Jones Gillam Renz Architects

Address
730 N 9th St.
Salina, KS 67401

1881 Main St., Suite 301
Kansas City, MO 64108

Contact
jgr@jgrarchitects.com
(785) 827-0386

Web
jgrarchitects.com

Request for Proposal and Project Manual

for

CITY OF SALINA
and
SALINA BASEBALL ENTERPRISES
BERKLEY FAMILY RECREATIONAL AREA
Dean Evans and Wilbur Fields
Lighting Upgrades
Salina, KS

September 22, 2023

Project No. 22-3274

CITY OF SALINA and
SALINA BASEBALL ENTERPRISES
BERKLEY FAMILY RECREATIONAL AREA
Dean Evans and Wilbur Fields Lighting Upgrades
Salina, Kansas

Project No. 23-3356

DATE OF DRAWINGS AND SPECIFICATIONS September 22, 2023

OWNER

SALINA BASEBALL ENTERPRISES
1831 Hillcrest Ln
Salina, KS 67401
Kenny Hancock
785 452 2490

CITY OF SALINA
300 W. Ash St.
Salina, KS 67401
Mike Schrage, City Manager
785 309 5700

ARCHITECT

JONES GILLAM RENZ ARCHITECTS
730 North 9th Street
Salina, KS 67402-2928
Charles A. Renz, Project Architect
785 827 0386

MECHANICAL / ELECTRICAL

LST CONSULTING ENGINEERS
4809 Vue Du Lac Place, Suite 201
Manhattan KS 66503
John Lewis-Smith, P E
785 587 8042 Fax 785 587 8039

Table of Contents

Berkley Family Recreational Area
Dean Evans and Wilbur Field Lighting Upgrades
Salina, KS

Jones Gillam Renz Architects, Inc
730 N. 9th St.
Salina, Kansas 67401
785-827-0386

Project No. 23-3356

INVITATION TO BID

Sealed Proposals, will be received by Salina Baseball Enterprises, Salina, Kansas, and the City of Salina, for the furnishing of all labor and materials as hereinafter specified for the construction of New Sports Lighting and associated Electrical Upgrades at the Berkley Family Recreational Area. **Proposals shall be delivered to the office of JGR Architects, 730 North Ninth Street**, ***prior to*** **Tuesday, October 24, 2023 at 2:00 p.m.** Proposals received after this time will not be accepted. Proposals will be opened publicly at the time stated above.

1. PROJECT SCOPE
   A. Electrical Service Upgrades to the existing electrical service located at the NW corner of Dean Evans Field.
   B. Replacement of existing field lighting at Dean Evans Field. Existing lamps are to be removed and new LED lamps are to be installed.
   C. Existing light poles at Dean Evans Field are to remain. Modification to the existing poles and mounting brackets shall be as required for the complete installation of new lights.
   D. New field lighting systems are to be installed at Wilbur Field. Installation shall include ALL components as required for complete field lighting including but not limited to wiring and conduit, light poles and base, lighting supports, lamps, etc.
   E. General purpose power shall be installed as indicated on the attached plan.

1A. ADDITIONAL INFORMATION
   A. This project will be performed in conjunction with additional construction projects, performed under separate contracts, at Wilbur Field. Projects include:
      a. New artificial turf installation including site work, grading, underground drainage systems, turf installation, fencing, and associated work.
      b. Construction of new seating and grandstand areas including site concrete and landscape areas.
      c. New site fencing and landscape

      Contractor will be required to coordinate with contractors performing work under separate contract throughout the duration of this project. This shall include providing proposed layout/coordination drawings for underground work, regular on-site coordination meeting attendance, routine communication with contractors on-site,
   B. Contractor will be responsible for all structural engineering associated with the light pole installation including design of light poles, pole bases if applicable, and attachment of associated components. Structural design may be submitted as a deferred submittal. All structural drawings shall be sealed by a Kansas Licensed Engineer.

2. PRE-BID CONFERENCE
   Pre-Bid Conference will be held on **Thursday, October 12, at 2:00 p.m. at Berkley Family Recreational Area, Dean Evans and Wilbur Fields, Markley Road, Salina, KS.** Failure to attend may be grounds for rejection of proposal. If special circumstances exist, coordinate with project architect for possible arrangements.

3. COMPLETION TIME
   Completion date for the project is to be bid in calendar days: To be Bid by Contractor and stated on the Bid Form.

4. The GENERAL CONSTRUCTION CONTRACT will include General Construction, Site Utility, and Electrical Work combined into one Contract. Contractor shall be responsible for all work..

5. As a condition precedent to Contract Award, type of work completed and proposed Subcontractors will be carefully considered. Owner is not obligated to accept lowest or any other proposal/bid. Reference the Information for Bidders section of the Project Manual for evaluation criteria for contractor selection.

