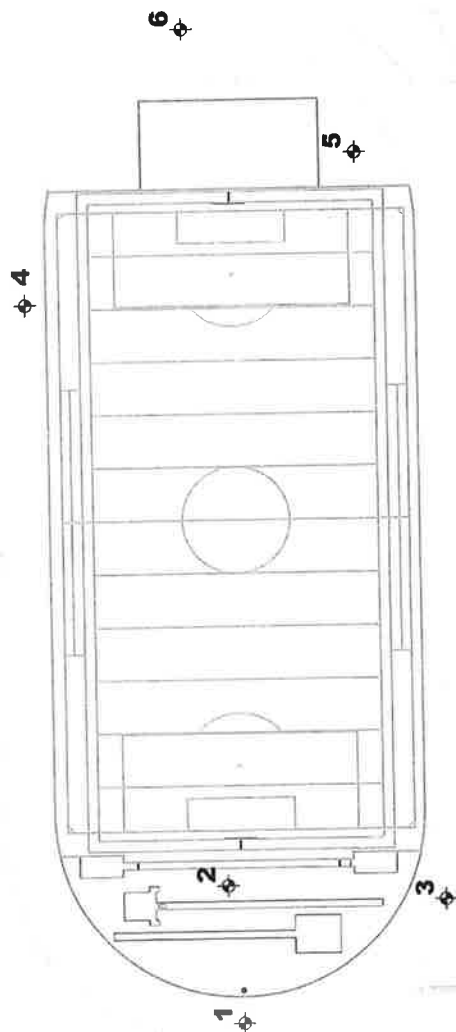
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SEE YOU

SOIL BORING LOCATIONS

DATE	8/8/2016	SCALE	1"=30'-0"
DRAWN BY	WHL	CHECK BY	WHL

L1.01





Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 1

Job No.: 59465

Project: Athletic Field Improvements, Grosse Pointe South High School

Client: Foresite Design, Inc.

Location: Grosse Pointe Farms, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 11/28/2018

Ground Surface Elevation:

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	4 7 6	.38 .5	ASPHALT (4 1/2")	16.8	111	
			3	Crushed Sand & Gravel-FILL (1 1/2")			
	LS	2 2 1	5	Medium Compact Moist Brown Silty Fine SAND	18.3	121	
5.0				Very Loose Moist Brown SAND			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" J.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 1



Testing Engineers & Consultants, Inc.

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 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 2 **Job No.:** 59465

Client: Foresite Design, Inc.

Type of Rig: Truck

Drilling Method: Solid Stem Augers

Ground Surface Elevation:

Project: Athletic Field Improvements, Grosse Pointe South High School

Location: Grosse Pointe Farms, Michigan

Drilled By: I. Mickle

Started: 11/28/2018

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	11 13 10	.25 .83	ASPHALT (3")	10.8	138	
			3	Crushed Sand & Gravel-FILL (7")			
5.0	LS	4 4 3	5	Medium Compact Moist Brown Silty Fine SAND With Black Seams	20.3	127	
				Loose Moist To Wet Brown SAND			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: 4'9"

At Completion: 3'2"

Boring No. 2



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 3

Job No.: 59465

Project: Athletic Field Improvements, Grosse Pointe South High School

Client: Foresite Design, Inc.

Location: Grosse Pointe Farms, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 11/28/2018

Ground Surface Elevation:

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	6 5 5	.42 .5	ASPHALT (5")	8.0	143	
			3	Crushed Sand and Gravel-FILL (1")			
5.0	LS	4 5 7	5	Firm Moist Dark Gray Clay With Some Silt, Crushed Gravel & Sand Seams-FILL	18.3	129	
				Medium Compact Moist Brown SAND			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" .D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 3



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

Boring No.: 4

Job No.: 59465

Project: Athletic Field Improvements, Grosse Pointe South High School

Client: Foresite Design, Inc.

Location: Grosse Pointe Farms, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 11/28/2018

Ground Surface Elevation:

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	4 6 6	.38 .83	ASPHALT (4 1/2")	26.9	117	6180
				Crushed Sand & Gravel-FILL (5 1/2")			
5.0	LS	4 5 7	5	Stiff Moist Brown Oxidized CLAY With Some Silt LL = 44, PL = 20, PI = 24	27.6	115	
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
SS - 2" Split Spoon Sample
LS - Sectional Liner Sample
ST - Shelby Tube Sample
AS - Auger Sample

w - H₂O, % of dry weight
d - Bulk Density, pcf
qu - Unconfined Compression, psf
DP - Direct Push
RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 4



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 5 **Job No.:** 59465

Client: Foresite Design, Inc.

Type of Rig: Truck

Drilling Method: Solid Stem Augers

Ground Surface Elevation:

Project: Athletic Field Improvements, Grosse Pointe South High School

Location: Grosse Pointe Farms, Michigan

Drilled By: I. Mickle

Started: 11/28/2018

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	9 10 10	27 27.75 3	ASPHALT (3 1/4") Crushed Sand & Gravel-FILL (5 3/4")	13.8	134	
5.0	LS	3 4 4	5	Medium Compact Moist Brown Silty Fine SAND Loose Moist Brown SAND	16.0	132	
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 5



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 6 **Job No.:** 59465

Client: Foresite Design, Inc.

Type of Rig: Truck

Drilling Method: Solid Stem Augers

Ground Surface Elevation:

Project: Athletic Field Improvements, Grosse Pointe South High School

Location: Grosse Pointe Farms, Michigan

Drilled By: I. Mickle

Started: 11/28/2018

Completed: 11/28/2018

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	6 6 4	.46 .67 2.7	ASPHALT (5 1/2") Crushed Sand & Gravel-FILL (2 1/2") Medium Compact Moist Crushed Asphalt-FILL	27.2	122	
5.0	LS	4 5 8	5	Stiff Moist Brown Oxidized CLAY With Some Silt Bottom of Borehole at 5'	27.5	118	5930
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 6



Testing Engineers and Consultants, Inc.

1343 Rochester Road PO Box 249 Troy, Michigan 48099-0249

248-588-6200 or 313 T-E-S-T-I-N-G

Fax 248-588-6232

MECHANICAL ANALYSIS TEST REPORT

PROJECT: Athletic Field Improvements

TEC REPORT NUMBER: 59465

LOCATION: Grosse Pointe South High School, Grosse Pointe Farms, MI

DATE: 11/30/2018

CLIENT: Foresite Design, Inc.

Material Description: Brown silty fine SAND

Date Sampled: 11/28/18

Sample Source / Depth: B-1 at 2.5'

Sampled By: Ian Mickle

Sample Location:

TEC Lab Sample Number:

Intended Use:

Remarks:

AGGREGATE ANALYSIS

Sieve No.	Total Weight Retained	Total Percent Retained	Total Percent Passing	Specification Range	SAMPLE DATA	
3"					Initial Sample Weight (g)	205.4
2-1/2"					Weight After Wash (g)	163.4
1-1/2"					Loss in Weight (g)	42.0
1"					Loss by Wash (%)	20.4%
3/4"						
1/2"						
3/8"		0.0	100.0			
#4	0.2	0.1	99.9			
#10	3.8	1.9	98.1			
#20	8.1	3.9	96.1			
#30	10.0	4.9	95.1			
#40	12.8	6.2	93.8			
#100	61.6	30.0	70.0			
#200	163.4	79.6	20.4			
Total Sample	205.4	100.0	0.0			

Test Method: ASTM C117/C136

AASHTO T11/T27

MTM 108/109

X

Remarks:

Respectfully Submitted:

Testing Engineers and Consultants, Inc.

