

Project Manual

BISHOP STADIUM RAILING REPLACEMENT

3308 Robinson Drive

Manhattan-Ogden Unified School District 383
Manhattan, Kansas

P1405.01

February 2016



The Ebert Mayo Design Group
Architects & Planning Consultants

BISHOP STADIUM RAILING REPLACEMENT

Manhattan-Ogden Unified School District 383

3308 Robinson Drive

Manhattan, Kansas

Architects:

**The Ebert Mayo Design Group
Architects & Planning Consultants, Inc.**

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SECTION 00 11 00 – NOTICE TO BIDDERS

January 28, 2016

BISHOP STADIUM RAILING REPLACEMENT
MANHATTAN-OGDEN UNIFIED SCHOOL DISTRICT 383
3308 ROBINSON DRIVE
MANHATTAN, KANSAS

1.1 PROJECT SCOPE

- A. The project consists of removal of existing steel railings, seating and concrete stairs, and installing new galvanized steel railings, accessible seating, concrete treads, traffic coating, and aluminum bleacher seating.

1.2 TIME AND PLACE OF BID OPENING

- A. 2:00 pm, February 24, 2016, at the Robinson Education Center, 2031 Poyntz Avenue, Manhattan, Kansas.

1.3 PRE-BID CONFERENCE

- A. 3:00 pm, February 15, 2016, at Bishop Stadium, 3308 Robinson Drive, Manhattan, Kansas.

1.4 TYPE OF CONTRACT

- A. Lump sum for General Contract Work.

1.5 CONTRACT DOCUMENTS

- A. Drawings and Specifications are on view at the following locations:
 1. The Ebert Mayo Design Group, Architects & Planning Consultants, 1115 Westport Drive, Manhattan, Kansas 66502, 785-776-1800, fax 785-776-9906, www.EMGArch.com.
 2. Dodge Data & Analytics, 6750 Antioch Road #110, Merriam, Kansas 66204, 866-223-3876. fax 800-465-7009.
 3. The Builders' Association, 720 Oak Street, Kansas City, Missouri 64106, 816-595-4116, fax 816-285-0575, plan room 816-595-4116.
 4. Associated General Contractors, 200 SW 33rd Street, Topeka, Kansas 66611, 785-266-4015, fax 785-266-2561.
 5. Go Blue, LLC, 4545 SW 21st Street, Topeka, Kansas 66604, 785-272-4744 or 866-377-4825, fax 785-272-6966.
 6. Topeka Blueprint Company, Inc., 608 Jackson, Topeka, Kansas 66603, 785-232-7209 or 888-291-7209, fax 785-232-5663.
 7. Kansas Construction News, 230 Laura Suite 101, Wichita, Kansas 67211, 316-263-0265, fax 316-263-0267.
 8. ARC Document Solutions, 518 W. Douglas, Wichita, Kansas 67203, 316-264-9344 or 888-457-2583, fax 316-264-5165.

9. Manhattan Area Chamber of Commerce, 501 Poyntz Avenue, Manhattan, Kansas 66502, 785-776-8829, fax 785-776-0679.

B. Drawings and Specifications are available without deposit from The Ebert Mayo Design Group, 1115 Westport Drive, Manhattan, Kansas 66502, 785-776-1800, fax 785-776-9906, (there is a \$10.00 postage and handling charge for each shipment).

1.6 BID SECURITY AND BONDS

A. Bid Security will be required in accordance with the Instructions to Bidders.

B. Bonds will be required in accordance with the Supplementary Conditions.

END OF SECTION 00 11 00

SECTION 00 21 00 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 DEFINITIONS

- A. Definitions set forth in the "General Conditions of the Contract for Construction," AIA Document A201-2007, are applicable to these Instructions to Bidders.
- B. Bidding documents include the Notice to Bidders, Instructions to Bidders, Proposal Form and proposed Contract Documents including any Addenda issued prior to receipt of Bids.
- C. Addenda are written or graphic instruments issued prior to the execution of the contract that modify or interpret the bidding documents, including the Drawings and Specifications, by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed.

1.2 PLANHOLDERS OF RECORD

- A. Planholders who have received drawings and specifications directly from The Ebert Mayo Design Group are considered planholders of record and will receive appropriate addenda and other information regarding this project.
- B. Planholders who have not received drawings and specifications directly from The Ebert Mayo Design Group (e.g., at plan rooms or through plan services) are anonymous planholders, and may not receive pertinent or timely information during the bidding process. Anonymous planholders who intend to submit a bid for this project should advise the Architect of the intent to bid so that they may become a planholder of record.

1.3 EXAMINATION OF BIDDING DOCUMENTS

- A. Each Bidder shall examine the bidding documents carefully and, not later than 7 days prior to the date for receipt of Bids, shall make written request to the Architect for interpretation or correction of any ambiguity, inconsistency or error therein which he may discover. Any interpretation or correction shall be by Addendum, and only a written interpretation or correction shall be binding.
- B. Before submitting any bids, the Contractor, and the Contractor's subcontractors and material suppliers shall observe the Drawings and Project Manual and should any material and/or its installation be indicated or specified in a manner not approved by the material manufacturer, notify the Architect.

1.4 APPROVAL OF ALTERNATE PRODUCTS, MATERIALS OR METHODS

- A. Bidders requesting approval of alternate manufacturer's products, materials or methods must make written request to the Architect not later than 7 days prior to the date for receipt of Bids. Such written request must include complete technical information to allow the Architect to compare proposed alternate products, materials or methods with specified products, materials or methods.
- B. Requests must be accompanied by the following:
 - 1. Requests shall be specifically noted as alternate products, materials or methods requests,

-
2. Requests must include full description and technical data, including physical dimensions, operating characteristics, and any other information necessary for comparison.
 3. Requests must clearly include and clearly highlight, for both the specified manufacturer and the proposed substitute manufacturer, the following information:
 - a. Manufacturer's name, model, catalog number, photographs or cuts.
 - b. All specified tests and requirements.
 - c. All differences between specified item and substitute item.
 - d. Any other information necessary for comparison.
- C. The Architect will not provide verbal approval of materials or methods during the bidding phase. Bidders who base their Bids upon proprietary products, materials or methods that have not been approved by Addendum do so at their own risk.

1.5 ADDENDA

- A. Prior to the receipt of Bids, addenda will be mailed, delivered, faxed, or issued by telephone (and documented in writing before Bid submission), to each planholder recorded by the Architect as having received the bidding documents. Addenda issued within the last 48 hours may be transmitted by fax only to the General Contractors who are recorded as planholders.
- B. Bidders shall acknowledge receipt of addenda on the Proposal Form in the specific space provided.
- C. Addenda issued after receipt of Bids will be mailed or delivered only to the selected Bidder.

PART 2 - TAXES

2.1 SALES TAX EXEMPTION

- A. Materials and equipment incorporated into this project are exempted from payment of Kansas Sales Tax and such sales tax shall not be included in bids.
- B. The Owner will secure a project exemption certificate for the project in accordance with the rules of Kansas Department of Revenue and furnish a copy to the Contractor. The Contractor shall furnish a copy of the project exemption certificate to all suppliers from whom purchases are made, and to all subcontractors.
 1. Suppliers who supply materials for the project shall execute invoices bearing the number from such certificate.
 2. Upon completion of the Project, each Contractor and each Subcontractor who used the project exemption certificate to claim exemption, shall furnish to the Owner a sworn statement, on a form provided by the Director of Taxation, that all its purchases made exempt under the project exemption certificate were entitled to exemption.
 3. All invoices shall be held by the Contractor and Subcontractors for a period of five (5) years and shall be subject to audit.
- C. The Contractor shall assume full responsibility for the Contractor's proper use of the certificate number, and shall pay all costs of any legally assessed penalties for improper use.
- D. If requested by the Owner or Architect, the Contractor shall furnish the Owner, through the Architect, with copies of all invoices bearing the certificate number prior to final payment.

2.2 FEDERAL TAX:

- A. Materials and equipment incorporated into this project are subject federal excise tax on all items of construction and equipment subject to such tax.

PART 3 - PAYMENTS

3.1 PAYMENTS DURING CONSTRUCTION

- A. The Owner shall pay the Contractor as follows:
 - 1. Periodic payments shall be made during the course of the Work. Each periodic payment shall be for work performed during the previous month. The Owner will retain 10% of amounts due the Contractor on payments made until Final Completion and submission of all required project closeout paperwork.

PART 4 - COMPLETION TIME AND LIQUIDATED DAMAGES

4.1 COMPLETION TIME

- A. Each Bidder acknowledges that he will substantially complete the work by the time specified in the Proposal Form, or be subject to liquidated damages as defined by these Instructions to Bidders.

4.2 LIQUIDATED DAMAGES

- A. All time limits stated in the contract documents are of the essence of the contract.
- B. The Owner shall be entitled to liquidated damages to cover the costs of alternate facilities, additional observations and inspections by the Architect, the salaries of contingent forces, and any other expenses incurred by the Owner due to delays in completion of the Work caused by the Contractor.
- C. Liquidated Damages for Failure to Meet the Date of Substantial Completion: In the event that the project is not substantially complete within the time period specified on the Proposal Form, the Contractor (and their Surety) shall be liable for and shall pay to the Owner the following as fixed, agreed and liquidated damages for each calendar day until the entire Work is substantially completed:
 - a. \$200.00 per day.
- D. Liquidated Damages for Failure to Achieve Final Completion: In the event that Final Completion of the project is not achieved within 30 days following Substantial Completion, or within a time period mutually agreed between the Owner, Architect and Contractor, the Contractor (and their Surety) shall be liable for and shall pay to the Owner the following as fixed, agreed and liquidated damages for each calendar day until the entire Work is finally completed:
 - a. \$100.00 per day.
- E. The above amounts for liquidated damages shall be deducted from the contract by contract Change Order prior to final payment. Such Change Order shall not require approval of the Contractor.

PART 5 - RECEIPT OF PROPOSALS (BIDS)

5.1 BIDDER'S REPRESENTATION

- A. The Bidder, by submitting their Bid, represents that:
1. The Bidder has read and understands the Bidding Documents and their Bid is made in accordance therewith.
 2. The Bidder has personally visited the site and has familiarized himself with the local conditions under which the work is to be performed.
 3. The Bid is based upon the materials, systems and equipment described in the Bidding Documents without exception.
 4. The Bidder has not entered into collusion among other Bidders.
 5. The Bidder does not have an interest in more than one Bid or submitted more than one Bid under different names.

5.2 PROPOSAL FORM

- A. Proposals shall be made upon the Proposal Form or facsimile thereof as bound in this Project Manual. Fill in all blanks on the Proposal Form clearly with typewriter or ink. Erasures or other changes must be explained or noted over the signature of the Bidder. Signature shall be in longhand by a principal duly authorized to sign contracts; the signature accompanied by the corporate seal impression if Bid is by a corporation. Any persons signing as an agent shall submit acceptable evidence of their authority. Bids shall contain no alterations or recapitulation of the Work.
- B. Bidders shall acknowledge receipt of any Addenda by checking the appropriate location on the form.
- C. Each Bidder shall bid on any alternates and unit prices if included on the Proposal Form.
1. If an alternate or unit price involves no change in price, Bidder shall so indicate by writing the words "No Change" in the space provided.
 2. If a Bidder desires not to bid an alternate or unit price, he may insert the words "No Bid" in the space provided for price for such alternate. He thereby waives any claim to the contract award if that alternate or unit price becomes the basis for determining the low bid and/or the contract award.