6. The Owner has identified three pre-approved lighting manufactures.
   A. Techline Sports Lighting
   B. Musko
   C. Qualite

7. The Drawings, Specifications, and Contract Documents may be obtained by bona fide Prime Bidders (Electrical and Subcontractors) from Jones Gillam Renz Architect, 730 North 9th Street, Salina, Kansas 67401, 785-827-0386 upon deposit of $150.00 for one (1) set of General Construction, Mechanical and Electrical Drawings and Specifications.

   Electronic Drawings and specifications will be available for review on the website at www.jgrarchitects.com. Contractors and Subcontractors who are bidding from documents via website or plan room must contact the office of Jones Gillam Renz Architects, 785.827.0386 to register as an official Plan Holder.

   Those who submit prime proposal may obtain refund by returning sets in good condition no more than one (1) week after proposals have been opened. No refund of deposit will be made to Contractors not submitting a proposal, unless all documents are returned in good condition five (5) days prior to time of receiving proposals.

   CONTRACT DOCUMENTS will be on file and may be examined at the following locations:
   Jones Gillam Renz Architects, 730 North 9th Street, Salina, KS 67401, ph. 785-827-0386, www.jgrarchitects.com
   Associated General Contractors of Kansas, ph. 316-928-8635, www.agcks.org
   KCNR, LLC., ph. 316-263-0265, https://kcnr.net
   Dodge Construction Network, ph. 877-784-9556, www.construction.com
   Construct Connect, ph. 877-969-2909, www.cmdgroup.com
   Salina Blueprint, 209 S. Santa Fe Ave., Salina, KS 67401, ph. 785-827-6182, www.salinablue.com
   Salina Area Chamber of Commerce Plan Room, 120 West Ash, Salina, KS 67401, ph. 785-827-9301, www.salinakansas.org

8. **PROPOSAL SECURITY in the amount of 5% of the proposal must accompany each proposal in accordance with INFORMATION FOR BIDDERS.**

BY ORDER OF:

Salina Baseball Enterprises
Salina, Kansas

INFORMATION FOR BIDDERS

1. EXAMINATION

Before submitting their proposal, each Bidder shall carefully examine all documents pertaining to the work, visit the site of the work, and inform themselves as to all existing conditions under which the work will be performed. Submission of a bid will be considered presumptive evidence that the Bidder is fully aware of the conditions of the work, requirements of the Contract Documents, pertinent State and Local codes, conditions of labor and material markets, and has made allowances in their bid for all work and all contingencies. Contractors will not be given extra payments for conditions which can be determined by examining the site and documents.

2. QUESTIONS AND INTERPRETATION OF DOCUMENTS

Should a Bidder be in doubt as to the meaning of any part of the Drawings, Specifications or other proposed Contract Documents and/or find discrepancies in or omissions from the Drawings, Specifications and Contract Documents, he shall contact the Architect immediately per Article 3, Subparagraph 3.2.1 of the AIA General Conditions. Any interpretation of the proposed documents will be made only by Addendum duly issued and copy of such Addendum will be emailed to each person receiving a set of such documents. The Architect and Owner will not be responsible for any other explanation or interpretation of the proposed documents.

3. CONSTRUCTION BID

a. The Construction proposal shall incorporate all of the departments of Work (Construction and Electrical Work) into one (1) proposal.
It is preferred that Contractors work with Prime subcontractors with whom they have previous working relationships, including at least three previous projects of similar scope. Contractor/Subcontractor experience and relationship may be considered by the owner in the evaluation of proposals and acceptance of proposals.

b. The Contractor shall assume all responsibility for supervision and coordination of the Work.

c. The Contractor shall furnish Performance and Payment Bonds in the full amount of the Work (Total of Construction and Electrical Work).

d. The Contractor shall carry and pay the premium covering the Construction Work, for Contractors and Subcontractors Insurance as specified in Supplementary Conditions of the Contract.

4. BID PROCEDURE

a. Bids will be received at the time and place stated in the INVITATION TO BID. Bids received after the time stated will be returned unopened.

b. No oral or telephonic proposals will be considered, but modifications by email of bids already submitted will be considered if received prior to time set for proposal opening.

c. A 5% Bid Security shall be included with the Proposal.

d. Any addenda issued during the time of preparation of proposals are to be acknowledged on the Bid Form and in closing a Contract, they will become a part thereof.

e. Each Bidder is required to bid all alternates included in the Bid Form, except that should they desire not to bid an Alternate, they may insert the words “No Proposal” in the space provided for such Alternates. In such case, if it is determined to use such Alternate, the fact that the cost of the material, type, or method proposal may be lower than that chosen shall not constitute the basis of a claim by the Bidder that the Contract be awarded to them. If an Alternate Price called for involves no change in price, Bidder shall so indicate by writing the words, “No Change” in the space provided. Refer to Section 01019 - SPECIAL PROVISIONS. Each Bidder is required to fill in all unit cost items shown on the Bid Form. Failure to comply may be cause for rejection.