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

SOIL DESCRIPTIONS

In order to provide uniformity throughout our projects, the following nomenclature has been adopted to describe soil characteristics:

CONSISTENCY AND RELATIVE DENSITY

COHESIVE SOILS			GRANULAR SOILS	
UNCONFINED COMPRESSIVE STRENGTH, PSF	"N" VALUES	CONSISTENCY	"N" VALUES	RELATIVE DENSITY
Below 500	0 – 2	Very Soft	0 – 4	Very Loose
500 – 1,000	3 – 4	Soft	5 – 10	Loose
1,000 – 2,000	5 – 8	Plastic	11 – 30	Medium Compact
2,000 – 4,000	9 – 15	Firm	31 – 50	Compact
4,000 – 8,000	16 – 30	Stiff	50+	Dense
8,000 – 16,000	31 – 50	Ex. Stiff		
Over 16,000	51+	Hard		

Material Types By Particle Size

BOULDERS

COBBLES

GRAVEL

COARSE SAND

MEDIUM SAND

ASTM D2487

Stones Over 12" In Diameter

Stones 3" To 12" In Diameter

#4 To 3" Diameter

#10 To #4 Sieves

#40 To #10 Sieves

Testing Engineers & Consultants, Inc.

Mr. Bruce Lemons
Grosse Pointe Public School System
c/o Foresite Design, Inc.
December 27, 2018

TEC Report: 59465

SOIL DESCRIPTIONS (Cont'd)

Material Types By Particle Size

FINE SAND

SILT

CLAY

PEAT

MARL

SWAMP BOTTOM DEPOSITS

ASTM D2487

#200 To #40 Sieves

Minus #200 Sieve Material,
Fairly Non-Plastic, Falls Below
"A"-Line

Minus #200 Sieve Material Plastic
Material That Has A Tendency To
Stick Together, Can Be Rolled
Into Fine Rods When Moistened;
Falls Above "A"-Line

Black Organic Material
Containing Partially Decayed
Vegetable Matter

Fresh Water Deposits Of Calcium
Carbonate, Often Containing
Percentages Of Peat, Clay
& Fine Sand

Mixtures Of Peat, Marl,
Vegetation & Fine Sand
Containing Large Amounts Of
Decayable Organic Material

SECTION 02 3208
SOIL BORINGS

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SECTION 02 4113
DEMOLITION

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 1000 Site Preparation
- C. Work includes demolition of the following items:
 - 1. All-Weather Track Surface
 - 2. Asphalt Paving at Track
 - 3. Existing Aggregate Base

1.2 SCOPE

- 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. 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.
- C. All other facilities and items that are indicated shall remain and be protected from construction damage. Areas damaged to known fault of the Contractor during construction shall be repaired or replaced at the expense of the Contractor. Lawn, paving, and concrete damaged during construction shall be restored to the condition which existed prior to commencement of Contractor's work.

PART 2 - PRODUCTS

N/A

PART 3 - EXECUTION

3.1 EXECUTION

- A. General
 - 1. Contractor shall not, for any reason, dump or leave any excavated materials on property.
 - 2. Contractor shall remove all items as indicated on drawings.
- B. Removal of Debris
 - 1. Promptly remove cleared debris from the site.
 - 2. Burning of debris on site is not permitted, unless permission is obtained from applicable regulatory authority.
 - 3. Obtain permission from applicable regulatory authority for disposal of debris to waste disposal site.

SECTION 02 4113
DEMOLITION

4. Upon the removal of fence posts and or footings, excavated areas shall be backfilled.
 - a. 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.
 - 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. Peastone is also acceptable backfill material.
 - c. Holes shall not be left open for more than 10 hours.

END OF SECTION 02 4113

SECTION 03 3010
PORTLAND CEMENT 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 32 1124 Aggregate Base Course

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials and equipment necessary to construct Portland cement concrete, turf anchor, concrete slabs, and foundations.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM A185 – Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete
 - b. ASTM A615 – Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
 - c. ASTM A82 – Standard Specification for Steel Wire, Plain for Concrete Reinforcement
 - d. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete
 - e. ASTM C192 – Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
 - f. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete
 - g. ASTM C309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
 - h. ASTM C31 – Standard Specification for Making and Curing Concrete Test Specimens in the Field
 - i. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
 - j. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
 - k. ASTM C94 – Standard Specification for Ready-Mixed Concrete
 - l. ASTM C171-69 (1975) – Standard Specification for Sheet Materials for Curing Concrete
 - m. ASTM C309-74 – Standard Specification for Liquid Membrane Forming Compound for Curing Concrete
 - n. ASTM D1751-73 – Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).

1.4 SUBMITTALS

- A. Test Reports: Reports of Portland cement concrete compression, yield and air content tests.
- B. Product Data: Submit data for propriety materials and items, including reinforcement and forming

SECTION 03 3010
PORTLAND CEMENT CONCRETE

accessories, admixtures, patching compounds, joint systems, curing compounds, and others to the Landscape Architect/Engineer.

C. Shop Drawings

1. Reinforcement: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures.

D. Samples: Submit samples of materials as specified and as otherwise requested by Landscape Architect, including names, sources and descriptions.

E. Material Certificates: Provide materials certificates in lieu of material laboratory test reports when permitted by Landscape Architect/Engineer. Material Certificates shall be signed by manufacturer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Portland Cement Concrete

1. Allowable concrete temperatures
 - a. Cold Weather: Maximum and minimum.
 - b. Hot Weather: Maximum concrete temperature: 90°F. (23°C.)
2. Do not place concrete during rain, sleet or snow.

1.6 PROTECTION

A. Protect concrete from traffic for minimum of seven (7) days.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Forms for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit. Minimum thickness for lumber form shall be 1" for boards and 5/8" for plywood.
- B. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.
- C. Forms for Slab-on-grade construction joints: Forms for slab-on-grade construction joints shall be prefabricated metal forms to produce tongue and groove joint. Form shall be approved by Architect/Engineer.
- D. Synthetic turf anchoring curb system: Forms shall be prefabricated metal forms to produce tongue and groove joint. Automated self propelled curb-and-gutter equipment shall not be allowed.

SECTION 03 3010
PORTLAND CEMENT CONCRETE

2.2 REINFORCING MATERIALS

- A. Reinforcing Bars: Grade 60, deformed
- B. Steel Wire: Plain, cold drawn, steel
- C. Welded Wire Fabric: Welded steel wire fabric, supplied in flat sheets.
- D. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable. Wood, brick and other devices shall not be acceptable.
 - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs. Concrete block or brick for support of reinforcement for slabs on grade shall be at least 2" wide, 3" long and of proper heights.

2.3 READY MIXED CONCRETE

- A. Cement type: type "1, 3500 psi" (28 day compressive strength)
- B. Admixtures:
 - 1. Air-entrained - 6%
 - 2. Fly Ash – Class C or F, except as modified herein.
 - a. Loss of ignition shall not exceed 4%.
 - b. Fine amount retained shall not exceed 25%.
 - c. Furnish documentation from an independent testing agency that fly-ash proposed for this project conforms to this specification."
- C. Slump: two (2) to three (3) inches.
- D. Minimum 564 lbs. of cement per cubic yard.
- E. No admixtures other than air-entraining without approval of the Architect.
- F. Water: Clean, fresh, potable and free of deleterious amounts of acids, alkalis, organic materials and/or dissolved or suspended materials of any kind.

2.4 CURING MATERIAL

- A. ASTM C171 4 MIL white opaque polyethylene type, or ASTM C309, type 2, white pigmented curing compound.

2.5 EXPANSION JOINT FILLERS

- A. Preformed non-extruding, resilient bituminous type, width as indicated on plans.

SECTION 03 3010
PORTLAND CEMENT CONCRETE

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify the earthwork is completed to correct line and grade. Notify the Owner/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°F. or below, provide suitable protection for concrete work to maintain a minimum concrete temperature of 50°F. for five (5) days (or 70°F. for three (3) days). After the protection period, do not let concrete cool more than 20°F. in each successive day.
- B. Hot weather: Employ suitable means to prevent too rapid drying. Shade fresh concrete as soon as possible without marring surface.
- C. Wet weather: Unless adequate protection is provided, do not place concrete in rain, sleet or snow.

3.3 INSTALLATION

- A. Contractor shall install the first section of sidewalk/slab/foundation as a quality sample in place. Upon approval of sample by 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.
 - 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 turf anchor every 10 feet. Sawcut depth shall be no more 3/4" deep and 1/8" in width.