5.3 SIGNING PROPOSAL FORM

- A. Proposals that are not signed by the individuals making them shall have attached to them a Power of Attorney evidencing authority to sign the bid in the name of the person for whom it is signed.
- B. Proposals that are signed for co-partnerships shall be signed by all of the co-partners or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the bid a Power of Attorney evidencing authority to sign the bid.
- C. Proposals that are signed for corporations shall have the corporate name signed in handwriting or in typewriting, and the signature of the president or other authorized officer of the corporation. If signed by an official other than the president of the corporation, a resolution of the board of directors evidencing the authority of the official to sign the bid shall be attached.
- D. If bids are signed for any other legal entity, the authority of the person signing for the legal entity shall be attached to the bid.

5.4 BID SECURITY

- A. Bid Security shall consist of one of the following:
 - 1. A Bid Bond (AIA Document A310 or other document containing identical provisions).
 - 2. A certified check on a solvent bank.
 - 3. A cashier's check on a solvent bank.
- B. Bid Security shall be enclosed with each Bid in the amount of at least 5% percent of the Base Bid.
- C. Bid Security shall be made payable, without condition to Unified School District 383, as a guarantee that the Bidder, upon notification of award, will within 10 days file all bonds and enter into the construction contract. Should the successful Bidder fail to enter into contract with the Owner, said Bid Security shall be forfeited as liquidated damages and the money derived therefrom will be turned to the use of the Owner. No Bidder may withdraw their Bid for a period of 60 days after the date of the Bid opening.
- D. Bid Security will be retained for the three lowest Bidders until the contract is awarded or other disposition is made thereof. Bid Security of all other Bidders will be returned promptly after the canvass of Bids.
- E. Bidder shall require attorney-in-fact who executes required bonds on behalf of the surety to affix thereto a certified and current copy of their power of attorney indicating the monetary limit of such power.

5.5 SUBMISSION OF BIDS

- A. All copies of the Proposal Form, Bid Security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed in the lower left corner as follows:

BID ENCLOSED
BISHOP STADIUM RAILING REPLACEMENT
Date and Time of Bid Opening

- B. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEPARATE BID ENVELOPE ENCLOSED" on the face thereof.
- C. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Notice to Bidders, or any extension thereof made by Addendum. Any Bid received after the publicized date and time shall not be considered by the Owner.
- D. Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- E. Oral or telecommunication Bids are invalid and will not receive consideration.

5.6 MODIFICATION OR WITHDRAWAL OF BID

- A. A Bid may not be modified, withdrawn or cancelled by the Bidder for a period of 60 days following the time and date designated for the receipt of Bids, and Bidder so agrees in submitting their Bid.
- B. Prior to the time and date designated for receipt of Bids, Bids submitted early may be modified or withdrawn only by notice to the party receiving Bids at the place and prior to the time designated for receipt of Bids. Such modification or withdrawal shall be in person, or by a notice in writing over the signature of the Bidder, by mail or by fax.

1. If by mail, written confirmation over the signature of Bidder must have been postmarked on or before the date and time set for receipt of Bids. It shall be so worded as not to reveal the amount of the original Bid.
 2. If by fax, it shall be on the Contractor's stationery and shall be so worded as not to reveal the amount of the original Bid.
 3. The Owner shall have no responsibility for failure of the notice to arrive at the designated site prior to the time designated for receipt of Bids.
- C. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with the Instructions to Bidders.
- D. A Bid may be withdrawn or corrected no later than two days after the bids have been opened if a non-judgmental error has been made.

PART 6 - REVIEW OF PROPOSALS

6.1 RESPONSIBLE BIDDER

- A. It is the intent to award the project to the lowest responsible Bidder. The Owner remains the sole judge of whether or not a Bidder is "responsible." Criteria that may be used to judge "responsible," by way of illustration and not limitation, are:
1. Financial standing.
 2. Proposed project completion time.
 3. Reputation.
 4. Experience.
 5. Resources.
 6. Facilities.
 7. Judgment.
 8. Efficiency.
- B. The Owner may investigate the "responsibility" of any Bidder by using information at hand to form an intelligent judgment, such as that from the Architect, previous clients of the Bidder, their own investigation, or an outside investigation agency.

6.2 REJECTION OF PROPOSALS

- A. The Owner shall have the right to reject any or all Bids, and in particular to reject a Bid not accompanied by any required Security or data required by the Bidding Documents or a Bid in any way incomplete or irregular.
- B. The Owner reserves the right to reject any and all Bids and to ask for new Bids.
- C. The Owner reserves the right to waive any informality or irregularity concerning the bids received as it may be in their interest to do so.
- D. The Owner may cancel this project at any time prior to the complete execution of a construction contract. Neither the Owner nor any of its employees, consultants or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the project canceled for any reason prior to the complete execution of a construction contract.

6.3 LISTING OF SUBCONTRACTORS

- A. The apparent low bidder shall provide a listing of subcontractors proposed for use on the project. This list shall be provided to the Architect within 24 hours of the opening of bids. The list shall include any subcontractor that will be receiving one or more contracts totaling 10% or more of the bid price, either with or without alternates.
 - 1. If the apparent low bidder is unable to specifically identify a proposed subcontractor, such as due to discrepancies in their proposed scopes of work, all subcontractors under consideration shall be listed along with the outstanding issues to be resolved.

6.4 POST-BID CONTRACTOR QUALIFICATION

- A. Upon request of the Owner or Architect, a Contractor who has not had a contract with the Owner within the past 5 years shall submit a completed Contractor's Qualification Statement.
 - 1. Bidder shall submit a fully completed Contractor's Qualification Statement (AIA Document A305, 1986 edition).
 - a. A305-1986 may be obtained from AIA Kansas, 700 SW Jackson, Topeka, Kansas 66603, 785-357-5308.
 - 2. At Article 3, EXPERIENCE, paragraph 3.2, add the following question:
 - a. 3.2.2.1 Have there been any judgments, claims, arbitration proceedings or suits against your organization, or any of its officers, that have been resolved within the last 5 years?
 - b. 3.2.2.2 Have there been any liquidated damages assessed your organization within the last 5 years? If so, list the projects and amounts.
- B. Contractors who fail to fully complete the qualification statement may be disqualified.

6.5 NOTICE TO PROCEED

- A. It is the intent of the Owner to issue a Notice to Proceed no later than April 1, 2016. On-site construction may not begin before May 25, 2016.

6.6 DESIRED PROJECT COMPLETION

- A. It is the desire of the Owner that the Date of Substantial Completion is no later than August 15, 2016.

END OF SECTION 00 21 00

SECTION 00 42 00 - PROPOSAL FORM

BISHOP STADIUM RAILING REPLACEMENT
MANHATTAN-OGDEN UNIFIED SCHOOL DISTRICT 383
3308 ROBINSON DRIVE
MANHATTAN, KANSAS

In compliance with your Notice to Bidders and Instructions to Bidders, the Undersigned proposes to furnish all labor, materials, equipment, haulage, services and incidentals necessary to construct the project in accordance with the Construction Contract Documents prepared by The Ebert Mayo Design Group, Architects & Planning Consultants, 1115 Westport Drive, Manhattan, Kansas 66502.

The undersigned Bidder acknowledges receipt of the following Addenda:

None (___) #1 (___) #2 (___) #3 (___) #4 (___) #5 (___)

BID

The undersigned Bidder agrees to perform all work indicated on the Drawings, Project Manual and any Addenda, for the improvements, and all incidental work related thereto, for the following Base Bid:

Base Bid:

_____ Dollars (\$_____)

TIME OF COMPLETION

The Bidder agrees that the entire Work of the Base Bid will be Substantially Complete in _____ calendar days from the date of the Notice to Proceed.

ALTERNATE BIDS

The undersigned Bidder agrees to perform all work indicated on the Drawings, Project Manual and any Addenda, for the improvements, and all incidental work related thereto for the following Alternate Bids:

Alternate No. 1: Installation of traffic coating on precast concrete bleacher structure and concrete stair treads.

Add _____ Dollars (\$_____)

and Add _____ calendar days to achieve Substantial Completion.

Alternate No. 2: Installation of new galvanized steel accessible seating .

Add _____ Dollars (\$_____)

and Add _____ calendar days to achieve Substantial Completion.

PROJECT MANAGER AND CONSTRUCTION SUPERINTENDENT

The Bidder acknowledges that the Project Manager and Superintendent are the two key persons representing the Contractor who will have a significant impact upon the success of the project. The Bidder proposes to assign the following personnel to this project, for the duration of the project, unless circumstances beyond the control of the Contractor (i.e., prolonged illness, injury, death or terminated employment) prevent them from continuing on the project.

Project Manager:

Name _____

Number of years employed by the Contractor _____

Number of years at this job title with the Contractor _____

Construction Superintendent:

Name _____

Number of years employed by the Contractor _____

Number of years at this job title with the Contractor _____

CONTRACT AND CONTRACT SECURITY

If notified of the acceptance of this Bid within 60 calendar days of the time set for opening bids, the Undersigned agrees to execute the Construction Contract within 10 days of the receipt of such notification and in accordance with this Bid and the Contract Documents.

The Bidder agrees, if awarded the Contract, to execute and deliver to the Architect all required bonds and insurance certificates as set forth in the Instructions to Bidders.

DECLARATIONS

The undersigned hereby declares that he has carefully examined the Site, the Notice to Bidders, the Instructions to Bidders, the Project Manual, and the Drawings, has satisfied himself as to all quantities and conditions, and understands that in signing this Bid he waives all right to plead any misunderstanding regarding same.

The undersigned understands that their competence and responsibility and that of their proposed subcontractors as well as any other factors of interest to the Owner will be a consideration in making the award.

The Owner reserves the right to reject any or all bids and to waive any informality or irregularity concerning the bids received as it may be in their interest to do so.

Legal Name of Bidder

Corporate Seal
(if bid is submitted by a corporation)

By Authorized Officer (Signature)

Printed Name, Title

Date

Street Address

City, State, Zip

Telephone Number

Fax Number

E-Mail Address

END OF SECTION 00 42 00

SECTION 00 72 00 - GENERAL CONDITIONS

PART 1 - GENERAL

1.1 AIA GENERAL CONDITIONS

- A. AIA Document A107-2007, "Abbreviated Form of Agreement Between Owner and Contractor for Construction Projects of Limited Scope," 2007 Edition, 21 Articles, including General Conditions of the Contract for Construction, hereinafter referred to as the General Conditions, is hereby made part of these Specifications as if herein repeated. Contractor shall consult with its contents before submitting their proposal.

- 1. A107-2007 may be obtained from AIA Kansas, 700 SW Jackson, Topeka, Kansas 66603, 785-357-5308.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 00 72 00

SECTION 00 73 00 - SUPPLEMENTARY CONDITIONS

PART 1 - PRE-CONTRACTUAL SUBMITTALS

- A. Provide the Owner, through the Architect, the following items in a single submittal. Upon the Architect's acceptance, the Architect will transmit the submittal to the Owner for final signatures:
 - 1. Contract for Construction:
 - a. Three copies each, signed by the Contractor.
 - 2. Bonds:
 - a. Performance Bond: Two copies each, including power of attorney.
 - b. Labor and Material Payment Bond: Two copies each, including power of attorney.
 - c. Statutory Bond: Two copies each, including power of attorney.
 - d. Receipt from the District Court for filing the Statutory Bond: One copy.
 - 1) In lieu of separate receipt, each copy of the bonds may be stamped by the District Court.
 - 3. Insurance:
 - a. Insurance Certificates: Two copies each.
 - b. Best's Rating for the Insurance Company: One copy.

PART 2 - CONTRACT CONDITIONS, BONDS, AND INSURANCE

2.1 RELATIONSHIP TO GENERAL CONDITIONS

- A. Should conflict occur between these Supplementary Conditions and the General Conditions, the requirements of the Supplementary Conditions shall take precedence.