f. Proposals shall be submitted on the forms provided. All blank spaces on the forms shall be fully completed in words as well as figures. Bid Forms must be signed in longhand, with name typed below signature. Where Bidder is a corporation, Bid Forms must be signed with legal name of corporation, followed by the name of the State of Incorporation, the legal signature of an officer authorized to bind the corporation to a contract, Attest and Seal Impression.

g. Submittals of Bids shall be as follows:

1) Bids, together with Bid Security, shall be sealed in an opaque envelope, labeled “SALINA BASEBALL ENTERPRISES BERKLEY FAMILY RECREATIONAL AREA FIELD LIGHTING UPGRADES, SEALED PROPOSAL, DO NOT OPEN” addressed to: JGR ARCHITECTS, 730 N. NINTH ST, SALINA, KANSAS 67401.

Proposals shall be delivered to the office of JGR Architects, 730 N. Ninth St. <u>before 2:00 pm on Tuesday October 24, 2023</u>. Bids will be opened in private session with the owner the same day.

5. CONTRACT GUARANTEE
Successful Bidder must deliver to the Owner the following Bonds in an amount no less than 100% of the accepted bid, as security for the faithful performance of the Contract.
a. Performance and Payment Bond as per General Conditions.
b. Statutory Bond, as required in Section 01019 - SPECIAL PROVISIONS.

6. WITHDRAWAL OF BIDS
A bid may be withdrawn on written or faxed request and by request of Contractor personally, received or made prior to time fixed for proposal opening. No proposal may be withdrawn after opening of proposals.

7. INTERPRETATION OF QUOTED PRICES
In case of a difference in written words and figures in a proposal, the amount stated in written words shall govern.

8. EVALUATION OF PROPOSAL AND SELECTION CRITERIA
Bids/Proposals shall be accompanied with product information specified to the project to allow proper evaluation of the bid/proposals by the owner. The following information, at a minimum, shall be included:
A. Lighting system product information including light fixture cut sheets.
B. Product information on the light poles including size, finish, and installation method. Include confirmation that installation is in conformance with the structural requirements of all applicable codes. Note sealed structural drawings are not required at time of submittal. This may be a deferred submittal following award of contract.
C. Photometric plan for light distribution of the fields and surrounding area.
D. Additional information as required for the owner to evaluate proposals per the ten (10) criterial stated below.

The owner will evaluate the following items in determining the successful bidder. The list is in no particular order of weighted preference. ***The owner is under no obligation to accept the low-cost proposal.***

1. Similar Project Experience
2. Contractor References
3. Subcontractor Experience
4. Subcontractor References
5. Warranty
6. Insurance
7. Customer Service
8. Ability to Meet Project Schedule
9. Price
10. Other criteria as determined by the selection team
11. Lighting Controls System

8. TIME OF CONSTRUCTION AND LIQUIDATED DAMAGES
Refer to Section 01019 - SPECIAL PROVISIONS.

9. DISQUALIFICATION
The Owner reserves the right to disqualify proposals, before or after opening upon evidence of collusion with intent to defraud or illegal practices upon part of the Bidder. Bids will be opened as stated in the Invitation to Bid.

10. SALES TAX EXEMPTION
Refer to Section 01019 - SPECIAL PROVISIONS.

*****

Berkley Family Recreational Area
Dean Evans and Wilbur Fields Lighting Upgrades
BID FORM

Bid of _____
(Firm Name)

Date _____

BID FORM FOR:

Berkley Family Recreational Area
Dean Evans and Wilbur Fields Lighting Upgrades
Salina, Kansas
Project No. 22-3274

In compliance with your INVITATION TO BID, the undersigned proposes to furnish all labor and materials and perform all work for the General Construction, including Mechanical and Electrical Work, incidental for the construction and equipping of **Dean Evans and Wilbur Field Lighting Upgrades, Salina, Kansas**, in strict accordance with the Specifications and Drawings dated September 22, 2023 for consideration of the following:

BASE BID _____ **DOLLARS**

$ _____

The Base Bid includes all allowances as outlined in Section 01019 – Special Provisions.

Number of consecutive Calendar Days to complete this project in accordance with Drawings and Specifications, to be coordinated with General Contractor and subject to Liquidated Damages. Calendar Days shall be identified below if the Contractor believes the completion days will extend beyond the timeline identified in Section 01019 Special Provisions.