SECTION 03 3010
PORTLAND CEMENT CONCRETE

8. Place top of expansion joint material flush with walk surface, unless noted otherwise on plans.
9. Place reinforcing materials.
10. Place concrete with mechanical vibrators.
11. Consolidate concrete with mechanical vibrators.
12. Round edges of walks and turf anchor at top with finishing tool, $\frac{1}{4}$ " to $\frac{3}{8}$ " radius. 1" radius for retaining wall.
13. Finished exposed walk surfaces with wood float followed by brushing with broom, smooth band of 12", unless otherwise shown on drawings.
14. Apply plastic sheeting or curing material and cure for seven (7) days.
15. Replace sections that pocket water.
16. Do not allow free drop of more than five (5) feet. Use elephant trunk when necessary.

3.4 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 C31 and ASTM C172. One set (three (3) cylinders) is required for each day's pour.
- C. Maintain two (2) cylinders at 50 to 70°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 Architect in duplicate.

3.5 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.

3.6 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.

3.7 CLEAN UP

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

END OF SECTION 03 3010

SECTION 03 3010
PORTLAND CEMENT CONCRETE

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SECTION 04 0513
MORTAR

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 33 4413 Manholes, Catch Basins and Similar Structures

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. General Requirements:
 - 1. Specific materials (brands, trade names, sources of supply, etc.) must be approved by Landscape Architect before any materials are ordered.
 - 2. Once approved, the same materials must be used throughout entire job.
- B. Portland Cement: ASTM C150, Type 1.
- C. Sand: ASTM C144. Must be washed.
- D. Lime: Hydrated lime for masonry purposes, ASTM C207, Type S.
- E. Pea Gravel: ASTM C33, size #8 (1/4" – 3/8")
- F. Water: Clean, fresh, potable and free of deleterious amounts of acids, alkalis, organic materials and/or dissolved or suspended materials of any kind.
- G. Mortar Coloring for Block: Mortar for block shall be natural mortar color.
- H. Other Admixtures: None, unless authorized by Landscape Architect prior to application.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Mortar shall be Portland cement-lime mortar mix proportioned with 1 part cement, 1 part lime, 6 cu.ft. sand (Type S Mix). Prepared mortar shall not be used.
- B. Mortar shall comply with requirements of ASTM C270 for Type S (1500 PSI compressive strength) mortar.
- C. Mortar shall contain minimum of 12% and maximum of 12% entrained air.
- D. Use all mortar within 2-1/2 hours after mixing.
- E. Mortar may be retempered as required, but in no case, if retempering is due to loss of water by hydration.

SECTION 04 0513
MORTAR

3.2 BOND PATTERN

- A. Lay concrete block in bond pattern with uniform coursing and jointing. Maintain vertical joints in line, with bond pattern carefully preserved. Joints shall be $3/8"$ ($\pm 1/8"$).
- B. Commence tooling joint when mortar is "thumb hard" and bonds to the course above without leaving hair cracks. Unless otherwise required, cut flush and concealed joints; tool interior and exterior exposed joints in block to a uniform compressed concave surface with an oversize jointing tool.
- C. Rake out mortar in preparation for application of caulking or sealants where shown.
- D. Joints that are not tight at time of tooling shall be raked out.
- E. Units disturbed after laying: Remove, clean, and relay in fresh mortar.

END OF SECTION 04 0513

SECTION 31 1000
SITE PREPARATION

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. The work under this Division consists of furnishing all labor, materials and equipment required for:
 - 1. Excavation and removals
 - 2. Asphalt, concrete, and base
 - 3. Trough Drains
 - 4. Track surface material and markings
- C. Bidders shall visit the site before submitting proposals and fully inform themselves as to the job and site conditions and other conditions under which the work of this section must be conducted. Verify themselves with the soil conditions at the site and familiarize themselves with the existing conditions that may be adjusted for this project. Submission of proposals implies that the Bidder has visited the site and is fully aware of these conditions.
- D. A pre-construction conference shall be held on the job site with all intended Contractors and Sub-contractors prior to the start of any work.

PART 2 - PRODUCTS

N/A

PART 3 - EXECUTION

3.1 SURVEY REQUIREMENTS

- A. The Contractor shall provide all survey work required to locate lines and grades for the construction of this project as herein specified and shown on drawings. The Contractor shall employ a registered engineer or surveyor for this layout.
- B. The Contractor upon entering the site and before any other work is underway, shall establish and set control points as indicated on the drawings and verify all finish grades.
- C. Existing survey as shown on the drawings is for information only and accurate at time taken. Contractor shall verify field conditions and notify the Landscape Architect or Owner before bid date of any discrepancies found in the survey or site conditions.
- D. The Contractor shall provide a complete "as built" survey of the site within the site limits, noting all grades, locations, etc. if final constructed project should vary from bid documents.
- E. All work under this section shall be coordinated with the Landscape Architect so as to verify their understanding of the plans and intended layout.

END OF SECTION 31 1000

SECTION 31 1000
SITE PREPARATION

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SECTION 31 2000
EARTHWORK

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.

1.2 QUALITY ASSURANCE

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

1.3 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.

1.4 SAFETY CODES AND STANDARDS

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

1.5 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.

1.8 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

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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.

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3.2 DRAINAGE SWALES

A. Swale Preparation

1. Contractor shall provide positive drainage swales along track edge to all structures shown. The high point of the swale between all structures shall be four inches (4") below proposed inside track elevation provided.

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.

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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.
 - 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 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.

<u>Aggregate Sieve Analysis</u>	<u>Percent Passing</u>
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.

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- 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.

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AGGREGATE BASE COURSE

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 1124
AGGREGATE BASE COURSE

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SECTION 32 1217
PLANT MIX BITUMINOUS ASPHALT PAVEMENT - TRACK

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 1124 Aggregate Base Course

1.2 SCOPE

- A. The work under this section of specifications shall include the furnishing of all labor, materials and equipment necessary to produce, place, spread, compact and finish to proper grade and cross section all plant mix bituminous pavement as shown on the drawings and as specified herein.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. Michigan Department of Transportation
 - a. All work done under this section of the specifications except as amended herein, shall be in accordance with current edition of the Michigan Department of Transportation Standard Specifications for Highway Construction, referred to hereafter as the MDOT Specifications.
 - 2. American Sports Builders Association (ASBA)
 - 3. National Federation of State High School Association (NFSHSA)
- B. Acceptability of the Work:
 - 1. Grade: Grade conformance tests shall be conducted on both the leveling and wearing courses. The entire surface shall have positive drainage, 1% lateral inclination and 0.1% in running direction.
 - 2. Planarity: After completion of the finish rolling operations on each course, the compacted surface shall be tested with a 10' straightedge. Measurements shall be made perpendicular to and across all mats at a distance not to exceed 25 feet. The maximum allowable planarity deviation within a pass shall be no more than 1/8" in 10' when measured in any direction.

1.4 SUBMITTALS

- A. Contractor shall submit mix designs for approval prior to placement which includes the exact proportions of bituminous material and mineral filler.

PART 2 - PRODUCTS**2.1 PLANT MIX**

- A. Leveling Course: The bituminous plant mix base course shall meet the requirements of MDOT Specification 7.10 - Plant Mix Bituminous Mixtures. The specific mix and cross sections are as follows.
 - 1. Thickness: Not less than 1 ½" inches when compacted

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PLANT MIX BITUMINOUS ASPHALT PAVEMENT - TRACK

2. Liquid Asphalt or Bitumen: 5% ~ 7% by weight
3. Asphalt Penetration or Type: (PG-58-28)
4. Aggregate Type: Crushed limestone or natural aggregate. Slag is unacceptable.
5. R.A.P. not exceed 10%
6. MDOT Mix: 1100 L - 20AA

<u>Aggregate Sieve Analysis</u>	<u>Percent Passing</u>
3/4"	100
1/2"	90-100
3/8"	65-95
No. 8	45-70
No. 30	20-45
No. 200	3-10

- B. Wearing Course: The bituminous plant mix base course shall meet the requirements of MDOT Specification 7.10 - Plant Mix Bituminous Mixtures. The specific mix and cross sections are as follows.