2.2 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND STATUTORY BOND

- A. The Contractor shall pay premium for and furnish a Performance Bond (AIA Document A312 or other document containing identical provisions), made payable to Unified School District 383, in the full amount of the Contract Sum to cover faithful performance of the contract.
- B. The Contractor shall also provide a State of Kansas Public Works Bond as required by K.S.A 60-1111 in the full amount of the Contract Sum, which shall be filed with the Clerk of the District Court in the county where the Project is being constructed. The Contractor shall provide the Architect with a receipt of the filing of such statutory bond.
 - 1. A Public Works Bond is not required for projects with a Contract Sum below \$100,000.00.

2.3 OPTIONAL PERFORMANCE AND PAYMENT GUARANTEE

- A. The Contractor may elect to use a certificate of deposit as a performance and payment guarantee in lieu of providing a Performance Bond, Labor and Material Payment Bond, and Public Works Bond. The certificate of deposit shall

have a value of not less than the amount of the Contract, and shall serve the purpose of the Performance Bond, Labor and Material Payment Bond, and Public Works Bond.

- B. The Owner may accept a certificate of deposit jointly payable to the Owner and/or the State of Kansas, without condition, in lieu of any required surety bond from a bidder or contractor in the case of any contract for construction, repairs or improvements under K.S.A. 75-3739, 75-3741 or 60-1111 and amendments thereto.
- C. The certificate of deposit shall be subject to forfeiture to the Owner or State of Kansas and shall be in a form and under such conditions as may be prescribed by the Director of the Division of Purchases for surety bonds in accordance with K.S.A. 60-1112 and amendments thereto.
- D. Each such certificate of deposit shall be retained by the Owner for at least six (6) months after the final acceptance of the work for which the contract was entered into. At the end of such time period, the certificate of deposit may be endorsed back to the Contractor if there are no claims by the Owner under the Contract or by any person making a claim against the certificate of deposit.
- E. All interest accruing under any such certificate of deposit shall belong to the Contractor unless the certificate of deposit is forfeited to the Owner or State of Kansas.

2.4 INSURANCE

A. Property Insurance: The insurance shall be provided as follows:

- 1. The Contractor shall purchase and maintain Property Insurance (All Risk Builder's Risk) required under AIA General Conditions, and shall name the Architect and Owner as additional insured parties under the policy as their interests may accrue (ATIMA).

B. Workers' Compensation and Liability Insurance: Provide insurance as follows:

- 1. Worker's Compensation as required by all applicable Federal, State, Maritime or other laws including Employers Liability with a limit of at least:
 - a. Statutory limit regarding Worker's Compensation.
 - b. \$500,000.00 each person, Employer's Liability.
- 2. The policy shall protect the Contractor from claims under Workers' Compensation Acts and require all subcontractors similarly to provide Workers' Compensation Insurance for the latter's employees unless such employees are covered by the State-approved protection offered by Contractor.
- 3. The Contractor shall also be protected against claims for injury, disease, or death of employees that for any reason may not fall within the provisions of the Workers' Compensation Act.
- 4. The policy shall include an "all states" endorsement.

C. Comprehensive Automobile Liability Insurance: Provide insurance as follows:

- 1. The Contractor shall purchase and maintain Comprehensive Automobile Liability Insurance which shall protect the Contractor against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operation on or off the site of all motor vehicles licensed for highway use, whether they are owned, non-owned, or hired.
- 2. Coverage: \$1,000,000.00 each person, \$1,000,000.00 per accident, including Property Damage of \$1,000,000.00 each occurrence.

D. Comprehensive General Liability Insurance: Provide insurance as follows:

-
1. The Contractor shall purchase and maintain Comprehensive General Liability Insurance (including Contractor's Protective Liability) to protect the Contractor against all claims arising out of any act or omission of the Contractor, the Contractor's agents, employees or subcontractors.
 2. Coverage:
 - a. Bodily Injury, \$2,000,000.00 each occurrence, \$2,000,000.00 aggregate.
 - b. Property Damage, \$2,000,000.00 each occurrence, \$2,000,000.00 aggregate.
 3. The policy shall contain no exclusion relative to blasting, collapse of building, or damage to underground property if the Contractor's work, or work under the Contractor's direction, may have any risk whatsoever of such damage.
- E. Insurance policies must be purchased from companies rated a minimum of "A-" in the latest edition of Best's Key Rating Guide, and licensed to transact business in Kansas.
1. Submit evidence of Best's rating with the required insurance certificates.
- F. No Work shall be started until the Contractor has furnished the Architect with the required rating evidence and insurance certificates.
- G. Insurance Certificates: Provide the following certificates of insurance:
1. The Contractor shall provide insurance certificates of aforementioned insurances through the Architect in 2 certified copies. The Owner and Architect shall be listed as additional insureds as their interests may accrue (ATIMA). Such certificates shall be on ACORD Certificate of Insurance 25-S or other form providing identical information.
 2. The Contractor shall provide insurance certificates of aforementioned insurances through the Architect in 2 certified copies. The Owner and Architect shall be listed as certificate holders. Such certificates shall be on ACORD Certificate of Insurance 25-S or other form providing identical information.
- H. Should any of the Contractor's insurance policies be canceled before the expiration date, the issuing companies must provide a minimum of 30 days written notice to each certificate holder.

PART 3 - PERMITS, FEES, LAWS AND REGULATIONS

3.1 BUILDING PERMITS

- A. The Contractor shall secure and pay any fees for building permits and any other required construction permits from authorities having jurisdiction over the project.

3.2 PERMITS, FEES AND REGULATIONS

- A. The Contractor shall pay all fees and shall procure all applications, permits, licenses and approvals necessary for the execution of their contract.
- B. If charges for water, sewer and other utility connections made by municipalities are costs which the Owner is obligated to pay, the Contractor shall pay these charges where required by the Specifications.
- C. The Contractor shall give all notices and comply with all State and Federal laws, codes, rules and regulations relating to the performance of the Work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

3.3 LAWS TO BE OBSERVED

- A. The Contractor shall at all times observe and comply with all federal and state laws, local laws, ordinances, orders, decrees, regulations and license requirements, whether existing or enacted subsequent to the execution of the Contract, which in any manner affect the prosecution of the work. The Contractor and Contractor's surety shall indemnify and save harmless the Owner and all of the Owner's officers, architects, engineers, representatives, agents, and employees against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor, the Contractor's employees, or subcontractors and suppliers.
- B. The Contractor hereby agrees and covenants as a condition of contract award that the Contractor will comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.), the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.), and the Americans With Disabilities Act (42 U.S.C. 12101 et seq.), and that failure to do so may be deemed by the Owner to be a breach of contract, and may subject the contract to be terminated in whole or in part by the Owner.
 - 1. Failure to comply may be deemed by the Owner to be a breach of contract and may subject the contract to be terminated in whole or in part by the Owner.

3.4 CERTAIN ACTS PROHIBITED

- A. The Contractor shall be responsible for the conduct of the Contractor's employees, Subcontractor's employees, and Supplier's employees on the site.
- B. The Contractor shall educate workers on the site and monitor their performance to ensure compliance with the following prohibitions on or near the construction site:
 - 1. No possession of firearms or hunting items on school district property.
 - 2. No language that is vulgar or profane.
 - 3. No language that is racially or sexually derogatory.
 - 4. No physical or verbal contact is to be made with students, parents or non-designated staff.
 - 5. No clothing which has vulgar, profane, or inappropriate printing or messages. This includes tobacco, alcohol and drug related products.
 - 6. No shirtless workers or workers wearing short pants. All workers are to wear clothing appropriate for construction activities.
- C. The Contractor shall comply with the following drug possession or use policy:
 - 1. No use or possession of illegal drugs or substances.
 - 2. No employees under the influence of illegal substances.
- D. The Contractor shall comply with the following alcohol use policy:
 - 1. No consumption or possession of alcoholic or cereal malt beverages.
 - 2. No employees under the influence of alcohol.
- E. The Contractor shall comply with the following tobacco use policy:
 - 1. All Unified School District 383 properties are tobacco free.
 - 2. All tobacco products, including smokeless tobacco, are prohibited.
 - 3. There are no designated areas for tobacco use.
 - 4. Smoking will not be permitted inside private vehicles which are on school district property.
 - 5. Workers may be required to sign a form acknowledging no tobacco use on school district property.

6. Violators may be asked to leave the project site and may be barred from future access to the site.
7. Smoking on site is prohibited at all times.
8. Chewing and spitting of tobacco within the building at any time is prohibited.
9. Chewing and spitting of tobacco is prohibited on site at all times.

F. The Contractor shall take immediate steps to remedy any of the following activities:

1. Activities which may be construed as discriminatory or which creates a hostile work environment.
2. Act in an unprofessional manner, including cursing, sexual harassment, etc.
3. Willfully or deliberately failing to comply with the specifications or general conditions of the construction contract.
4. Violations of the law.

G. Violation of any of the above items shall be sufficient cause for the offending individual(s) to be removed from further participation in the Work. The Contractor shall cooperate with the Owner and Architect to ensure compliance with the acts prohibited above, and the permanent removal of individuals not in compliance.

PART 4 - ARCHITECT

4.1 OBSERVATION AND INSPECTION BY THE ARCHITECT

A. The undertaking of periodic observation and inspection by the Architect or Architect's representative shall not be construed as supervision of actual construction, nor make him responsible for providing a safe place for the performance of work by the Contractor, subcontractors, suppliers, or their employees, or for access, visits, use, work, travel, or occupancy by any person.

4.2 ARCHITECT'S SELECTION AND REVIEW OF MATERIALS

- A. Where review by the Architect of material or equipment is required, obtain such review before procurement.
- B. The aesthetic values of every material and installation, such as shape, proportion, texture, finish and color, will be an important consideration to the Architect and their decisions concerning same shall be final.

PART 5 - CONSTRUCTION DOCUMENTS

5.1 DRAWINGS AND SPECIFICATIONS

- A. The intent of the Contract documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.
- B. The successful Contractor(s) will be furnished free of charge up to 10 sets of Drawings and Project Manuals, including all modifications thereof. Additional sets will be furnished at the cost of reproduction, postage and handling.
- C. Mechanical, electrical, plumbing and telecommunications subcontractors shall review and coordinate with architectural drawings prior to installing work in an individual space. Such review shall verify that architectural elements shown on mechanical, electrical, plumbing and telecommunications drawings are identical to elements

shown on architectural drawings. The Contractor shall bring to the Architect's attention any discrepancies and follow the Architect's instructions for resolving such discrepancy.

- D. If additional site information is required beyond that shown in the Contract Documents, the Contractor shall be responsible for all site, topography and property surveys not provided.
- E. Do not scale drawings for dimensions. Accurately lay out such work from dimensions indicated on architectural drawings, unless such be found in error, or by use of field verified dimensions. Consult the Architect for interpretations concerning locations of equipment.
- F. Where Drawings indicate a portion of the Work and the remainder is shown in outline, the parts drawn out apply to other like portions of the Work. Where a detail is drawn by starting only, it shall apply at the location at which it occurs and apply to similar parts of Work unless otherwise indicated.
- G. Unless otherwise indicated, a detail indicates the general application of Work at all locations where it logically applies, and other related Work incident thereto shall be provided as required to fully complete the work in a manner consistent with the detail and other related details, and as approved by the Architect.
- H. Where the Drawings and/or Specifications designate a standard of performance (e.g., fire rating, wind uplift class, insulation value, heating output, air velocity, etc.), the completed installation shall perform to the designated standard.
- I. If the Contractor observes that drawings and specifications are at variance with any laws, ordinances, rules, regulations, or codes applying to the Work, the Contractor shall promptly notify the Architect in writing, following RFI procedures, and any necessary changes will be adjusted as provided in the Contract Documents.

5.2 FORM OF SPECIFICATIONS

- A. The General Conditions and Supplementary Conditions apply to every Division of these Specifications.
- B. All specification instructions are directed to the Contractor, and the inclusion of any work by mention, note or itemization, however brief, implies the Contractor shall provide same, unless specifically directed otherwise. Where a specific Contractor is named, he shall be responsible for and provide work so designated.
- C. In specifying an item by manufacturer's catalog or brochure (as published at the date of the Project Manual), furnish such item complete with component parts necessary for the obviously intended use and installation, whether or not the description or catalog number contains all supplemental information and/or numbers of such components.