Section 01019 - SPECIAL PROVISIONS -- _____**DAYS**

The Undersigned acknowledges receipt of the following addenda:

Addendum #1 ____ Addendum #2 _____ Addendum #3 _____ Addendum #4 _____ Addendum #5 _____

ALTERNATE PRICES: For the Alternates as described in the Specifications and/or Drawings, the UNDERSIGNED agrees to ADD or DEDUCT the following amounts to or from the BASE BID as hereinafter itemized:

ALTERNATE NO.	**ADD/DEDUCT**
Alternate No. 1 (As described by Addendum)	$ _____
Alternate No. 2 (As described by Addendum)	$ _____
Alternate No. 3 (As described by Addendum)	$ _____

Unit Prices

Unit Price No. 1
Remove unsuitable soil material and replace with suitable fill $ _____ per cubic yard

MAJOR SUBCONTRACTORS:

Field Lighting System Supplier/Contractor:

Name, Address _____

I (or WE) FURTHER AGREE AS FOLLOWS:

1. To furnish labor and materials for additional Electrical work ordered by the Owner and for which no pre-agreed upon amount has been determined for the cost of the labor and materials involved plus 10% for overhead and profit.

2. To furnish supervision and coordination for 10% of the cost of additional Electrical work ordered by the Owner.

3. To accept the provisions of Section 01019 – SPECIAL PROVISIONS regarding the date of completion of the Project and Liquidated Damages.

4. If written notice of the acceptance of the Bid is mailed, telegraphed or delivered to the Undersigned within 30 days after the date of the opening of the Bids, or anytime thereafter before this Bid is withdrawn, the Undersigned will, within ten (10) days after the date of such mailing, telegraphing or delivery of such notice, execute and deliver a contract in accordance with AIA Document A101, Standard Form of Agreement Between Owner and Contractor, and give Performance Bond in accordance with the Specifications and bid as accepted.

5. That upon failure or refusal to execute and deliver the contract and bonds required within ten (10) days after receipt of notice of acceptance of the Bid, that security deposited with Bid shall be forfeited to the Owner as liquidated damages for such failure or refusal.

DECLARATION:

1. The Undersigned hereby declares that he has carefully examined the Invitation and Information for Bidders, the Drawings and Specifications, has visited the actual location of the Work and has consulted his sources of supply, and has satisfied himself as to all quantities and conditions, and understands that in signing this Bid, he waives all rights to plead any misunderstanding regarding the same.

2. The Undersigned understands that his competence and responsibility and that of his proposed subcontractors, time of completion, as well as any other factors of interest to the Owner will be considered in making the award. The Owner reserves the right to reject any or all bids, to accept or reject alternate bids and unit prices and to waive technicalities concerning the bids received, as it may be in his interest to do so.

_____
(Legal Name of Bidder)

(SEAL, if bid is by a corporation)

_____
(Address of Bidder)

BY _____ in longhand

_____ Typewritten
(Title)

AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

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

Berkley Family Recreational Area
Dean Evans and Wilbur Fields Lighting Upgrades
Salina, KS
JGR 23-3356

THE OWNER:
(Name, legal status and address)

Salina Baseball Enterprises
Kenny Hancock
1831 Hillcrest Ln, Salina, KS 67401
785-452-2490

THE ARCHITECT:
(Name, legal status and address)

Jones Gillam Renz Architects, Inc.
Charles A. Renz, Principal
730 N Ninth St., Salina, KS 67401
785-827-0386

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

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

TABLE OF ARTICLES

Init.
/

INDEX
(Topics and numbers in bold are Section headings.)

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

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

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

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

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

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

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

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

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

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

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

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

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

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

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

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

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

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

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

§ 3.4 Labor and Materials

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

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

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

§ 3.5 Warranty

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

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

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

§ 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

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

§ 3.9 *Superintendent*

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

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

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

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

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

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

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

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

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

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely

upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

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

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

§ 4.2 Administration of the Contract

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

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

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

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

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

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

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

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

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

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

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

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

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

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

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

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

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

§ 6.2 Mutual Responsibility

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

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

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

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

§ 7.3 Construction Change Directives

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

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

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

- **.1** Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- **.2** Unit prices stated in the Contract Documents or subsequently agreed upon;
- **.3** Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- **.4** As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

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

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

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

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

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

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

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

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

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

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

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

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

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

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

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

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

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

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

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

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

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

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

§ 9.5 Decisions to Withhold Certification

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

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
.5 damage to the Owner or a Separate Contractor;
.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
.7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

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

§ 9.6 Progress Payments

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

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

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

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

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

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

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

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

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

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

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

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

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

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

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

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

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

§ 9.10 Final Completion and Final Payment

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

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

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

- **.1** liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents;
- **.3** terms of special warranties required by the Contract Documents; or
- **.4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