7. Thickness: Not less than 1 1/2" inches when compacted
8. Liquid Asphalt/Bitumen: 5% ~ 9% by weight ($\pm 1\frac{1}{2}\%$)
9. Asphalt Penetration or Type: (PG-58-28)
10. Aggregate Type: Crushed limestone or natural aggregate. Slag is unacceptable.
11. R.A.P. not exceed 10%
12. MDOT Mix: 1100 T - 36-A

<u>Aggregate Screen Size</u>	<u>Percent Passing</u>
1/2"	100
3/8"	92-100
No. 4	65-90
No. 8	55-75
No. 30	20-50
No. 200	4-10
Percent Crushed	60

PART 3 - EXECUTION

3.1 LIMITATIONS OF OPERATIONS

- A. Bituminous tack coat shall be applied only when surface and weather conditions are favorable.
- B. Bituminous plant mix shall be placed only during daylight hours when the temperature of a shaded portion of the aggregate base is 40°F. or higher and when the surface upon which it is to be constructed is dry.

3.2 SUB-GRADE AND BASE COURSE PREPARATION

- A. Prepare sub-grade and aggregate base course in accordance with these specifications. The subgrade shall be proof compacted loaded rubber tired equipment and witnessed by a representative of the design team. Areas that exhibit significant deflection or pumping shall be removed and replaced with compacted granular material. Aggregate base course shall be

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PLANT MIX BITUMINOUS ASPHALT PAVEMENT - TRACK

compacted to 95% of the maximum dry density as determined by ASTM D698 (AASHTO T99) procedures.

- B. At the time of applying bituminous material, the sub-grade surface shall be dry and clean, and all necessary repairs or reconditioning work shall have been completed.
- C. All objectionable foreign matter dirt, debris, etc. on the asphalt surface shall be removed and disposed by the Contractor.

3.3 BITUMINOUS TACK COAT

- A. Bituminous tack coat shall be applied at a rate of 0.10 gallons per square yard to existing bituminous surfaces and to successive plant mix surfaces. The tack coat may be waived by the Landscape Architect where successive plant mix courses are to be placed during one day's operation.
- B. The bituminous tack coat shall be applied uniformly to the clean, dry surface with a pressure distributor. Pools of bituminous material shall not be allowed to remain on the surface. The tack coat material shall be applied far enough ahead of the paving operation to allow it to cure before placing the subsequent plant mix bituminous material.

3.4 TEMPERATURE

- A. The temperature of bituminous material at the time of application shall be as approved by the Landscape Architect within the limits specified below.

SS-1h	105-180 degrees F.
Plant Mix	270-330 degrees F.

- B. The Landscape Architect may reject any load of plant mix bituminous material whose temperature is outside the temperature limits identified in 3.4A

3.5 PLACEMENT AND COMPACTION

- A. Paving operations shall provide a mat that is smooth, dense and of the proper thickness, slope and planarity. The plant mix bituminous material shall be compacted to 95% of the bulk density as determined by 50 blows-per -side Marshall procedures.
- B. The wearing course shall be placed such that the longitudinal joints of the wearing course are offset from that of the leveling course. Transverse joints shall be off set a minimum of 24".
- C. In placing each succeeding pass after the initial one, the screed of the paver should be set so that it overlaps the preceding pass by 2" and be sufficiently high so that when compacted, a smooth joint is produced. Prior to pinching the joint, the excess material shall be pushed onto the edge of the new pass with a lute. Excess material shall be removed from the pass.
- D. Deficient areas within the base course shall be corrected by sawcutting or milling to a depth equal to the thickness of the mat. Tack coat shall be applied to all edges and the pavement shall be replaced. Skin patching of the wearing course shall only be done with materials acceptable to the surfacing contractor.

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PLANT MIX BITUMINOUS ASPHALT PAVEMENT - TRACK

3.6 BITUMINOUS PAVING

- A. After completion and acceptance of the stone base course, install 1½" of leveling course and 1½" of wearing asphalt materials.
- B. Installation shall be in two (2) separate courses of 1½" and 1½" after compaction. Each asphalt lift shall be installed using automated laser grade control, self-propelled paving equipment, with dual-slope capabilities.
- C. Edge Shaping: While surface is being compacted and finished, trim edges of pavement for proper alignment, bevel edges of asphalt and compact thoroughly.
- D. The plant mix bituminous material shall be compacted to 95% of the bulk density as determined by 50 blows-per-side Marshall procedures.
- E. Plant mix shall be placed and compacted in accordance with 1990 MDOT Specification Section 4.00 - Plant Mix Bituminous Pavements. The initial contact with the hot mixture leveling course shall be made by the power or driving roll of the steel roller, weighing not less than six (6) tons. The finish surface of the leveling course shall not vary more than 1/4" in 10 feet when measured in any direction. The finish surface of the wearing course shall not vary more than 1/8" in 10 feet when measured in any direction.

3.7 TESTS AND SAMPLES

- A. At the direction of the Landscape Architect, the Contractor shall cut samples from any course or finished pavement not to exceed five (5) in number from any days run for tests of density and composition. These samples shall be taken at points designated by the Landscape Architect by sawing with a power driven masonry saw or diamond core drill. Samples shall be sufficiently large to meet the needs of the testing laboratory.
- B. The Owner will hire an independent testing laboratory to perform field density testing with a nuclear density gage to verify that the specified density requirements are being met.
- C. The surface from which samples are taken shall be restored by the Contractor not later than the next succeeding day of plant operation.
- D. All test results will be available to the Contractor.
- E. All testing samples will be paid for in accordance with these specifications.
- F. Asphalt paving contractor shall power-wash asphalt prior to installation of tennis court or all weather track surface. Contractor shall flood the asphalt to identify all potential "Bird Bath" areas prior to surface application. Bird bath areas will be repaired as directed by the Landscape Architect.

END OF SECTION 32 1217

SECTION 32 1724
TRACK MARKINGS

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. Verify all-weather surface dimensions on plans, details, and field prior to track surface installation.

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials, equipment, transportation, and services necessary to complete the striping of track and field event markings.
- B. The track shall be marked for 8-42" lanes and include all event markings as recommended by National Federation of State High School Athletic Association and the Michigan High School Athletic Association.

1.3 SUBMITTALS

- A. Submit to the Landscape Architect upon notification of award of project, a drawing showing location of all proposed track markings and a chart with the appropriate colors to be used.
- B. Submit product literature for paint for prior approval from Landscape Architect. The paint must be recommended by the manufacturer of track surface.
- C. Upon completion, supply the Owner with all necessary as-built drawings showing color coded markings of each event.
- D. Upon completion, a letter of certification attesting to the accuracy of the markings shall be submitted by the Professional Engineer or Land Surveyor in charge of the layout. The letter shall be signed and sealed by the person or persons in charge of the layout indicating the state of registration, number and name.

1.4 ADDITIONAL MARKINGS:

- A. The following Junior High School Events will also be installed:
 - 1. 55 Meter Hurdles
 - 2. 200 Meter Hurdles
 - 3. 70 Meter Dash

PART 2 - PRODUCTS

2.1 PAINT

- A. Paint shall be that material as recommended by the manufacturer of the track surface.
- B. No thinners shall be used.

SECTION 32 1724
TRACK MARKINGS

PART 3 - EXECUTION

3.1 COMPUTATIONS

- A. Verify the locations of proposed events with the Owner.
- B. Calculations shall be made to the nearest 1/100,000th of a foot.
- C. Calculations of the angle shall be made to the nearest one second.
- D. Calculations shall be submitted to the Landscape Architect prior to the painting.
- E. Calculations shall be made by or certified by the engineer or surveyor completing the work.
- F. All measurements and tolerances shall conform with those recommended by the N.F.S.H.S.A. for track and field event layout.

3.2 LAYOUT

- A. Lines and markings shall be made by a competent, experienced and fully qualified Professional Engineer or Registered Land Surveyor.
 - 1. Locate and confirm both new radius points.
 - 2. Establish and set all necessary control points.
 - 3. Measurements shall be made on the track to the nearest 1/100th of a foot.
 - 4. Angles shall be set by using a transit or theodolite capable of reading direct to 20 seconds.
 - 5. The markings on the curve may also be set by using the chord length method.
 - 6. Measurements shall be made with an engineering steel tape in engineering scale.
 - 7. All markings shall be clearly identified, and color coded for the painter to identify.