5.3 ADDITIONAL INSTRUCTIONS


- A. The Contractor may be furnished additional instructions, clarifications, and/or detail drawings by the Architect/Engineer as necessary to carry out the intent of the Work included in the Contract. The additional Drawings and/or instructions thus supplied will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the Work in accordance with the additional detail drawings and/or instructions following ASI procedures.

PART 6 - SUBSTITUTIONS

6.1 SUBSTITUTIONS

- A. The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building, including visible items of mechanical and electrical equipment, have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect will judge overall design of the work, as well as for the intrinsic merits of any proposed substitution which, in the Architect's opinion, would be out of character, obtrusive or otherwise inconsistent with the character or quality of the work.
- B. After Contract has been executed the Owner and the Architect may consider formal requests for the substitution of products in place of those specified only under the conditions as herein specified. Prior to making a formal request for substitution, contact the Architect to determine whether substitutions will be considered.
1. Requests for substitution may be considered when, in the Architect's opinion:
 - a. Extensive revisions to the Contract Documents are not required.
 - b. Changes are in keeping with the general intent of the Contract Documents.
 - c. There will be a benefit to the Owner with respect to construction quality, cost and/or time.
 - d. The request is timely, fully documented and properly submitted.
 2. By making a request for substitution, the Contractor:
 - a. Represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified, including construction, physical size, efficiency, utility aesthetic design, and color.
 - b. Represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified.
 - c. Certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent.
 - d. Will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
 3. Requests must include the following:
 - a. Full description and technical data, including physical dimensions, operating characteristics, and any other information necessary for comparison.
 - b. Clearly highlighted information for both the specified manufacturer and the proposed substitute manufacturer, including:
 - 1) Manufacturer's name, model, catalog number, photographs or cuts.
 - 2) All specified tests and requirements.
 - 3) All differences between specified item and substitute item.
 - 4) Any required alterations to any part of the Work, including that of a separate contractor or a subcontractor.
 - 5) Any other information necessary for comparison.
- C. The Architect will be allowed a reasonable time within which to evaluate each proposed substitute. The Architect will be the sole judge of acceptability, and no substitute shall be ordered, installed or utilized without the Architect's prior written acceptance through approval of Shop Drawings, Change Order, Supplementary Instruction, or other directive.

- D. No claim shall arise from any rejection of a proposed substitution.
- E. The acceptance of a proposed substitution shall not be grounds for any claim for variation to cost or time unless otherwise agreed at the time of acceptance.
- F. The Contractor shall reimburse the Owner for the charges of the Architect and the Architect's consultants for evaluating each proposed substitute, whether or not the Architect accepts a proposed substitute. Such reimbursement shall be by Change Order, and shall not require the Contractor's signature.
- G. The Contractor shall use the following Request for Substitution form all substitution requests. The Request for Substitution form is available from the Architect in electronic format.

 <p>The Ebert Mayo Design Group Architects & Planning Consultants</p>	<p>1115 Westport Drive Manhattan, Kansas 66502-2873</p> <p>(785) 776-1800 Phone (785) 776-9906 Fax www.EMGArch.com</p>		
<p>REQUEST FOR SUBSTITUTION</p>			
<p><i>This form must be completed with all relevant data before any request to change the drawing or specification requirements will be considered.</i></p>			
<p>REFERENCE DATA</p>			
Project Name:	TEM DG Project No:		
Date of Request:	Contractor Project No:		
Contractor:	Contractor Phone:		
Contractor Contact:	Contractor Fax:		
Subcontractor:	Subcontractor Phone:		
Subcontractor Contact:	Subcontractor Fax:		
<p>SUBSTITUTION REQUEST DATA</p>			
<p>Request for Substitution for:</p> <p><input type="checkbox"/> Named product.</p> <p><input type="checkbox"/> Product type, material, finish or formulation.</p> <p><input type="checkbox"/> Other.</p>	<p>Reason for request:</p>		
<p>Product / Material for which substitution is requested is shown on the following documents:</p>			
Specification:	Section No:	Page(s)	Paragraph No(s):
<p>Drawings: (List numbers of all drawings affected):</p>			
<p>COST/BENEFIT ANALYSIS</p>			
<p>Describe in detail any alteration to any other part of the Works required by use of the requested substitution:</p>			
<p>Net cost / savings of any such other required alterations, including contractor overhead and profit:</p>			\$
<p>Estimated cost of Architect's review, documentation and administration:</p>			\$
<p>Total cost / savings of other required alterations:</p>			\$
<p>Cost / savings achieved with proposed substitution (from page 2):</p>			\$
<p>Total cost / savings to Owner:</p>			\$
<p>Benefits to Owner (other than financial):</p>			
<p>ADDITIONAL INFORMATION REQUIRED</p>			
<p>Attach the following information:</p> <ol style="list-style-type: none"> 1. Manufacturer's technical data sheets on proposed and specified products, highlighting key informational differences. 2. Manufacturer's standard form of warranty on proposed and specified products. 3. Letter on manufacturer's letterhead stating that manufacturer will warrant products as specified. 			
<p>1</p>			

COMPARISON OF OPTIONS	
<i>Fill in the following blanks as are applicable to the product, material or method type. As a guide, if the item is mentioned in the Specification as a performance or materials requirement, then identical information about the proposed substitution is required to evaluate the proposed substitution. Requests lacking relevant information will be returned without action.</i>	
SPECIFIED PRODUCT, MATERIAL OR METHOD	PROPOSED SUBSTITUTION
Description:	Description:
Product Name:	Product Name:
Type:	Type:
Model No:	Model No:
Fire rating (hours):	Fire rating (hours):
Thickness:	Thickness:
Composition:	Composition:
Availability (time):	Availability (time):
Country of manufacture:	Country of manufacture:
Substrate preparation required:	Substrate preparation required:
Length of warranty available (years):	Length of warranty available (years):
Sound transmission/noise reduction coefficient (STC/NRC):	Sound transmission/noise reduction coefficient (STC/NRC):
Exposure class:	Exposure class:
Resistance to chemicals (list):	Resistance to chemicals (list):
Other specified performance criteria (list):	Other specified performance criteria (list):
UNIT COST OF PRODUCT / MATERIAL (Must be completed):	UNIT COST OF PRODUCT / MATERIAL (Must be completed):
\$ What units:	\$ What units:
Units required: Total value \$	Units required: Total value \$
CONTRACTOR'S REVIEW	
<i>I certify that I have checked the above documentation for the proposed Request for Substitution and warrant it to be substantially complete and accurate.</i>	Signature:
	Date:
ARCHITECT'S ACTION	
<input type="checkbox"/> Request approved. <input type="checkbox"/> Request denied. <input type="checkbox"/> Request approved subject to qualifications per attached documentation. <input type="checkbox"/> Returned without action	Approved by: _____ Date: _____ Comments: _____

PART 7 - CONSTRUCTION PROJECT MANAGER AND SUPERINTENDENT

7.1 CONSTRUCTION PROJECT MANAGER

- A. The Contractor shall be represented by a competent project manager who is acceptable to the Owner and Architect. The project manager shall be continuously assigned to the project, from the beginning of the Work until its final completion, and shall not be replaced without the permission of both the Owner and Architect, unless otherwise due to circumstances beyond the Contractor's control (e.g., prolonged illness/injury, death, or terminated employment).

- B. The project manager shall provide overall project coordination and management, and shall have full decision making authority of the Contractor.
- C. The project manager shall be replaced upon request of the Owner and Architect.

7.2 CONSTRUCTION SUPERINTENDENT

- A. The Contractor shall be represented by a competent superintendent who is acceptable to the Owner and Architect. The superintendent shall be continuously assigned to the project, from the beginning of the Work until its final completion, and shall not be replaced without the permission of both the Owner and Architect, unless otherwise due to circumstances beyond the Contractor's control (e.g., prolonged illness/injury, death, or terminated employment).
- B. The superintendent shall provide site coordination and management, and shall have full decision making authority of the Contractor.
- C. The superintendent shall coordinate and enforce requirements of the contract documents whether the particular item of work is under their direct supervision or under subcontract. He shall ensure that work is executed by experienced mechanics.
- D. The Contractor shall receive written permission from the Architect and Owner if the superintendent for this project is to have responsibilities at other projects.
 - 1. Non-compliance with this provision will be cause for the Owner to immediately stop the Work or stop making payments until the Contractor reassigns the superintendent exclusively to this project. Stopping Work under this provision will not extend time periods for the purposes of calculating liquidated damages.
- E. The superintendent shall be replaced upon request of the Owner and Architect.

PART 8 - CONSTRUCTION SCHEDULING, SEQUENCING AND MEETINGS

8.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. A minimum of one week prior to the Pre-Construction Conference, the Contractor shall present to the Architect a construction schedule. The Contractor shall coordinate each subcontractor's schedule and establish a mutually acceptable schedule for the entire progress of the Work. Following acceptance of the schedule by the Architect, present the schedule during the Pre-Construction Conference.
- B. The Contractor shall prepare a fully developed, horizontal bar chart type construction schedule. The Contractor may provide a critical path schedule in lieu of a bar chart schedule.
 - 1. The schedule shall include all tasks identified in the schedule of values.
 - 2. The schedule shall incorporate anticipated delays due to adverse weather conditions.
- C. Revise the schedule when the timeline for one or more activities changes in a manner to impact other activities. Issue the updated schedule within three workdays of the progress meeting when the scheduling issues have been resolved.
- D. Provide an up to date schedule at each progress meeting. In addition to the current schedule, provide the original schedule for comparison purposes, including original and current milestone dates.
- E. Provide a current construction schedule with each application for payment.

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- F. Should the Contractor fail to meet completion dates shown on the progress schedule, the Architect may issue a notice to the Contractor requiring the Contractor to submit a written plan for expediting the Work to comply with the progress schedule.
1. The plan shall be developed by the Contractor and submitted to the Architect and Owner within ten days.
 2. The plan shall specify the dates and means by which the Contractor will bring the work back on schedule. Means may include, but are not limited to, hiring additional workers, working additional hours, utilizing additional equipment, or expediting delivery of materials.
 3. If the Contractor fails to submit a written plan, or fails to comply with dates specified in the plan for bringing the Work back on schedule, the Architect may double the amount withheld as retainage on future applications for payment.

8.2 PROGRESS MEETINGS


- A. Conduct progress meetings at the project site at a regularly scheduled time every two weeks. Coordinate the scheduled meeting time with the Owner and Architect. Coordinate dates of meetings with preparation of the application for payment.
- B. In addition to representatives of the Owner and Architect, the superintendent and each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented by persons familiar with the Project and authorized to conclude matters relating to progress.
- C. The Contractor shall keep minutes of the meetings and shall provide copies of minutes to all parties concerned within three days of each meeting.
- D. Progress meetings will be held until all punch list items are complete. The Contractor and all subcontractors having incomplete punch list items are required to attend progress meetings.

PART 9 - SUBMITTALS

9.1 SUBMITTAL PROCEDURES

- A. General: Prepare and submit submittals required by individual specification sections. Types of submittals are indicated in the various sections.
1. Where possible, submit electronic submittals via e-mail as PDF files.
 2. Send submittals to Submittals@EMGArch.com.
 3. Submittal procedures, including submittal records and file naming formats, shall be coordinated with the Architect prior to transmitting any submittals.
- B. The Contractor shall, when possible, provide all required shop drawings, product data and samples for the Architect's review in a single group of submittals for each division of the specifications. Transmit submittals sufficiently in advance of performance of related construction activities to avoid delay.
1. The Architect reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are received.
- C. Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

- 1. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- D. All submittals shall be accompanied by a transmittal letter identifying the project, Architect’s project number, and specification section number for each item being submitted.
- E. All submittals shall be clearly marked indicating which features, options and accessories will be provided.
- F. The Contractor shall use the following Shop Drawings Submittal Cover Page for all shop drawing and product data submittals. Attach a completed cover page to each front page of each copy of each submittal. The cover page is available from the Architect in electronic format.