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

§ 10.2 Safety of Persons and Property

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

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

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

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

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

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

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

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

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

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

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

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

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

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or

expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance
The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss
§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK
§ 12.1 Uncovering of Work
§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

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

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

that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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

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

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

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

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

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

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

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

§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

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

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

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

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

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

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

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

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

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

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

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

§ 14.3 Suspension by the Owner for Convenience

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

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

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

§ 14.4 Termination by the Owner for Convenience

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

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

- **.1** cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

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

§ 15.1.7 Waiver of Claims for Consequential Damages

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

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

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

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

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

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

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

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

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

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

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

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

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

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

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

§ 15.4 Arbitration

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

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

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

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

§ 15.4.4 Consolidation or Joinder

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

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

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

SUPPLEMENTARY CONDITIONS OF THE CONTRACT

1. DEFINITIONS - Supplement Paragraph 1.1 as follows:
   a. When words such as approved, proper, satisfactory, equal, and as directed are used, they imply such reference to the Architect's specific approval and directions.
   b. Provide means to furnish and install.
   c. The provisions of the Agreement take precedence over all other Contract Documents.

2. WARRANTY - Supplement Paragraph 3.5.1 as follows:
   a. Contractor warrants to Owner and Architect that on receipt of notice from either of them, within the period of two (2) year following date of Substantial Completion, that defects in materials and/or workmanship have appeared in the Work, Contractor will promptly correct such defects to the state of condition originally required by the Contract Documents at Contractor's expense.

3. SHOP DRAWINGS - Supplement Paragraph 3.12 as follows:
   a. The Contractor shall submit **one (1) electronic copy** of all Shop or Setting Drawings and Schedules required for the work of the various trades, after same have been checked and compared with the Contract Document Requirements, and after checking with field conditions at the job and so certified on the Drawings by the Contractor. Above Drawings will not be checked by Architect unless same bear certification.
   b. Architect's approval is subject to notations on Drawings, Compliance with Drawings and Specifications, and conditions and measurements at project. Measurements and quantity not checked or approved.

4. SAMPLES - Supplement Subparagraph 3.12.3 as follows:
   a. All samples as called for in the various Sections of this Specification and any other samples, as directed, shall be furnished by the Contractor for approval.
   b. All samples of materials that require approval as to color, texture, finish and type shall be furnished at the same time, so that an intelligent selection of colors and textures may be made by the Architect.

5. COLOR SELECTIONS – Not Used

6. CLEAN UP - Supplement Paragraph 3.15 as follows:
   a. Each Contractor shall, at all times, remove any and all of his rubbish from the buildings and grounds and keep the building site clean.
   b. In addition to the general broom cleaning, the General Contractor shall do the following special cleaning for all trades at the completion of the work:
      1) Finishes and Equipment. Clean all finishes and equipment, removing all stains, paint, dirt, dust, etc.
   c. All rubbish, and all debris and other rubbish shall be removed entirely from the premises.

7. MUTUAL RESPONSIBILITY OF CONTRACTORS - Supplement Paragraph 6.2 as follows:
   a. Contractor shall assume general coordination and direction of the project. Contractor shall cooperate with other subcontractors and/or suppliers on the Work and install their work in sequence to facilitate and not delay the completion of the project. The Architect is not the coordinator or expeditor of the work of the contractors and/or subcontractors referred to hereinbefore.

8. CHANGES IN THE WORK
   Refer to Paragraph 7.2 and insert the following:
   a. Whenever a Change Order involves net cost decrease, the CREDIT to the Owner shall be such net cost decrease. Whenever a Change Order involves a summary net increase, the Contract shall be increased by the amount of such net cost increase plus 10% of such net cost for overhead and profit. The Contractor will furnish supervision and coordination for 10% of the cost of additional Electrical work ordered by the Owner. The total allowed cost for overhead and profit, combined, shall not exceed 10%.
   b. The Contractor shall furnish the Owner an itemized accounting with supporting data used in computing the value of any change that might be ordered.
   c. Change Orders must state a number of added days or days to be deleted from completion time. If no change in days is required by the change order, write NONE. Failure to comply with above voids any later request for extra time.

9. APPLICATION FOR PROGRESS PAYMENTS AND CERTIFICATION FOR PAYMENT
   a. Amend Subparagraph 9.3.1 and insert the following: On or before the 25th day of each month, the Contractor shall submit to the Architect an itemized Application for Payment supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require.

b. Amend Subparagraph 9.4.1 and insert: If the Contractor has made application for payment as above, the Architect will, with reasonable promptness and within seven (7) days after receipt of the application, issue an application for payment to the Owner, with a copy to the Contractor in the amount of 90% of the value of the Contract the Architect determines has been completed to the date of application, thus a 10% retainage, less any amount paid to the Contractor, or state in writing his reason for withholding an application as provided in Subparagraph 9.5.1.

c. Date of payment of the Application for Payment by the Owner is hereby defined as the earliest possible date that the Owner can prepare vouchers after receipt of Application for Payment from the Architect and approval of same by any governing body of the Owner and issuance of vouchers to cover Application for Payment.