3.3 TRACK MARKINGS

- A. All markings shall conform with those recommended by the N.F.S.H.S.A. for track and field event layout.
 - 1. Lanes and lines shall be 2" wide markings with color determined by Owner.
 - 2. Start and finish lines shall be 2" wide lines and shall be clearly marked with the start of said events.
 - 3. Exchange zones shall be indicated with triangles with a 41" base and 24" high with the base as the limits of the zone.
 - 4. Acceleration marks shall be a 2" wide by 4" long dash marked clearly in the center of the lane.
 - 5. Hurdle marks shall be 2" x 2" tic marks on the lane line on both sides of the lane.
 - 6. Lane numbers shall be not less than 42" high and located as directed by the Landscape Architect in four (4) locations. Numbers shall be in two (2) colors (shadowed background as selected by the Owner).
 - 7. Event identification shall be 4" letters stenciled below and to the right of each lane and mark.
 - 8. Scratch lines for the jumping events shall be 8" wide.
 - 9. All symbols shall have the proper color code for the event.
 - 10. Check marks for the long jump and pole vault events shall be included with bid. Coordinate frequency and locations with athletic department prior to striping.
 - 11. Discus pad and shot-put pad dimension boundaries shall be a 2" painted circle. See details for proper dimensions.

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TRACK MARKINGS

3.4 INSTALLATION

- A. No painting shall be performed when the velocity of the wind exceeds twelve miles per hour (12mph), unless the spray equipment is equipped with the proper air curtains.
- B. Day time temperature shall be a minimum of 50 degrees with nighttime temperatures above 45 degrees.
- C. Sunny skies with no forecast of rain for a minimum of 5 hours.

**Contact the Athletic Department and verify all markings prior to installation. **

SECTION 32 1724
TRACK MARKINGS

BLUE SURFACE

All Lanes
Common Finish
Common Exchange Zone

Yellow-White Alleys
White
Green

EVENT	GRAPHIC SYMBOL	COLOR
70 M DASH	Start Line	White
100 M DASH	Start Line	White
200 M DASH	Start Line (1 turn stagger)	White
400 M DASH	Start Line (2 turn stagger)	White
800 M RUN	Alleys	Green
1600 M RUN	Alley Start	White
3200 M RUN	Alley Start	White
100 M HURDLES	Start Line Hurdle Location	White Yellow
110 M HIGH HURDLES	Start Line Hurdle Location	White Green
400 M RELAY 4 x 100	Start Line Exchange zone	White Yellow △
800 M RELAY 4 x 200	Start Line 1st-exchange zone 2nd-exchange zone 3rd-exchange zone	White Red △ Red△ Yellow △
1600 M RELAY 4 x 400	Start Line 1st-exchange zone 2nd-exchange zone 3rd-exchange zone	White Red△ Red/Green △ Red/Green △
3200 M RELAY 4 x 800	Waterfall Start Common Exchange Zone	White Green △
55 M LOW HURDLES (Junior High Event)	Start Line Hurdle Location	White Black
200 M INT/LOW HURDLES (Junior High Event)	Start Line Hurdle Location	White Green
300 M INT/LOW HURDLES	Start Line Hurdle Location	White Red
LANE NUMBERS	Primary Number Shadow	White Black

END OF SECTION 32 1724

SECTION 32 1826
ALL-WEATHER SYNTHETIC TRACK SURFACE

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 1217 Plant Mix Bituminous Pavement

1.2 SCOPE OF WORK

- A. The work under this section of the specification shall consist of furnishing all labor, materials and equipment to produce, place, spread, and finish to proper grade and cross section, an all-weather synthetic track surface.

1.3 QUALITY ASSURANCE

- A. Reference Standards
 - 1. American Society for Testing and Materials (ASTM):
 - a. F 2157-02 Synthetic Surfaced Running Tracks
- B. Each Bidder shall submit color samples with their bid.
- C. The manufacturer must have ten (10) uninterrupted years of experience compounding polyurethane for athletic surfacing under the same corporation name. The installer must have ten (10) years experience installing the specified system with the same polyurethane. This is applicable for the polyurethane alternates only.
- D. The synthetic track surface shall be installed by authorized applicators of the approved manufacturer, acceptable to the Owner. The Owner reserves the right to final acceptance with regards to any installers. The manufacturer must attest to the work previously completed by each person installing the work. The Installation Contractor shall be solely responsible for the following:
 - 1. Protection of the surface until it has fully cured.
 - 2. Removal of all excess rubber crumb and binder on the inside and outside edges.
 - 3. All material used shall be handled, shipped and installed as outlined in the Material Safety Data Sheets and according to current O.A.S.H.A. Standards.
 - 4. Disposal of all products as per current EPA Regulations.
 - 5. Inspection and acceptance of the asphalt surface, prior to manning the site.
 - 6. Verify all-weather surface dimensions on plans, details, and field prior to track surface installation.
 - 7. 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.
 - 8. 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.
- E. The work shall conform to standards for running track construction as prescribed or approved by the National Federation of State High School Associations (NFSHSA) *Track and Field Rule Book* and American Sports Builders Association (ASBA) *Track Construction Manual*. Installer must be a member of the American Sports Builders Association (ASBA).

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- F. Base Bid shall be Black and not be less than 13mm total thickness. This depth shall be measured from the top of asphalt to the top of the continuous surface. (ie. to the top of the binder, not to the top of the projecting rubber corners)

1.4 SUBMITTALS

- A. Each Bidder shall submit one (1) sample, not less than 3" X 3" with each surface being bid. All samples shall represent the exact surface being bid. These samples will be used to determine the most qualified surface.
- B. Each Bidder shall submit a complete installation specification with the bid and any items that are regarded as technical guidelines for the installation of the surface that varies from the specification, include maintenance instructions and recommendations.
- C. Each Bidder are required to submit a list of facilities that have been installed under this product name. List to include four (4) to five (5) year old surface installations with contact person, and telephone number.
- D. Contractor must submit copies, in triplicate, of the Material Data Safety Sheets (MSDS) for all products to be used, before materials are delivered to the site.

1.5 TESTING

- A. The Owner shall reserve the right to submit the surface to the following tests to determine the surface performance. Any section of the track that is found to be unacceptable by these standards shall be removed and replaced in a proper workmanship-like manner.
- B. 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.
- C. The above performance characteristics shall be a part of the overall performance of the surface. The data that shall be obtained from the above testing will be the factors that will determine the final acceptance of the surface if the above tests are required.
- D. The installation Contractor will be responsible for all tests that fail the above characteristics. 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.

1.6 WARRANTY

- A. Warranty: Furnish 5 year written warranty, executed by Applicator and Contractor, certifying that the track and field surfacing complies with the following:
1. Has been manufactured, applied and will perform in accordance with these and the manufacturer's specifications.
 2. Will hold fast and/or adhere to the primer, asphalt, concrete, edging filler, patches or overlay materials.

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3. Is Ultra-Violet resistant, will not bubble, blister, fade, crack or wear excessively during the warranty period.
4. Provide a five (5) year manufacturer's warranty against workmanship and materials on the synthetic surface.