 <p>The Ebert Mayo Design Group Architects & Planning Consultants</p>		<p>1115 Westport Drive Manhattan, Kansas 66502-2873</p> <p>(785) 776-1800 Phone (785) 776-9906 Fax www.EMGArch.com</p>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: left; padding: 2px;">ROUTING</th> </tr> <tr> <td style="width: 33%; padding: 2px;">TEMGG Received:</td> <td style="width: 33%; padding: 2px;">to Reviewer: from Reviewer:</td> <td style="width: 33%; padding: 2px;">Returned to Contractor:</td> </tr> </table>			ROUTING			TEMGG Received:	to Reviewer: from Reviewer:	Returned to Contractor:
ROUTING								
TEMGG Received:	to Reviewer: from Reviewer:	Returned to Contractor:						
SHOP DRAWINGS SUBMITTAL COVER PAGE								
<p>Contractor: Address: City/State/Zip: Phone:</p> <p>Subcontractor: Address: City/State/Zip: Phone:</p> <p>Supplier: Address: City/State/Zip: Phone:</p> <p>Manufacturer: Address: City/State/Zip: Phone:</p>	<p>Project: -Project Name- -Project Owner-</p> <p>Proj No(s): P0 ____</p> <p>Date:</p> <p>Submittal No:</p> <p><input type="checkbox"/> Original Submittal <input type="checkbox"/> Complies With Contract Documents <input type="checkbox"/> Resubmittal <input type="checkbox"/> Deviates From Contract Documents</p> <p>Submittal Title:</p> <p>Spec Section(s):</p> <p>Spec Sub-section(s):</p>							
Contractor's Comments:	Architect's or Consultant's Comments:							
Contractor's Action Stamp:	Architect's or Consultant's Action Stamp:							
<p style="font-size: small; margin: 0;">Rev. 05/16/12</p>								

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- G. Contractor shall submit no more copies than actually required to construct the work, plus allowing for the following:
1. One copy retained by the Architect.
 2. One copy retained by the Owner.

PART 10 - TEMPORARY FACILITIES

10.1 GENERAL

- A. General: The Contractor shall be responsible for coordinating and scheduling among all trades and subcontractors the furnishing and use of all temporary facilities required for the work. The Contractor shall provide (or shall require that subcontractors provide) all the temporary materials and equipment necessary to accomplish the work including ladders, hoses and connections, extension cords, scaffolding and special lighting systems.
- B. Requirements of Regulatory Agencies: Comply with industry standards, applicable laws and regulations of authorities having jurisdiction over work involved in the Project. Obtain and pay all associated costs for any necessary permits and inspections for all temporary work being performed. Authorities having jurisdiction and regulations include, but are not limited to, the following:
1. Building Code requirements.
 2. Fire Marshal.
 3. Health and safety regulations.
 4. Utility company regulations.
 5. Police, Fire Department and Rescue Squad rules.
 6. Environmental protection regulations.
- C. Grades, Lines and Levels: Lay out lines, levels and locations for the work in accordance with the information furnished on the drawings. The Contractor shall be held responsible for all errors resulting from failure to verify all figures from reference points given in the furnished information and drawings, before laying out the work. When dimensions are provided, drawings shall not be scaled.
1. The Contractor shall employ the services of a qualified Engineer or Surveyor to perform all layouts and surveys required for the Work.
 2. Permanent batter boards, reference stakes and benchmarks shall be installed, protected from displacement and checked periodically for accuracy. Upon completion of the Work, all reference marks shall again be checked, replaced if necessary, and left in place. Employ the services of the Surveyor who performed the land survey of the site to replace any property corners or permanent benchmarks damaged or destroyed during construction of the Project.

10.2 ENVIRONMENTAL

- A. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.
1. Avoid use of tools and equipment that produce harmful noise.
 2. Restrict use of noise making tools and equipment to hours that will minimize complaints from building occupants and adjacent property owners.

10.3 TRAFFIC

- A. Streets and Drives: Do not interfere with normal use of streets in the vicinity of the project site except as indicated on drawings and/or as absolutely necessary to execute required work, and then only after proper arrangements have been made with applicable authorities, including traffic control.
 - 1. The Contractor shall minimize the impact of construction activities on traffic which occurs at the start and end of each school day.
- B. Vehicle Access: The contractor shall be responsible for all traffic control at streets adjacent to the project site as required when vehicles enter and leave the site. Comply with governing regulations for traffic control.

10.4 BARRIERS

- A. Temporary Fences and Gates: Provide and maintain temporary fencing and gates.

10.5 SANITATION

- A. Health and Sanitation: Comply with rules and regulations of boards and bodies having jurisdiction with respect to health and sanitation. Supply safe and sufficient drinking water and toilet facilities to all employees, obey and enforce sanitary and health regulations, and take precautions against the spread of infectious diseases.
- B. Sanitary Facilities: Existing toilets shall not be used by construction personnel.
 - 1. The Contractor shall provide temporary toilets, wash facilities, drinking water, and all necessary disposable materials. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities.

10.6 WASTE CONTAINERS AND DUMP SITES

- A. Waste Containers: The Contractor shall provide and pay for all facilities and dumpsters for use by all subcontractors as necessary to remove all their trash and construction debris from the site. Each subcontractor shall be responsible for the general clean up and trash removal associated with their work.
 - 1. Collect waste from construction areas and areas within 50 feet of the site daily.
 - 2. Obtain all necessary permits and comply with requirements for disposal.
 - 3. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather, or 3 days when the temperature is expected to rise above 80 deg F.
 - 4. Dispose of materials in a lawful manner.
- B. Prior to beginning construction work, submit a list of dump sites to be used for disposal of construction related materials. Include certification from the dump site owner that the dump is approved as a dump site by the local agencies having jurisdiction over the site.

10.7 UTILITIES

- A. Electrical: Provide and maintain temporary electrical service to the site and all temporary wiring and lighting within the confines of the Project. Provide all temporary lighting and wiring required for extension of energy of ample quality and quantity for accurate and efficient performance of the Work within the confines of the Project. The

Contractor may use the Owner's electrical service for powering required electrical systems used during construction. The Owner will pay for current during construction.

1. The Contractor shall not abuse the use of electrical service by leaving on lights, equipment, etc. when not necessary.
2. Any damage resulting from improper connection or overload shall be repaired at the expense of the Contractor and in a manner acceptable to the Owner.

B. Water: Water will be made available by the Owner at the nearest hose bib. The Owner will pay for water used during construction.

10.8 SECURITY

A. Watchman: The Contractor shall be solely responsible for the safety of their own materials, equipment, tools, etc. on the site, and shall, if he deems it necessary or expedient, employ at their own expense the services of a competent watchman. The Owner shall have no responsibility for the safety of the Contractor's materials, equipment, tools, etc., or any damage which may be done to the same due to vandalism, theft or any other cause.

PART 11 - SCOPE AND QUALITY OF WORK

11.1 SCOPE OF WORK

A. The Work included under these Drawings and Specifications consists of furnishing all items, materials, operations, or methods listed, mentioned, indicated or scheduled on the Drawings and/or in this Project Manual, including all labor, materials, and equipment, necessary and required for the construction and completion of the Project in accordance with the Contract Documents.

11.2 QUALITY OF WORKMANSHIP

A. The quality of workmanship shall be an important consideration in acceptance or rejection of Work. It is expected that the Contractor shall provide qualified workmen who can produce a first quality project. Work which fails to achieve a first quality standard may be considered defective and rejected. Such Work shall be removed and replaced with new Work of first quality.

PART 12 - CONSTRUCTION OPERATIONS

12.1 REMODELING INSTRUCTIONS

A. The Contractor understands that, in part, this is a remodeling and as such certain items cannot be fully illustrated nor explained without field observation. Thus, the Contractor has visited and examined the site and existing building in detail and made allowance for conditions that will affect the Work indicated or reasonably implied by the Drawings and these Specifications.

12.2 USE OF SITE

A. Site storage shall be confined to the area directly south of the stadium and the area below the stadium. Provide temporary fencing near the existing ticket booth to limit access to the storage area.

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- B. Limit use of site for work and storage of items relative to this project.
 - C. Do not unreasonably encumber site with materials, debris or equipment.

12.3 PROTECTION OF WORK AND PROPERTY

- A. The Contractor shall take charge of and assume general responsibility for proper protection of the site and building during construction. The Contractor shall further provide substantial enclosures at all openings as necessary for protection of the building and its inhabitants.
- B. Protect the existing structure or previously placed work by suitable coverings or other protections during installation of subsequent work. Clean off any foreign materials accidentally deposited on finish surfaces and, where such would stain, corrode or otherwise disfigure, clean same immediately with material that will not damage finished work.
- C. Protect work in place requiring job finishing until such finishing has been completed. In cold weather, protect work from damage from frost and freezing. In hot weather, protect work from rapid drying out.
- D. The Contractor shall not allow any Contractor, Subcontractor or Supplier personnel to be on the playing field at any time.
- E. Access to the running track surface by any Contractor, Subcontractor or Supplier personnel shall be limited to a minimum to prevent damage to the track.
- F. Access to the running track by the public is to be maintained at all times. Restrict public access to the stadium work area by providing temporary fencing at the east edge of the stadium. Temporary fencing posts shall be free standing and shall not attach to the existing concrete paving.

12.4 SAFETY

- A. 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.
- B. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and hazardous conditions shall be guarded, including warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America; and Occupational Safety and Health Standards, published by Occupational Safety and Health Administration, U.S. Department of Labor; or their successor publications., latest and best edition, amendments or addenda.
- C. All Contractors, Subcontractors and Suppliers hereby agree to comply with applicable occupational safety, health and environmental laws, regulations, standards, codes and/or ordinances at all times from inception through completion of this Contract. This includes, but is not limited to, the Hazard Communication Standard under the Occupational Safety and Health Act (for information and free assistance, contact the Kansas Department of Human Resources, Division of Industrial Safety and Health, 512 S.W. 6th Street, Topeka, Kansas 66603-3150, telephone 913-296-4386); and the Emergency Planning and Community Right-to-Know Act (for information and free assistance, contact the Kansas Department of Health and Environment Right-to-Know Program, 109 S.W. 9th Street, Suite 501, Topeka, Kansas 66612-1290, telephone (785-296-1690).

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- D. The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of authorities having jurisdiction bearing on safety of persons or property or their protection from damage, injury, or loss.
 - E. 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.
 - F. The Contractor shall be responsible for the safety of all persons while on the construction site. The Contractor shall maintain construction area safety which may include providing and maintaining warning signs, lights, signal devices, barricades, guard rails, fences, and other devices appropriately located on site which shall give proper and understandable warning to all persons of danger, entry onto land, structure, or equipment as required by code and all other regulatory requirements.
 - G. If the Contractor encounters on the site, material believed to be hazardous which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Architect and the Owner in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Contractor if in fact the material is hazardous and has not been rendered harmless. Hazardous materials are those as defined by Kansas Department of Health and Environment's response list.
 - H. The Contractor shall promptly take precautions which are necessary and adequate against conditions created during the progress of the Contractor's activities hereunder which involve a risk of bodily harm to persons or a risk of damage to property. The Contractor shall continuously inspect Work, materials, and equipment to discover any such hazardous conditions and shall be solely responsible for correction of any such conditions.
 - I. It shall be the sole responsibility of the Contractor to enforce or direct safety rules or procedures. It shall not be the responsibility of the Owner or Architect to enforce or direct safety rules or procedure.
 - J. The Contractor shall hold harmless and indemnify the Owner and Architect from damages and expenses from any and all claims related to this Article for bodily injury or property damage or expenses incurred by any person or firm.
 - K. The Owner reserves the right to issue a stop work order in the event that building occupants may be placed in danger.
 - L. The Contractor shall immediately inform the Owner of all accidents requiring medical attention.