10. CONTRACTOR'S LIABILITY INSURANCE

a. Workers' Compensation and Employers Liability Insurance - Refer to Subparagraph 11.1.1.

b. Bodily Injury and Property Damage - Refer to Subparagraph 11.1.2. Limits shall be as follows:

(1) Limits of liability coverage shall be $2,000,000.00 Combined Single Limit for Bodily Injury and Property Damage.

c. Owner's Protective Liability Insurance - Refer to Paragraph 11.2 - Owner's Option.

11. PERFORMANCE AND PAYMENT BONDS - Supplement Subparagraph 11.4.1 as follows:

a. Until the Work is completed and accepted by the Owner, **the <u>Contractor</u> shall effect and maintain total Property Insurance (Marine All Risk Special Builders Risk and Transit Form**) upon the Work at the site to 100% of the insurable value thereof (plus 8% of this insured value for Architect's Fee in connection with any loss covered by this insurance) including items of labor and materials connected therewith in or adjacent to the structure insured, materials in place or to be used as a part of the permanent construction, including surplus materials, shanties, protective fences, bridges or temporary structures, miscellaneous materials and supplies incidental to the Work, and such scaffoldings, stagings, towers, forms and equipment as are not owned or rented by the Contractor, the cost of which is included in the cost of the work. EXCLUSIONS: This insurance does not cover any tools owned by mechanics; any tools, equipment, scaffoldings, stagings, towers and forms owned or rented by the Contractor; the capital value of which is not included in the cost of the work, nor loss of equipment, materials, tools, etc., by theft. **Contractor shall not commence construction prior to receipt of policy copy from Owner.**

b. This insurance shall include the interest of the Owner, the Contractor, Subcontractor, and Sub-Subcontractor in the Work.

END OF SECTION

LIST OF DRAWINGS

Sports Field Improvements

Geotechnical Engineering Report

August 11, 2023 | Terracon Project No. 01235149

Prepared for:

Jones Gillam Renz Architects, Inc.
730 N. 9th
Salina, KS 67401

Terracon
Explore with us

Nationwide
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials

1815 S. Eisenhower
Wichita, KS 67209
P (316) 262-0171
Terracon.com

August 11, 2023

Jones Gillam Renz Architects, Inc.
730 N. 9th
Salina, KS 67401

Attn: Charles Renz, AIA
P: (785) 827-0386
E: crenz@jgrarchitects.com

Re: Geotechnical Engineering Report
Sports Field Improvements
851 Markley Road
Salina, Kansas
Terracon Project No. 01235149

Dear Mr. Renz:

We have completed the scope of Geotechnical Engineering services for the above referenced project in general accordance with Terracon Proposal No. P01235149 dated June 30, 2023. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and slab for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon

JAMIE M. KLEIN
LICENSED
22112
8/8/2023
KANSAS
PROFESSIONAL ENGINEER

Kev Esmaeili
Geotechnical Professional

Jamie M. Klein, P.E.
Senior Associate
Kansas PE: 22112

Table of Contents

Figures

Attachments

Note: This report was originally delivered in a web-based format. Blue Bold text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the terracon logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

Refer to each individual Attachment for a listing of contents.

Introduction

This report presents the results of our subsurface exploration and Geotechnical Engineering services performed for the proposed field improvements to be located at 851 Markley Road in Salina, Kansas. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil (and rock) conditions
- Groundwater conditions
- Seismic site classification per IBC
- Site preparation and earthwork
- Foundation design and construction

The geotechnical engineering Scope of Services for this project included the advancement of test borings, laboratory testing, engineering analysis, and preparation of this report.

Drawings showing the site and boring locations are shown on the Site Location and Exploration Plan, respectively. The results of the laboratory testing performed on soil samples obtained from the site during our field exploration are included on the boring logs and/or as separate graphs in the Exploration Results section.

Project Description

Our understanding of the project conditions is as follows:

Item	Description
Information Provided	Information provided via email and phone call with Mr. Charles Renz with JGR.
Project Description	The field improvement project includes a new turf field, aluminum seating and press-box, seating canopy, dugouts and elevated seating platform. The improvements are presented on an improvement plan prepared by JGR dated 6/13/2023.
Finished Floor Elevation	Base elevations for the dugouts, aluminum seating and press box were not provided at the time of this report.