PART 2 – PRODUCTS

2.1 ACCEPTABLE SYSTEMS FOR POLYURETHANE BOUND, BLACK EPDM CRUMB BASE MAT WITH DARK BLUE STRUCTURAL SPRAY:

BSS-100	by:	Benyon Sports Surfaces Hunt Valley, MD 21030 (410) 771-9473
POLYMAT SS:	by:	Fisher Tracks, Inc. Boone, IA 50036 (800) 432-3191
GTS SELECT SS	by:	Goddard Coatings Lake Orion, MI 48359 (248) 393-6320
POLYTRAC MS:	by:	Star Trac Southfield, MI 48034 (248) 354-2304
STOBITAN SC	by:	All-American Tracks Amherst, Ohio 44001 (440) 986-8729
SPURTAN BS	by:	Dynamic Sports Surfaces Leander, TX 78641 (800) 517-0015

PART 3 - EXECUTION

3.1 BASE MAT

- A. The contractor shall clean the entire surface of all dirt and debris with a 5000 psi power washer prior to the application of any materials. Surface shall be free from all grease, oils and other foreign matter. The asphalt shall be allowed to cure for not less than fourteen (14) days and a concrete base a minimum of twenty-eight (28) days prior to any application of the urethane materials (weather permitting).
- B. The base mat shall consist of a mixture of one hundred percent (100%) polyurethane and synthetic materials, with no mineral or clay type fillers. The combination shall be of polyurethane and elastomeric granules consisting of EPDM granules. The base mat shall be free draining when cured. Granules shall consist of ambient ground EPDM rubber crumb not less than 1 mm and not more than 3 mm. Dust and the No. 200 sieve shall not exceed four percent (4%) of the total volume of rubber. The binder shall be a diphenylmethane diisocyanate base (100% MDI). Manufacturer of the polyurethane binder shall submit the Material Safety Data Sheets (MSDS), immediately upon request.

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- C. The base mat shall be thoroughly mixed in one container. No evidence of water may exist during the mixing of the materials. All containers shall be completely empty to assure the proper ratio of mixture. The mixture shall consist of a ratio of polyurethane binder of not less than twenty percent (20%) of the combined weight to eighty percent (80%) of the combined weight of the mixture of EPDM rubber granules.
- D. No solvents or emulsifier agent shall be used in the binder to extend the cure of the mixture. The contractor shall submit all shipment documents and proper material volumes.
- E. The asphalt surface shall be allowed to cure for not less than fourteen (14) days prior to any work being done (weather permitting). This timetable shall be agreed upon by the Owner and the Application Contractor, based on the time of the year, and may be changed with the Landscape Architect's approval.
- F. After the asphalt has cured, the surface shall receive a prime coat of polyurethane at the rate of three-hundredths (0.03) to five-hundredths (0.05) gallons per square yard prior to the installation of the base mat.
- G. The base mat shall be applied by mechanically operated screed equipment, which shall be electrically heated. No fuel heaters shall be allowed. All hand rollers shall be electrically heated if used.
- H. The Pot Life of the base mat shall not be less than forty-five (45) minutes from the time of the completed mix. All trowel work shall be done within this time. Any areas that are rough, high, uneven or open in texture shall be sanded and filled prior to any finish work.
- I. All joint work shall be flush with the adjacent mat and shall have edges primed with the binder material if the adjoining mat has cured or set.
- J. The contractor shall install the all-weather surface at the elevation required per manufacturers installation guide for specified field event equipment.

3.2 TOP SURFACE

- A. This work shall consist of a blend of pigmented polyurethane and colored Ethylene Propylene Diene Monomer (EPDM) granules. The top surface shall be applied in multiple coats of two or more over the black base mat at the rate of 1.8 lbs. per square yard per coat (minimum 2-coat application).
- B. Granules shall be an ambient ground EPDM rubber crumb having a peroxide cure. The size of the material shall not be less than 0.5 mm and not more than 1.5 mm. The mixture shall include a fine content (dust) not to exceed ten percent (10%).
- C. Binder shall be pigmented polyurethane mixture of Methylene Diphenylene Isocyanide. The pigmented binder shall consist of a two (2) part mixture. The ratio of Polyol to binder shall be installed in accordance with the manufacturer's specifications. The catalyst shall be added at the mixing site, if necessary.
- D. The material ratio of the top surface shall consist of sixty percent (60%) binder (Polyol-binder) and forty percent (40%) EPDM granules. The spray operation shall be performed when the average wind velocity does not exceed five (5) to seven (7) mph. This operation shall be stopped immediately at this excess.

SECTION 32 1826
ALL-WEATHER SYNTHETIC TRACK SURFACE

- E. The Owner shall reserve the right to have an anemometer on the site at this time. All work shall be protected from over spray outside the limits of the asphalt base.
- F. Final color and appearance shall be consistent along with the texture of the surface at all angles.
- G. No flooding or excess material over two (2) square feet shall be accepted. Excessive flooding constitutes poor workmanship and shall be reviewed and corrections determined at that time.

END OF SECTION 32 1826

SECTION 32 1826
ALL-WEATHER SYNTHETIC TRACK SURFACE

SAMPLE TRACK WARRANTY

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 NOTE

- A. The installation Contractor will be responsible for all tests that fail the specified characteristics. 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.

1.3 GUARANTEE

- A. The Contractor shall be required to guarantee all labor, materials, workmanship and services for the All Weather Synthetic Track Surface and Track Markings.
- B. This guarantee shall remain in force for a period of not less than FIVE (5) YEARS from the date of written acceptance of the work.
- C. Any defects caused by cracks, normal abrasion or raveling that is not in original conformance with the testing specifications or structural in nature shall be repaired or replaced at no cost to the Owner during this guarantee period.
- D. This Contractor shall be required to submit the following documents in regard to the guarantee:
 - 1. Letter from the manufacturer of all materials attesting to the guarantee length and limits. This must be signed by an officer of the organization.
 - 2. Letter of Guarantee from the Installation Contractor for the above time period.
 - 3. These documents shall be submitted to the Architect or Owner prior to final payment.

PART 2 - PRODUCTS

N/A

PART 3 - EXECUTION

N/A

SECTION 32 1838
ACRYLIC SURFACE

ALTERNATE A-1 & ALTERNATE B-1

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 1217 Plant Mix Bituminous Pavement

1.2 SCOPE OF WORK

- A. This proposal shall include the work to complete the acrylic surface for the pavement within the "D" zones at Grosse Pointe South High School. The acrylic surface asphalt is to be reviewed and acknowledged for the work under this proposal.
- B. Pavement shall be cleaned using a stiff bristle broom and a gas-powered, water based pressure spray unit capable of generating 2500 psi. at the nozzle tip, to remove all dirt and debris.
- C. The work shall include all labor, materials, equipment and transportation to install the following products.

1.3 SUBMITTALS:

- A. Submit manufacturer's data sheets for all materials and all other related items to owner's representative.

PART 2 - PRODUCTS

2.1 ACRYLIC SURFACE MATERIAL

- A. This material shall be a fully pigmented system in-depth color. The material shall be as specified:

Product	
1.	DECO SURFACING by California Products, Cambridge, MA (800) 332-6178
2.	NOVACOURT by Novasport USA, Framingham, MA (800) 872-6682
3.	PLEX-PAVE by California Products, Cambridge, MA (800) 225-1141
4.	LAYKOLD by Advanced Polymer Technology, Harmony, PA (412) 452-1330
- B. Asphalt or tar in any form will not be permitted in any coating. The color shall be pure acrylic-type containing no asphalt or tar emulsions and no vinyls, alkyds or non-acrylic resins. The color finish system shall contain factory-mixed compositions requiring only the addition of water on the job site. The material shall be delivered to the site in sealed containers with the manufacturer's label affixed.