12.5 MATERIALS AND EQUIPMENT

- A. The intent of these Specifications is to allow ample opportunity for the Contractor to use the Contractor's ingenuity and abilities to prosecute the work to the Contractor's and the Owner's best advantage, and to permit maximum competition in bidding on standards of materials and equipment required.
- B. These Specifications may identify the required materials and equipment by naming one or more manufacturers brand, model, catalog number and/or other identification. Bids shall include only those brands named, except as hereinafter provided.
- C. Where materials or equipment are described but not named, provide first quality items, adequate in every respect for the intended use. Such items are subject to the Architect's approval prior to procurement.

12.6 RECEIVING AND STORING MATERIALS

- A. On receipt of materials, check for in transit damage in ample time to replace any damaged materials prior to installation time.
- B. Whenever possible, deliver materials and equipment to the project site in the manufacturer's original package, keeping labels intact until final cleaning. Where items are to be job assembled, components shall be labeled, tagged, or otherwise properly identified until incorporated in project.
- C. The Contractor shall assume full responsibility for materials stored on the site. Transport and store materials in a manner to prevent deterioration, staining, soiling and intrusion of foreign materials subject to damage from elements such as water, snow, ice, or dust. Provide proper storage temperature for materials subject to damage by freezing, frost, or excessive heat.
- D. Remove from premises, and replace with new, any materials showing deterioration or damage, unless the Architect has given permission to repair damaged materials.
- E. Relocate any stored products that interfere with operations of the Owner.
- F. All stored materials shall be contained within fenced areas.

12.7 APPROPRIATE MATERIALS AND INSTALLATIONS

- A. Furnish materials and equipment that have been properly inspected and tested in accordance with accepted industry standards. Make field laboratory tests where specified herein, the cost of such being paid for by the Contractor, unless otherwise specified.
- B. The Contractor, and the Contractor's subcontractors and material suppliers shall observe the Drawings and Project Manual and should any material and/or its installation be indicated or specified in a manner not approved by the material manufacturer, notify the Architect and receive their instructions.
- C. Materials prohibited by governmental authority or regulation from being used in construction shall not be used on this project.

12.8 INSTALLATION

- A. Furnish, apply, install, connect, erect, clean and condition manufactured articles, materials and equipment per manufacturer's printed directions, unless otherwise indicated or specified.
- B. The manufacturer's printed directions must be on the site prior to and during installation of materials and equipment.
- C. Make field check of actual building dimensions before fabricating products.
- D. The Contractor shall coordinate trades that must provide sleeves, recesses and openings in their work as required for work of other trades.
- E. Provide all attachment devices and materials necessary to secure materials together or to other materials and to secure work of other trades.
- F. Make allowance for ample expansion and contraction for all building components.

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- G. Furnish manufacturers with necessary templates to ensure proper fit of components where proper fit of work depends upon close tolerance of manufactured products.
 - H. Install materials only when conditions of temperature, moisture, humidity, and condition of adjacent building components are conducive to achieving best installation results.
 - I. In job assembling, each trade shall properly cut and fit to make its assemblies fit accurately. Cut and fit as necessary for other trades having work occurring herein. Correct errors in cutting, shop fabrication and installation. Where necessary to cut into other building components, do so only in a manner not to damage the building structurally nor aesthetically, then repair adjoining parts thoroughly and neatly.
 - J. Erect, install and secure building components in a structurally sound and appropriate manner. Where necessary, temporarily brace, shore, and otherwise support members until final connection or installation. Brace walls and other structural elements with shoring or other structural supports in place as long as necessary for safety and until structure is strong enough to withstand all loads involved.
 - K. Assemble units in best acceptable manner where construction consists of a series of courses of units to provide a structurally sound installation; waterproof where exposed to exterior. Accurately plumb and level all courses and verify levels of frequent courses with instruments.
 - L. Handle materials in manner to prevent scratching, abrading, distortion, chipping, breaking or other disfigurement.
 - M. Fabricate and install materials true to line, plumb and level, unless indicated otherwise. Leave finished surfaces smooth and flat or of smooth contour where indicated, free from wrinkles, warps, scratches, dents and other imperfections.
 - N. Furnish materials in longest practical lengths and largest practical sizes to avoid unnecessary jointing. Make all joints secure.
 - O. Do not load structure with weight or forces that will endanger structure.
 - P. Transport, handle, store, and erect materials in a manner to keep them free from injury.
 - Q. Make seams tight, secure and inconspicuous where sheet materials join in the same plane.
 - R. Scribe and/or otherwise neatly fit materials to adjoining materials.
 - S. Mix no more materials than can be used before materials begin to "set." Mix no partially "set" batch with another. Clean tools and appliances prior to mixing materials that can be contaminated.
 - T. Do not disturb materials requiring curing time until appropriate curing time has transpired.
 - U. Conduct work in a manner to avoid injury to previously placed work.
 - V. Consult the Architect for mounting height or position of any unit not specifically located.
- 12.9 CLOSING-IN WORK
- A. Notify the Architect to inspect any work when placing of subsequent work would prevent observation of previous work.

12.10 REPAIRS

- A. Unless the Architect grants permission to repair any defective Work, remove defective Work from project and replace with new Work in accordance with Contract Documents. If permission is granted, repair according to Architect's direction. Permission to repair any such Work shall not constitute a waiver of Architect's right to require complete replacement of defective work if repair operation does not restore quality and appearance of member or surface to Architect's satisfaction.

12.11 UNFAVORABLE CONSTRUCTION CONDITIONS

- A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine operations to Work that will not be affected adversely thereby. No portion of the Work shall be constructed under conditions that would adversely affect the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the Work in a proper and satisfactory manner.
- B. In the event of temporary suspension of work, or during inclement weather, or whenever the Architect shall direct, the Contractor and their subcontractors shall carefully protect their work and materials against damage or injury from the weather. If, in the opinion of the Architect, any work or materials that have been damaged or injured by reason of failure to protect the work, such materials shall be removed and replaced at the expense of the Contractor.

12.12 ACCESS

- A. Contractor shall provide adequate access to the site and the structure for both construction and the Owner's operations. The Contractor shall also provide and maintain at least one temporary or permanent access to each working elevation that is to be permanently occupied.

12.13 YARD MAINTENANCE AND SITE CLEANING

- A. The Contractor shall maintain the construction site in a clean manner.
- B. Pick up litter within the project site and any litter within 50 feet of the project site, along access routes, in the Contractor's storage areas, and any construction debris outside these areas. Debris is to be placed in the Contractor's trash containers. The Contractor is responsible for all removal of construction debris.
- C. Power wash the street and sidewalks after the Contractor's vehicles have left tracks on the way to or from the project site. Remove clods of dirt, etc, and remove from site.
- D. Remove marks and stains from paved surfaces caused by tires, oils, fuels, solvents, etc.
- E. The Contractor and each Subcontractor shall follow the Best Management Practices as outlined by the U.S. Environmental Protection Agency.

PART 13 - PAYMENTS

13.1 PAYMENTS TO THE CONTRACTOR

- A. Payment shall be made as outlined in the Instructions to Bidders. Each Application for Payment shall be consistent with previous applications and payments (if any) as certified by the Architect and paid by the Owner.

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- B. Payment Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Application for Payment. Other forms having identical information may be utilized if approved by the Architect.
- C. Schedule of Values: Unless otherwise approved by the Architect, the schedule of values on Continuation Sheets G703 shall be subdivided into labor, material and other categories. The schedule of values shall be provided one week prior to the Pre-Construction Conference.
1. No individual item shall exceed the following percentage of the total contract value:
 - a. 8% maximum per item.
 2. Include at the top of the schedule of values one line item titled "General Contractor Project Closeout Requirements." Unless otherwise agreed with the Architect, certification for payment of this item shall be approved only on the final application for payment. To receive payment for this line item all subcontractors and material suppliers shall have been paid in full, and project closeout paperwork and other requirements have been received and approved or accepted. The "General Contractor Project Closeout Requirements" amount shall not be less than the following percentage of original total contract value:
- D. Payment for materials stored off site in excess of \$10,000.00 in value may require documentation as requested by the Architect. Such documentation includes items such as a bill of sale, digital photographs, and notarized statements.
- E. Payment Application Times: Unless otherwise approved by the Architect, each progress payment application date shall be as of the fifteenth day of a month, with the period of construction Work covered by each Application for Payment as the previous calendar month.
1. Submit three copies of the Application for Payment, completed and notarized, supported by any data requested by the Owner or Architect to substantiate the Contractor's right to payment.
 2. Any Applications for Payment received after the required date will fall into the next payment period.
 3. Provided an Application for Payment is received by the Architect no later than the required date, payment shall be made by the Owner not later than forty-five days after the Architect receives the Application for Payment.

PART 14 - CHANGES

14.1 DELAYS DUE TO WEATHER CONDITIONS

- A. The following are considered reasonable anticipated days of adverse weather on a monthly basis and shall be included in the Contract Time.
1. January - 10 days.
 2. February - 9 days.
 3. March - 7 days.
 4. April - 6 days.
 5. May - 4 days.
 6. June - 5 days.
 7. July - 5 days.
 8. August - 4 days.
 9. September - 3 days.
 10. October - 2 days.
 11. November - 4 days.
 12. December - 7 days.

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- B. An adverse weather day is defined as a calendar day where at least 4 hours of work on the principal unit of Work underway, between the hours of 8:00 am and 5:00 pm, cannot be completed because of weather conditions that cannot be mitigated by reasonable action on the part of the Contractor. To meet the criteria for an adverse weather day, one of more or the following requirements must be met within the work day and cause and delay a scheduled critical path construction activity:
1. Rainfall equal to or greater than 0.10 inches.
 2. Average temperatures less than 20 degrees Fahrenheit.
 3. Snowfall in excess of 1.0 inches.
 4. Sustained wind speed in excess of 25 mph.
- C. The weather experienced at the project site during the contract period must be found to be more severe than the adverse weather to be anticipated for the project location during any given month.
- D. The delay must be related to the unusually severe weather and not due to the Contractor's fault, negligence, or their failure to maintain the approved construction schedule.
- E. Adverse weather days shall be recorded and submitted, in writing, to the Architect on a monthly basis.
1. The Contractor shall submit documentation indicating cause, effect and delay including the adverse weather criteria on each weather day that occurred during the month to be evaluated. Any day that is submitted that does not meet the criteria may be deemed not to qualify as an adverse weather day.
 2. Documentation of adverse weather criteria shall be submitted in their original form from a recognized weather recording station, newspaper, computer information service, or other Architect-approved source. In the event there is no weather recording source at or near the project location, the Contractor shall record the daily weather information in a format acceptable to the Architect. The weather documentation source should be determined at the pre-construction meeting.
- F. The Architect will make a determination on the actual impact of adverse weather on distinct construction activities subject to weather conditions. The Architect will take into account weather conditions in the months preceding and following the adverse weather month, and assess the overall impact on the scheduled critical path.
- G. Adverse weather days beyond those listed may be allowed to extend the Contract Time only if authorized by the Architect and Owner.