Item	Description
Maximum Loads	Anticipated structural loads were assumed by Terracon. ▪ Columns: 25 kips ▪ Walls: 3 kips per linear foot (klf) ▪ Dugout Foundation: 1 kip per linear foot (klf)
Grading/Slopes	We estimate approximately 2 feet of cut/fill will be required to develop final grade.

Terracon should be notified if any of the above information is inconsistent with the planned construction, especially the grading limits, as modifications to our recommendations may be necessary.

Site Conditions

The following description of site conditions is derived from our site visit in association with the field exploration.

Item	Description
Parcel Information	The project is located at 851 Markley Road in Salina, Kansas. 38.818563° N, -97.563024° W (See Exhibit D)
Existing Improvements	The site is a recreation complex with several sports fields. The project area includes an existing baseball field located towards the south end of the complex.
Current Ground Cover	Varies: Grass and dirt covered
Existing Topography	Relatively flat

Geotechnical Characterization

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of the site. Conditions observed at each exploration point are indicated on the individual logs. The individual logs can be found in the Exploration Results and the GeoModel can be found in the Figures attachment of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Possible Fill	Fat clay, trace shale and sandstone fragments
2	Native Clay	Lean to fat clay, fat clay, sandy lean clay, stiff to hard
3	Bedrock	Shale, highly weathered

Groundwater Conditions

The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was not observed in our borings while drilling, or for the short duration the borings could remain open. However, this does not necessarily mean the borings terminated above groundwater. Due to the relatively low permeability soils encountered in the borings, a period of time may be necessary for a groundwater level to develop and stabilize in a borehole. Long term observations in a piezometer or observation well sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Also, it is possible that groundwater could temporarily perch seasonally at shallow depths. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

Seismic Site Class

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil/bedrock properties observed at the site and as described on the exploration logs and results, our professional opinion is for that a Seismic Site Classification of D be considered for the project. Subsurface explorations at this site were extended to a maximum depth of 15 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper

borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

Geotechnical Overview

Based on the information obtained from our subsurface exploration, it is our opinion that the site can be developed for the proposed project. The Earthwork section addresses site preparation and compaction. The Foundations section addresses support of the aluminum seating and press box on footings on engineered fill or native clays including the recommended thickness of Low Volume Change (LVC) material. The General Comments section provides an understanding of the report limitations.

Possible fill materials were encountered at Borings B-4 through B-8 to the termination depths of 5 feet. While the fill materials tested suggest the fill may have been placed with compactive effort and moisture control, variable soil conditions could be encountered during construction which may not provide stable subgrade conditions for the new turf. As such, we recommend subgrade conditions be further evaluated by Terracon during construction as described in the Earthwork section of this report.

Existing fill should be anticipated in unexplored areas of the site, possibly to greater extents. The depth and composition of the existing fill materials can vary greatly over relatively small lateral and vertical distances. Caution should be exercised when using the depth and composition of the fill observed at the discrete boring locations for estimating purposes. The owner and/or contractor could consider a contingency budget to provide for additional earthwork items such as moisture conditioning dry subgrade soils, repairing soft subgrade soils, and removing unsuitable weak soils and existing fill.

Moderately to highly expansive clay soils were encountered at the site. These materials have the potential to shrink and swell with seasonal fluctuations in the soil moisture content. We recommend the mat foundation be supported on at least 24 inches of low volume change (LVC) material. Details regarding the LVC zone are provided in Earthwork.

This report provides recommendations to help mitigate the effects of soil shrinkage and expansion. However, even if these procedures are followed, some movement and at least minor cracking in the structure could still occur. The severity of cracking and other cosmetic damage such as uneven slabs on grade could increase if any modification of the site results in excessive wetting or drying of the expansive soils. Eliminating the risk of movement and cosmetic distress may not be feasible, but it may be possible to further reduce the risk of movement if significantly more expensive measures are used during construction. We would be pleased to discuss other construction alternatives with you upon request.

Earthwork

Earthwork is anticipated to include clearing and grubbing, excavations, and engineered fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations.

Site Preparation

Prior to placing fill, existing vegetation, topsoil, and root mats should be removed. Complete stripping of the topsoil should be performed in the areas where improvements will be constructed.

We recommend removing the organic topsoil zone and vegetation from within and at least 5 feet beyond the proposed construction areas. Where existing fill materials are present following initial site stripping and initial cuts, the existing fill should then be further evaluated by a representative of Terracon by exploring using hand equipment or test pits, field density tests and/or possibly obtaining additional samples for further laboratory testing. If unsuitable materials are encountered at this time, these materials should be removed and replaced with controlled engineered fill.