SECTION 32 1838
ACRYLIC SURFACE

ALTERNATE A-1 & ALTERNATE B-1

PART 3 - EXECUTION

3.1 APPLICATION

- A. Plant Mix Bituminous Asphalt shall cure for a minimum of 14 days prior to application of surfacing materials.
- B. The asphalt surface shall be flooded, and any ponding water that remains after 1 hour and is deep enough to cover the thickness of a five cent piece shall be corrected using a patch mix by the approved surfacing manufacturer.
- C. After all leveling and patching, the area shall receive one (1) coat of sand filled acrylic surfacer material at the rate of .07 gallon/square yard. Application of the system shall be in strict accordance with the printed instructions of the manufacturer. If the system is installed by someone other than the manufacturer, an experienced manufacturer's representative shall supervise the installation of the material. The installer shall provide the Owner with a list of at least five (5) installations of this or similar material, performed by his forces, within the last two (2) years.
- D. The surface to receive the acrylic surface system as specified shall be checked to be free from grease, oil and other foreign materials before starting the work. The Contractor shall remove by brush, vacuum or blower all dust, dirt, imbedded soil, etc. and shall mechanically wash areas, if required.
- E. Holes, cracks and spalled areas shall be clean of dirt, water and deleterious materials before any coating operations are started. After cleaning and treating these areas with the proper filler materials, the application shall proceed only if the surfaces are dry and clean and the temperature is at least fifty degrees Fahrenheit (50°F) and rising and the surface temperature is not in excess of one hundred forty degrees Fahrenheit (140°F).
- F. Apply two (2) filler coats and one (1) finish coat. Application shall be in strict accordance with manufacturer's specifications. The material shall have in-depth color in the color combinations as indicated for the final surface.
- G. The filler coat shall be applied at a rate of .05 gallons (concentrated material prior to dilution) per square yard for each coat. The final surface shall be applied at a rate of .04 gallons (concentrated material prior to dilution) per square yard. Only small amounts of water shall be added if too rapid drying is occurring during application. The Contractor shall be accountable at all times for the amount of materials of each color used. Permission of the Owner shall be obtained before adding any additional water.
- H. Care shall be taken to protect adjacent areas and structures (fences, posts, sidewalks, buildings, etc.) which are not to be coated. Remove immediately before drying occurs.
- I. Contractors must notify the Landscape Architect of all applications, 48 hours prior to installation.
- J. Acceptability of work: The finished surface shall be constant in color and texture, free from voids, depressions, joint marks, ridges, wheel marks or other imperfections. If any of these become apparent during the installation of the system, the contractor will correct prior to the final coat application, or the surface shall be rejected.

END OF SECTION 32 1838

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

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.

SECTION 32 9227
GENERAL LAWN RESTORATION

PART 2 - PRODUCTS

2.1 SEED

A. Seed shall be provided from one of the following suppliers

- EcoGreen Supply- 616-877-5326
- John Deere Landscapes - (800) 347-4272 (now Site One Landscapes)
- TurfGrass, Inc. – (248) 437-1427 (now Residex)
- Commerce Corp. – (800) 243-4769- closed (now BFG)
- Rhino Seed & Supply - (800) 482-3130
- Michigan State Seed Solutions - (800) 647-8873 (now Lacrosse Seeds)
- Tri Turf – (800) 636-7039

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. Enhanced Elite varieties 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. Athletic Fields

<u>Seed Varieties</u>	<u>Purity</u>	<u>Germination</u>
• Shannon Kentucky Bluegrass	95%	85%
• Lunar Kentucky Bluegrass	95%	85%
• SPF 30 Kentucky Bluegrass	95%	85%
• Fullback Kentucky Bluegrass	95%	85%
• Midnight Kentucky Bluegrass	95%	85%
• Hampton Kentucky Bluegrass	95%	85%
• Gaelic Kentucky Bluegrass	95%	85%
• BlueBank Kentucky Bluegrass	95%	85%
• Noble Kentucky Bluegrass	95%	85%
• Touchdown Kentucky Bluegrass	95%	85%
• Salinas Perennial Ryegrass	95%	85%
• Gray Star Perennial Ryegrass	95%	85%
• Sox Fan Perennial Ryegrass	95%	85%

4. General Seeding Areas

<u>Seed Variety</u>	<u>Purity</u>	<u>Germination</u>
• Shannon or Bluestar Kentucky Bluegrass	98%	85%
• Gaelic or Corsair Kentucky Bluegrass	98%	85%
• Lunar or Avalanche Kentucky Bluegrass	98%	85%
• Gray Star or Salinas Perennial Ryegrass	98%	90%
• SoxFan or Showtime Perennial Ryegrass	98%	90%

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GENERAL LAWN RESTORATION

• Charger 2 Perennial Ryegrass	98%	90%
• Oracle Creeping Red Fescue	98%	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:

Fertilizer "A": applied at the time of seeding at 50 lbs. per 8000 square feet.
16-32-4 (14.3% Ammoniacal Nitrogen, 1.7% Urea Nitrogen, 32% Phosphorus, 4% Available Potassium (SOP))

Fertilizer "B": applied 3-4 weeks after seeding at 50 lbs. per 8,000-10,000 square feet.
22-16-6 (6.3% Ammoniacal Nitrogen, 15.7% Urea Nitrogen, 16% Phosphorus, 6% Soluble Potassium.

Fertilizer "C" for enhanced establishment program (seed in lieu of sod)
5-5-5 with Mycorrhiza (1.7% Ammoniacal Nitrogen, 3.3% Water Insoluble Nitrogen, 5% Available Phosphorus, 5% Available Potassium, 4% Calcium, 2.5% Magnesium, .2% Copper, 5% Iron, .2% Manganese, .2% Zinc, complete Mycorrhiza and Bacterial Package.

Fertilizer "D" for enhanced establishment program (seed in lieu of sod)
15-0-7 with Broad Spectrum Innoculant (bacterial package (.75% Ammoniacal Nitrogen, 3.75% Urea Nitrogen, 3.50% other water soluble nitrogen, 7% water insoluble nitrogen, 7% soluble potash, 1% Calcium, .5% Magnesium, 1% Sulphur, .1% Copper, 1% Iron, .5% Manganese, .1% Zinc. 100% slow release nitrogen derived from Feather Meal and Methylated Urea.

- B. Complete Soil testing for both fertility (including micronutrients, CEC, pH) and particle size is required on all new establishment sites
- 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. 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.

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GENERAL LAWN RESTORATION

- 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 remove mesh.

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

SECTION 32 9227
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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.
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:
 - a. 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 an 10 square foot and bare spots not exceeding 5 by 5 inches.
 - b. Use specified materials to reestablish turf that does not comply with the requirements and continue watering and maintenance until turf is satisfactory.

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

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GENERAL LAWN RESTORATION

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SECTION 33 4413
MANHOLES, CATCH BASINS AND SIMILAR STRUCTURES

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 3010 Portland Cement Concrete
 - 2. Section 04 0513 Mortar
 - 3. Section 31 2000 Earthwork
 - 4. Section 33 4615 Subdrainage System

1.2 SCOPE

- A. The work under this section of the specifications shall consist of furnishing all labor, materials and equipment necessary to furnish and install manholes and catch basins as indicated on Contract Documents and specified herein.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM A48 – Standard Specification for Gray Iron Castings
 - b. ASTM C139 – Standard Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes
 - c. ASTM C144 – Standard Specification for Aggregate for Masonry Mortar
 - d. ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections
 - 2. Michigan Department of Transportation (MDOT)

1.4 SUBMITTALS

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

PART 2 – PRODUCTS

2.1 GENERAL

- A. Concrete to be 3500 psi at 28 days.
- B. Masonry sand for mortar shall conform to ASTM C144.
- C. Steel reinforcement to be as per manufacturer's recommendations.

SECTION 33 4413
MANHOLES, CATCH BASINS AND SIMILAR STRUCTURES

2.2 CASTINGS

- A. All castings shall be of cast iron, conforming to ASTM A48 unless indicated otherwise. Conform to details and notes indicated on plans.
- B. Manhole frames and covers: Material shall be MDOT Type A with perforated covers.
- C. Catch basins and inlet castings: Catch basin and inlet castings shall be MDOT Type K when located in curbs and gutter, MDOT Type E in non-paved locations, and MDOT Type A when located in paved areas.

2.3 MANHOLE SECTIONS

- A. Manhole Walls
 - 1. Standard manhole walls shall be precast concrete units conforming to ASTM C478, or be concrete block masonry.
- B. Manhole Bases: Manhole bases shall be precast concrete units of the dimensions indicated on drawings.

2.4 MANHOLE STEPS

- A. Manhole steps shall be of cast iron conforming to ASTM A48 or equal, and shall meet pertinent safety rules and regulations.

2.5 CATCH BASINS AND INLETS

- A. Construct catch basins and inlets of brick, block, masonry, or precast units. Precast concrete catch basin units, if used, shall have reinforcing steel conforming to ASTM C799 II, Wall B.