14.2 CHANGE ORDERS

- A. The Contractor, in connection with any proposal he makes for a contract modification, shall furnish a price breakdown itemized as required by the Owner or Architect. An analysis shall include all material, labor, equipment, subcontract and overhead costs, as well as profit. It shall cover all work involved in the modification whether such work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. If the proposal includes a time extension, provide a justification for the extension.
- B. Charges or credits to the contract sum for work shall be determined by one or more of the following methods:
1. Unit or lump sum prices previously stipulated and approved in the Contractor's original proposal.
 2. An agreed lump sum proposal with an itemized breakdown on major items of labor and materials including:
 - a. Material quantities and unit costs.
 - b. Labor breakdown by trade and unit costs.
 - c. Construction equipment.
 - d. Workers' compensation and liability insurance.
 - e. Employment taxes under FICA and FUTA.

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3. Cost plus work, with a not to exceed maximum dollar limit, based upon the actual cost of the work performed including those items above.
- C. No overhead, profit or fee shall be included in the breakdown of costs in either 2 or 3 above. To the total of these costs, the Contractor may add a negotiated amount for overhead, profit or fee, not exceeding the maximum amounts shown below, which shall be considered to include, but not limited to the costs of insurance (other than liability), bond, jobsite staff and office expense, small tools and incidental job burdens.
1. To the Contractor on work performed by other than their own forces:
 - a. Overhead = 0%, Profit = 0%, Fee = 10%.
 2. To a first level subcontractor on work performed by their subcontractors:
 - a. Overhead = 0%, Profit = 0%, Fee = 10%.
 3. To the Contractor and/or their subcontractors for that portion of work performed with their respective forces:
 - a. Overhead = 10%, Profit = 10%, Fee = 0%.
- D. On proposals covering both increases and decreases in the amount of the Contract, the application of overhead and profit percentages shall be on the net increase in direct costs for the Contractor or subcontractor performing the work.
- 14.3 CHANGE ORDERS FOR ADDITIONAL INSPECTIONS OR UNCOVERING AND CORRECTING WORK
- A. Additional Substantial Completion Inspections: The Contractor shall be responsible for the costs inspections to determine Substantial Completion beyond the initial inspection and one additional inspection. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the costs of the Architect's additional services and expenses made necessary by such inspections.
 - B. Additional Final Completion Inspections: The Contractor shall be responsible for the costs of additional inspections to determine final completion. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the costs of the Architect's additional services and expenses made necessary by such additional inspections. Such Change Order shall not require the approval of the Contractor.
 - C. Additional Expenses Related to Uncovering and Correcting Work: In the event the Contractor's work must be uncovered, rejected and corrected, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the costs of the Architect's additional services and expenses made necessary by such rejected work. Such Change Order shall not require the approval of the Contractor.

PART 15 - CORRECTION PERIOD

15.1 TWO YEAR CORRECTION PERIOD

- A. Within two years following the date of Substantial Completion the Contractor shall, upon notice from either the Owner or Architect, promptly correct defects in materials and/or workmanship that have appeared in any of the work. Such correction shall be to a state of conditions originally required by the Contract Documents and at the Contractor's expense.

PART 16 - PROJECT CLOSEOUT REQUIREMENTS

16.1 RECORD DRAWINGS

- A. The Contractor shall maintain a clean set of drawings and specifications to be used solely for recording all changes from the original drawings and specifications. On completion of the project, a new set of prints shall be obtained from the Architect, and the Contractor shall have a competent draftsman redraw neatly in red pencil all changes noted on the record set, including the location of capped pipes by two dimensions and depth below grade; invert elevations; actual invert elevations for all soil and waste piping; additional valves, drains, cleanouts, changes in conduit routing, changes in wiring, changes in pull or junction boxes, etc., and change orders issued during construction. If the field set is kept in a neat manner, it may be submitted for the final set. Final payment will not be authorized until the final record set is received and checked for completeness.

16.2 PROJECT COMPLETION

- A. The term "Substantial Completion" is defined as completion of the entire Work required by the contract documents, including submittal of all required closeout paperwork.
- B. Before being eligible for final payment, the Contractor shall deliver to the Owner, through the Architect:
 - 1. Record Documents: 1 copy of record documents for the project.
 - 2. Completed Punch Lists: 1 copy of all completed punch lists.
 - 3. Inspection Reports: 2 copies of each inspection report provided by an authority having jurisdiction.
 - 4. Extra Materials Receipts: 1 copy of each form signed by owner's representative who received extra materials required by the specifications.
 - 5. Warranties: 2 copies of all manufacturer's and special warranties specified for materials, equipment and installation.
 - 6. Subcontractors/Suppliers List: 2 copies of a list showing all subcontractors and material suppliers for the project. The list shall include company name, address, phone number, and contact person.
 - 7. Dump Sites: 2 copies of a list showing dump sites used for disposal of construction materials. Include the address, owner's name, and type of material dumped at each site.
 - 8. Payment Affidavit: 2 copies of Contractor's Affidavit of Payment of Debts and Claims, on AIA Form G706, only.
 - 9. Contractor Lien Release: 2 copies of Contractor's Affidavit of Release of Liens, on AIA Form G706A, only.
 - 10. Subcontractor Lien Releases: 2 copies of subcontractor's release of liens, from subcontractors as selected by Owner or Architect, and on form as approved by Architect.
 - 11. Consent of Surety: 2 copies of Consent of Surety to Final Payment, AIA Form G707 only.
 - 12. Sales Tax Exemption Certificate: 2 copies of the completed Sales Tax Exemption Project Completion Certificate.
 - 13. Lien Waivers: 1 notarized copy of lien waivers (or release of claims statement) from each subcontractor and material supplier stating that each has been paid in full for all work and materials on the project.
 - 14. If required by Owner or Architect, other data establishing payment of or satisfaction of all obligations, such as receipts, releases and waivers of liens rising out to the Contract, to the extent and in such form as may be designated by Owner or Architect.
 - 15. If required by Owner or Architect, one copy each of all invoices properly identified with the Sales Tax Exemption number as required by the State of Kansas. (The Owner will retain such invoices for a period of not less than 5 years.)

END OF SECTION 00 73 00

SECTION 01 73 29 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work consists of the following:
 - 1. Removal of existing bleacher seats and anchors, and patching anchor holes.
 - 2. Removal of existing metal stairs and railings, and patching anchor holes.
 - 3. Patching deteriorated concrete on upper portion of cast-in-place walls and precast bleacher sections.

1.2 MATERIALS OWNERSHIP

- A. Demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.4 PROJECT CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: Not expected to be present in building to be reroofed.
- D. Storage or sale of removed items or materials on-site is not permitted.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- D. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.

3.3 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.5 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 01 73 29

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
 - 1. Stair treads.
 - 2. Concrete patching.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with fly ash; subject to compliance with requirements.

1.3 ACTION SUBMITTALS

- A. Design Mixtures: For concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each of the following, signed by manufacturers:
 - 1. Cementitious materials.
 - 2. Admixtures.
 - 3. Form-release agents.
 - 4. Steel reinforcement and accessories.
 - 5. Waterstop.
 - 6. Curing compounds.
 - 7. Vapor retarders.
 - 8. Repair materials.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- C. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

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- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
 - E. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301, "Specifications for Structural Concrete."
 - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
 - F. Concrete Testing Service: Engage a qualified independent testing agency to design concrete mixtures.
 - G. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other approved panel materials.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

2.2 STEEL REINFORCEMENT

- A. Epoxy-Coated Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars, epoxy coated, with less than 2 percent damaged coating in each 12-inch (300-mm) bar length.
- B. Epoxy-Coated Wire: ASTM A 884/A 884M, Class A, Type 1 coated, as-drawn, plain-steel wire, with less than 2 percent damaged coating in each 12-inch (300-mm) wire length.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I/II, gray.
 - 2. Fly Ash: ASTM C 618, Class F or C.
- B. Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.4 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.5 CURING MATERIALS

A. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

B. Water: Potable.

C. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating. Verify compatibility with traffic coating.

2.6 RELATED MATERIALS

A. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

2.7 CONCRETE MIXTURES, GENERAL

A. Prepare design mixture for concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.

2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in pumped concrete and concrete with a water-cementitious materials ratio below 0.50.

2.8 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Stair Treads: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Minimum Cementitious Materials Content: 540 lb/cu. yd.
3. Slump Limit: 4 inches, or 8 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.

2.9 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.10 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
 1. Class A, 1/8 inch for smooth-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 1. Do not use rust-stained steel form-facing material.

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- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
 - G. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
 - H. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
 - I. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
 - J. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of walls and similar parts of the Work that do not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete must be hard enough to not be damaged by form-removal operations and curing and protection operations must be maintained.
 - 1. Leave formwork for other structural elements that support weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.4 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

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1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- C. Deposit and consolidate concrete in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Screed slab surfaces with a straightedge and strike off to correct elevations.
 3. Slope surfaces uniformly to drain.
 4. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- D. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- E. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.5 FINISHING FORMED SURFACES

- A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

3.6 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
1. Medium-Textured Broom Finish: Draw a bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, medium-line texture.

3.7 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Formed Surfaces: Cure formed concrete surfaces, including supported slabs and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces.
- D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces not scheduled to receive floor coverings.
 - b. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.
 - 2. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.

3.8 CONCRETE SURFACE REPAIRS

- A. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried.
 - 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- B. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
4. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

C. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.9 FIELD QUALITY CONTROL

A. Testing and Inspecting: Engage a qualified testing and inspecting agency to perform field tests and prepare test reports.

B. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour, plus one set for each additional 25 cu. yd. or fraction thereof.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C 31/C 31M.
 - a. Cast and laboratory cure four standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C 39/C 39M; test one laboratory-cured specimen at 7 days and two specimens at 28 days. Retain the fourth to be tested as directed by Architect.
 - a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
8. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as

directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.

11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 03 30 00

SECTION 05 51 00 - METAL STAIRS AND ACCESSIBLE SEATING

1.1 SUMMARY

- A. Section includes preassembled steel stairs and accessible seating with serrated grate treads.

1.2 ACTION SUBMITTALS

- A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work including anchors installed in concrete.

1.3 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

1.4 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.5 COORDINATION

- A. Coordinate installation of anchorages for metal stairs. Furnish setting drawings, templates, and directions for installing anchorages, anchor bolts, and items with integral anchors, that are to be embedded in concrete. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

- A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
- B. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- C. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.
- D. Uncoated, Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, either commercial steel, Type B, or structural steel, Grade 25, unless another grade is required by design loads; exposed.

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- E. Uncoated, Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, either commercial steel, Type B, or structural steel, Grade 30, unless another grade is required by design loads.

2.3 FASTENERS

- A. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.
- B. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.
- C. Machine Screws: ASME B18.6.3.
- D. Plain Washers: Round, ASME B18.22.1.
- E. Lock Washers: Helical, spring type, ASME B18.21.1.
- F. Post-Installed Anchors: Capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 FABRICATION, GENERAL

- A. Provide complete stair assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.
 - 1. Join components by welding unless otherwise indicated.
 - 2. Use connections that maintain structural value of joined pieces.
- B. Preassembled Stairs: Assemble stairs in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- E. Form exposed work with accurate angles and surfaces and straight edges.
- F. Weld connections to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.
4. Weld exposed corners and seams continuously unless otherwise indicated.
5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 2 welds: completely sanded joint, some undercutting and pinholes okay.

- G. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.
- H. Fabricate joints that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

2.6 STEEL-FRAMED STAIRS AND ACCESSIBLE SEATING

A. Stair and Seating Framing:

1. Fabricate stringers of steel channels.
 - a. Provide closures for exposed ends of channel stringers.
2. Construct platforms of steel channel headers and miscellaneous framing members.
3. Weld stringers to headers; weld framing members to stringers and headers.

2.7 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

2.8 STEEL AND IRON FINISHES

A. Galvanized Railings:

1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
4. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

- B. Provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal stairs to in-place construction. Include threaded fasteners for concrete inserts, through-bolts, and other connectors.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.

- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- E. Field Welding: Comply with requirements for welding in "Fabrication, General" Article.
- F. Place and finish concrete fill for treads and platforms to comply with Division 03 Section "Cast-in-Place Concrete."

3.2 ADJUSTING AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas. Repair hot-dip galvanizing to comply with the following:
 - 1. Hot Galvanizing Repair Low-Melting Point Zinc Alloy Repair Rods:
 - a. Zinc Cadmium: Liquid temperature 518°F-527°F.
 - b. Zinc-Tin Copper Alloys: Liquid temperature 660°F-670°F.
 - 1) Zinc-tin copper alloys must be applied while in a semi-solid state in the preferred application temperature range from 480°F-570°F.
 - 2. Repair Procedures Using Zinc-Based Solder:
 - a. Surfaces must be cleaned using a wire brush, a light grinding action or a mild blasting. To ensure a smooth reconditioned coating can be affected, surface preparation shall extend into the surrounding, undamaged galvanized coating.
 - b. If the area to be repaired includes welds, all weld flux residue and weld spatter shall be removed by wire brush, chipping, grinding or power scaling.
 - c. Areas to be repaired shall be preheated to at least 600°F.
 - 1) Do not heat the surface over 750°F or allow the surrounding galvanized coating to be burned. Wirebrush the surface to be reconditioned during preheating and pre-flux.
 - a) Pre-flux is required when solder will not adhere to steel surface.
 - d. Rub the cleaned, preheated welds/areas with the repair rod to deposit an evenly distributed layer of zinc alloy.
 - e. Thickness shall match original hot-dip galvanizing.
 - f. Rinse with water or wipe with a damp cloth to remove flux residue.

3.3 PROTECTION

- A. Protect finishes of railings from damage during construction period.

END OF SECTION 05 51 00

SECTION 05 52 13 - PIPE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes hot-dip galvanized steel pipe and tube handrails and guardrails for exterior locations.

1.2 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Manufacturer's product lines of mechanically connected railings.
 - 2. Railing brackets.
 - 3. Grout and anchoring cement.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Sample: Provide an assembled composite sample demonstrating the quality of each type of weld and bend to be encountered in the project.

1.3 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

1.4 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.6 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete. Deliver such items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.2 STEEL AND IRON

- A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
- B. Steel Tubing: ASTM A 500/A 500M, cold-formed steel tubing.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

2.3 FASTENERS

- A. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated.
 - 1. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.

2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- C. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

2.5 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field welds. Clearly mark units for assembly and coordinated installation.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

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- D. Form work true to line and level with accurate angles and surfaces.
 - E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
 - F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
 - G. Connections: Fabricate railings with welded connections.
 - H. Welded Connections: Provide welded steel joint construction meeting Type 2 joint finish standard developed by the National Ornamental & Miscellaneous Metals Association (NOMMA).
 - 1. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - b. Obtain fusion without undercut or overlap.
 - c. Remove flux immediately.
 - d. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
 - I. Form changes in direction by bending or by inserting prefabricated elbow fittings.
 - J. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
 - K. Close exposed ends of railing members with prefabricated end fittings.
 - L. Provide returns at ends handrails unless otherwise indicated.
 - M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
 - N. Provide inserts and other anchorage devices for connecting railings to concrete work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.
- 2.6 FINISHES, GENERAL
- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- 2.7 STEEL AND IRON FINISHES
- A. Galvanized Railings:
 - 1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
 - 2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
 - 3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
 - 4. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

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- B. Provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine assemblies where reinforced to receive anchors to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

- A. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 - 2. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- B. Adjust railings before anchoring or welding to ensure matching alignment at abutting joints.
- C. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

3.4 ANCHORING POSTS

- A. Anchoring Posts in Concrete: Provide the following:
 - 1. Core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
 - 2. Leave anchorage joint exposed with 1/8-inch buildup, evenly sloped away from post.
- B. Attaching Posts to Concrete: Provide through-bolt connections as shown on the Drawings.

3.5 ADJUSTING AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas. Repair hot-dip galvanizing to comply with the following:
 - 1. Hot Galvanizing Repair Low-Melting Point Zinc Alloy Repair Rods:

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- a. Zinc Cadmium: Liquid temperature 518°F-527°F.
 - b. Zinc-Tin Copper Alloys: Liquid temperature 660°F-670°F.
 - 1) Zinc-tin copper alloys must be applied while in a semi-solid state in the preferred application temperature range from 480°F-570°F.

2. Repair Procedures Using Zinc-Based Solder:

- a. Surfaces must be cleaned using a wire brush, a light grinding action or a mild blasting. To ensure a smooth reconditioned coating can be affected, surface preparation shall extend into the surrounding, undamaged galvanized coating.
- b. If the area to be repaired includes welds, all weld flux residue and weld spatter shall be removed by wire brush, chipping, grinding or power scaling.
- c. Areas to be repaired shall be preheated to at least 600°F.
 - 1) Do not heat the surface over 750°F or allow the surrounding galvanized coating to be burned. Wirebrush the surface to be reconditioned during preheating and pre-flux.
 - a) Pre-flux is required when solder will not adhere to steel surface.
- d. Rub the cleaned, preheated welds/areas with the repair rod to deposit an evenly distributed layer of zinc alloy.
- e. Thickness shall match original hot-dip galvanizing.
- f. Rinse with water or wipe with a damp cloth to remove flux residue.

3.6 PROTECTION

- A. Protect finishes of railings from damage during construction period.

END OF SECTION 05 52 13

SECTION 07 18 00 - TRAFFIC COATING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes traffic coating suitable for vehicular traffic in a non-vehicular setting.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product, including installation instructions.
- B. Samples: For exposed finish, prepared on rigid backing.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Certificates: For type of traffic coating.
- C. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For traffic coating to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply traffic coating to damp or wet substrates, when temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F above dew point.
 - 1. Do not apply traffic coating in snow, rain, fog, or mist, or when such weather conditions are imminent during the application and curing period. Apply only when frost-free conditions occur throughout the depth of substrate.

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- B. Do not install traffic coating until items that penetrate membrane have been installed.

1.8 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Adhesive or cohesive failures.
 - b. Abrasion or tearing failures.
 - c. Surface crazing or spalling.
 - d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.
 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Material Compatibility: Provide primers; base-, intermediate-, and topcoat; and accessory materials that are compatible with one another and with substrate under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

2.2 TRAFFIC COATING

- A. Traffic Coating: Manufacturer's standard, traffic-bearing, seamless, high-solids-content, cold liquid-applied, elastomeric, waterproofing membrane system with integral wearing surface for vehicular traffic; according to ASTM C 957.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. "Iso-Flex," LymTal International Inc.
 - b. "Autogard," Neogard; Division of Jones-Blair.
 - c. "Vulkem 350/345/346," Tremco Incorporated; an RPM company.
 - B. Primer: Liquid primer recommended for substrate and conditions by traffic-coating manufacturer.
 - C. Aggregate: Manufacturer's standard aggregate for use indicated.
 - D. Preparatory and Base Coats: Regardless of product or system listed above, topping shall be installed in three coats. Base coat shall be 25 mils. Intermediate (sand) coat shall be 15-20 mils. Top coat shall be 10-15 mils. Total thickness shall be 55 mils minimum.
 - E. Provide ultraviolet screening in all top coat material.

2.3 ACCESSORY MATERIALS

- A. Joint Sealants: Subject to compliance with requirements, provide products by one of the following:

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1. Horizontal Joints:
 - a. "Iso-Flex 880GB/881," LymTal International Inc.
 - b. "Vulkem 227, 245, or 922," Tremco Incorporated, an RPM company.
 2. Vertical and Cove Joints:
 - a. "Iso-Flex 881/830," LymTal International Inc.
 - b. "Vulkem 922" Tremco Incorporated, an RPM company.
- B. Adhesive: Contact adhesive recommended in writing by traffic-coating manufacturer.
- C. Reinforcing Strip: Fiberglass mesh recommended in writing by traffic-coating manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for surface smoothness, surface moisture, and other conditions affecting performance of traffic-coating work.
- B. Verify that substrates are visibly dry and free of moisture.
- C. Proceed with installation only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.
 1. Begin coating application only after minimum concrete-curing and -drying period recommended in writing by traffic-coating manufacturer has passed and after substrates are dry.
 2. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. General: Before applying traffic coatings, clean and prepare substrates according to ASTM C 1127 and manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application. Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating manufacturer.
- B. Mask adjoining surfaces not receiving traffic coatings to prevent overspray, spillage, leaking, and migration of coatings. Prevent traffic-coating materials from entering deck substrate penetrations and clogging weep holes and drains.
- C. Concrete Substrates: Mechanically abrade surface to a uniform profile acceptable to manufacturer, according to ASTM D 4259.
 1. Remove grease, oil, paints, and other penetrating contaminants from concrete.
 2. Remove concrete fins, ridges, and other projections.
 3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents, and other incompatible materials that might affect coating adhesion.
 4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM D 4258.

3.3 TERMINATIONS AND PENETRATIONS

- A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at expansion joints, drains, and sleeves according to ASTM C 1127 and manufacturer's written instructions.

3.4 JOINT AND CRACK TREATMENT

- A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C 1127 and manufacturer's written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to ASTM D 4258.

- 1. Comply with recommendations in ASTM C 1193 for joint-sealant installation.

- B. Apply reinforcing strip in traffic-coating system where recommended in writing by traffic-coating manufacturer.

3.5 TRAFFIC-COATING APPLICATION

- A. Apply traffic coating according to ASTM C 1127 and manufacturer's written instructions.

- B. Apply number of coats of specified compositions for type of traffic coating.

- C. Verify that wet film thickness of each coat complies with requirements every 100 sq. ft.

- D. Uniformly broadcast aggregate on coats specified to receive aggregate. Embed aggregate according to manufacturer's written instructions. After coat dries, sweep away excess aggregate.

- E. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate on vertical surfaces.

- F. Cure traffic coatings. Prevent contamination and damage during application and curing stages.

3.6 FIELD QUALITY CONTROL

- A. Final Traffic-Coating Inspection: Arrange for traffic-coating manufacturer's technical personnel to inspect membrane installation on completion.

- 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.

3.7 PROTECTING AND CLEANING

- A. Protect traffic coatings from damage and wear during remainder of construction period.

- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07 18 00

SECTION 13 12 50 – ALUMINUM BLEACHER SEATS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes aluminum bleacher seats attached to precast concrete bleacher structure.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For telescoping stands in both stacked and extended positions.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Include load capacities.
 - 3. Show seating layout and aisle widths.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For seating.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are approved by manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Aluminum Bleacher Seats: Provide seating system equal to Outdoor Aluminum, Inc. 2x10S Plank.

2.2 COMPONENTS

- A. Seating:
 - 1. Material: Anodized aluminum, 0.093-inch extrusion wall thickness.
 - 2. Bench Height: Not less than 17 inches or more than 18 inches .
 - 3. Bench Depth: 10 inches nominal.
 - 4. Brackets: Z type with 4-way adjustable tie-down clips.
 - 5. End Closures: Channel end cap.
 - 6. Gap Fillers: Anodized aluminum inserts.
- B. Fasteners: Hot-dipped galvanized steel or stainless steel.

2.3 FABRICATION

- A. Round corners and edges of components and exposed fasteners to reduce snagging and pinching hazards.
- B. Form exposed work with flat, flush surfaces, level and true in line.
- C. Supports: Fabricate supports to withstand, without damage to components, the forces imposed by use of stands without failure or other conditions that might impair their usefulness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install bleacher seats in accordance with manufacturer's written instructions.
- B. Install brackets at 4' -0" maximum spacing.

3.3 ADJUSTING

- A. Adjust seating so that each seat is at proper angle and aligned with each other in uniform rows.
- B. Clean seats on exposed and semiexposed surfaces. Touch up factory-applied finishes or replace components as required to restore damaged or soiled areas.

END OF SECTION 13 12 50