2.6 MORTAR

- A. Mortar for brick masonry or plastering manholes shall be made of one part Portland cement to two parts sand. Mortar shall conform to Specification Section 04 0513.

2.7 BRICK

- A. Brick work shall meet the requirements of Medium Brick, ASTM C13

2.8 CONCRETE BLOCK MASONRY

- A. Concrete block masonry shall meet the requirements of ASTM C139.

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Excavation shall be of sufficient dimensions to provide ample space for sheathing and bracing is required and ample space for the workmen to perform their work in a satisfactory manner.

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MANHOLES, CATCH BASINS AND SIMILAR STRUCTURES

- B. Refer to requirements of Section 31 2000 Earthwork.
- C. All structure shall be backfilled and tamped in lifts not greater than 8". Contractor shall have on site all necessary power equipment to achieve 95% compaction.

3.2 DRAINAGE SWALES

- A. Swale Preparation
 - 1. Contractor shall provide positive drainage swales along track edge to all structures shown. The high point of the swale between all structures shall be four inches (4") below proposed inside track elevation provided.

3.3 BRICK AND BLOCK CONSTRUCTION

- A. Laying of brick or block units shall be performed in such a manner that the courses will be true to line and the joints fully bonded.
 - 1. In a structure of cylindrical design, the bricks shall be laid with the long dimension radially in the structure.
 - 2. In a structure of rectangular design, the bricks shall be laid in alternate courses of headers and stretchers.
 - 3. Structures
 - a. Manholes shall be constructed of brick, concrete masonry units, precast reinforced concrete pipe, or monolithic concrete or as detailed.
 - b. All manholes shall be constructed to conform to the details shown on drawings.
 - i. Openings shall be provided in the manholes for future connections as shown on the plans or as ordered by the Engineer, of such size and at such elevation as directed and shall be considered incidental to the construction of the manhole.
 - ii. All such openings shall be closed with concrete or vitrified clay stoppers or brick bulkheads, to prevent infiltration or leakage.
 - c. The outside surface of all brick or masonry manholes on sanitary sewers shall be plastered one-half inch with mortar.
 - d. Cast iron manhole steps shall be set in a full mortar bed in the masonry.
 - e. Tops shall be tapered to receive the casting.
 - f. The manhole castings shall be set in a full mortar bed with the top at the required elevation and treated directly in line with the steps.
 - g. Manholes shall have flow lines shaped with concrete up to the spring line of the lines passing through.
 - 4. Catch basins shall be constructed of brick, concrete masonry units, precast reinforced concrete pipe, or monolithic concrete, and shall conform to details shown on drawings.
 - a. The inside surface of all brick or block catch basins shall be plastered one-half inch thick from the bottom to the corbel. The joints between the sections of precast pipe catch basins shall be plastered one-half inch thick and six inches wide, and no other plastering is required on such catch basins.
 - b. Catch basins which have lines of 30" diameter or larger entering, or four (4) or more lines entering, shall have an inside diameter of five feet.
 - c. Catch basins shall have a two (2) foot deep sump.
 - d. Tops shall be tapered to receive the casting.
 - e. Catch basins castings shall be set in a full mortar bed on top of the masonry. The castings shall be set with the top at the required elevation.

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MANHOLES, CATCH BASINS AND SIMILAR STRUCTURES

3.4 ADJUSTING EXISTING STRUCTURES

- A. Whenever existing manholes, catch basins, valve chambers, or similar structures occur, the tops of such structures shall be adjusted or rebuilt so that the top of the casting will fit the crown and/or grade of the finished surface.
- B. Raising castings shall be accomplished by use of precast adjusting rings and/or brick set in a full mortar bed with the casting re-set in accordance with preceding requirements for new construction.
- C. Lowering castings shall be accomplished by removing a sufficient amount of the existing structure to allow for reconstruction of the taper section and re-setting the casting in accordance with the preceding requirements for new construction.

END OF SECTION 33 4413

SECTION 33 4416
POLYMER CONCRETE TROUGH DRAIN SYSTEM

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 3010 Portland Cement Concrete
 - 2. Section 33 4413 Manholes, Catch Basins and Similar Structures
 - 3. Section 33 4615 Subdrainage Systems

1.2 SCOPE

- A. The work under this section of the specifications shall include all materials, labor and equipment necessary to install a pre-cast, chemical-resistant polyester concrete trough drainage systems as specified, and as shown on the Contract Documents.

1.3 QUALITY ASSURANCE

- A. Manufacturer shall certify that the polymer concrete used meets the strength values of Section 2.1 B.

1.4 SUBMITTALS

- A. Manufacturer will submit, when required, shop drawings showing a schematic plan of the total drainage system listing all parts being provided with exact center-line dimensions suitable for installation. Copies of the manufacturer's recommended method of installation, and assembly shall be submitted for review. Contractor shall obtain arc radius units where they apply.
- B. Manufacturer shall submit a list of projects installed locally during the past five years.

PART 2 - PRODUCTS

2.1 TROUGH DRAIN

- A. Manufacturer shall be one of the following or (approved equal):

<u>Manufacturer:</u>	<u>Model:</u>
1. ACO Polymer Products, Inc. Chagrin Falls, Ohio (216) 247-2033	System 4000 Grate Color: Black
2. SportsField Specialities Delhi, NY (888) 975-3343	Sport 4000 Grate Color: Black
3. SportsEdge Troutman, NC (800) 334-6057	Pro "S" Trench Drain Grate Color: Black

SECTION 33 4416
POLYMER CONCRETE TROUGH DRAIN SYSTEM

- B. Product shall be a one piece polymer concrete grated drain incorporating anti-slip, ADA compatible locking grate. Trench drain channels shall be pre-cast, and interlocking, incorporating either polyester or vinyl ester resins and formulated aggregate.

Overall Width	-	6.1 in
Internal Width	-	4.0 in
Unit Depth	-	6.0 in (nominal)
Compressive Strength	-	14,000 - 14,500 PSI
Flexural Strength	-	3,600 - 4,500 PSI
Tensile Strength	-	1,500 PSI

PART 3 - EXECUTION

3.1 SITE PREPARATION

- A. Excavate the area for channel placement wide and deep enough to accommodate the channel size and a minimum of 4 inch concrete encasement (channels require a minimum of 4 inches of concrete support and top of grate must be evenly aligned to the surface of the surrounding slab) on both sides as well as underneath the channel.

3.2 INSTALLATION

- A. Channel sections are installed from the outlet end of the system, working from either catch basins or other outlets. Insert channels to interlock ends. Channel sections shall be placed on brick, rebar basket, or low slump concrete slurry, to obtain correct finished elevation. Cutting will be made if required, by masonry or concrete saw. Saw cut relief joints at every third (3rd) section channel (± 10). Install drain system in strict accordance with manufacturer's recommendations and shop drawings.

3.3 CONCRETE PLACEMENT

- A. Protect the top of the channel against the concrete or other abutting materials during setting. Place concrete in a manner that will not dislodge the channels. Concrete shall be at finished level with the top of the grate to ensure efficient drainage and adequate grate edge protection.

3.4 FINISHING AND CLEAN-UP

- A. Following final set of concrete, remove channel protection, if used.

END OF SECTION 33 4416

SECTION 33 4615
SUBDRAINAGE SYSTEMS - PEASTONE

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 04 0513 Mortar
 - 2. Section 31 2000 Earthwork
 - 3. Section 33 4413 Manholes, Catch Basins and Similar Structures

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 an operating sub-drainage system.

1.3 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. ASTM D1785 – Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe
 - b. ASTM D3350 – Standard Specification for Polyethylene Plastics Pipe and Fitting Materials
 - c. ASTM F405 – Standard Specification for Corrugated Polyethylene Pipe and Fittings
 - 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 DRAINAGE TILE

- A. Perforated corrugated polyethylene tubing (with filter wrap) complete with required couplings and fittings.

2.2 PEASTONE

- A. 3/8" minus peastone to be used as backfill material.

SECTION 33 4615
SUBDRAINAGE SYSTEMS - PEASTONE

PART 3 - EXECUTION

3.1 EXECUTION 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.

END OF SECTION 33 4615