After completing these operations, we recommend the exposed subgrade be thoroughly proofrolled (under the observation of Terracon personnel) with a loaded tandem-axle dump truck or other heavy, rubber-tired construction equipment weighing at least 20 tons, to locate any zones that are soft, unstable, or unsuitable. The exposed subgrade where excessive rutting or pumping occurs during proofrolling should be removed and replaced with approved on-site soils free of organic matter and debris or aerated/reworked and recompacted in place to meet the fill compaction requirements described in this report.

All exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned as necessary, and compacted per the compaction requirements in this report. Compacted structural fill soils should then be placed to the proposed design grade and the moisture content and compaction of subgrade soils should be maintained until foundation or pavement construction.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable; however, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

Soil Stabilization

The subgrade soils are comprised of medium to high plasticity clays exhibiting the potential to swell with increased water content if in a dry condition. Construction of the proposed 7 inch thick granular drainage layer below the turf field creates the potential for gradual increased water contents within the clays if the soils are dry at the time of construction. If it is desired to reduce the swell potential to about one inch, we recommend at least the upper 2 feet of subgrade below the turf (including the granular drainage layer) be an approved Low Volume Change (LVC) material that we describe in Fill Material Types of the Earthwork section of this report.

We understand the existing field turf is irrigated, and therefore could be wet and soft upon initial exposure thus requiring stabilization. Methods of subgrade improvement, as described below, could include scarification, moisture conditioning and recompaction, removal of unstable materials and replacement with granular fill (with or without geosynthetics), and chemical stabilization. The appropriate method of improvement, if required, would be dependent on factors such as schedule, weather, the size of area to be stabilized, and the nature of the instability. More detailed recommendations can be provided during construction as the need for subgrade stabilization occurs. Performing site grading operations during warm seasons and dry periods would help reduce the amount of subgrade stabilization required.

Fill Material Types

Engineered fill should meet the following material property requirements:

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Lean Clay [2]	CL [3] (LL<46 & PI>15)	> 24 inches below building finished subgrade
Lean to Fat Clay [2]	CL/CH [3] (46≤LL<50 and/or PI≥23)	> 24 inches below building finished subgrade
Fat Clay [2]	CH (LL≥50)	> 24 inches below building finished subgrade
Well-graded granular and silty gravel	GM-GW GM [4]	All locations and elevations
Low Volume Change Material (LVC) [5]	CL or GM-GW, GM [4] and (LL<40 & 5≤PI<15)	All locations and elevations

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
On-Site Soils	Varies	The on-site soils, free of organic matter and debris, typically appear suitable for reuse as engineered fill. However, these near surface soils do not meet the low volume change zone criteria and should not be utilized within 24 inches of finished subgrade beneath the mat foundation.

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation.
2. Delineation of fat clays and lean clays should be performed in the field by a qualified geotechnical engineer or their representative and could require additional laboratory testing.
3. By our definition, cohesive soils with a liquid limit of 46 to 49 are classified as lean to fat clay (with the borderline symbol CL/CH) to alert of the expansive potential of clay soils with liquid limits close to 50 (see ASTM D2487-11, Section 1.1, Note 1).
4. Similar to KDOT AB-3 crushed limestone aggregate, limestone screenings, or granular material such as sand, gravel or crushed stone containing at least 15% low plasticity fines (-#200).
5. Low volume change cohesive soil or granular soil having at least 15% low plasticity fines (-#200).

Fill Placement and Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used	Same as structural fill
Minimum Compaction Requirements [1,2,3]	At least 95%, but not more than 100% of the material's maximum standard Proctor dry density (ASTM D698).	92% of max.

Item	Structural Fill	General Fill
Water Content Range [1]	Low plasticity cohesive: -2% to +3% of optimum High plasticity cohesive: 0 to +4% of optimum Granular: -3% to +3% of optimum	As required to achieve min. compaction requirements

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. High plasticity cohesive fill should not be compacted to more than 100% of standard Proctor maximum dry density.
3. If the granular material is a coarse sand or gravel, or of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, granular materials should be compacted to at least 70% relative density (ASTM D 4253 and D 4254). Materials not amenable to density testing should be placed and compacted to a stable condition observed by the Geotechnical Engineer or representative.

Grading and Drainage

All grades must provide effective drainage away from structures during and after construction and should be maintained throughout the life of the structure. Water retained next to new structures can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential slab and/or foundation movements.

After construction and landscaping, final grades should be verified to document effective drainage has been achieved. Grades around the fields and structures should also be periodically inspected and adjusted as necessary as part of the facility's maintenance programs.

Earthwork Construction Considerations

Care should be taken to avoid disturbance of prepared subgrades. Unstable subgrade conditions can develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. If unstable subgrade conditions develop, stabilization measures will need to be employed. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade becomes frozen, desiccated, saturated, or disturbed, the affected materials should be removed or these materials should be scarified, moisture conditioned, and compacted prior to slab construction.

Based on conditions encountered in the borings, significant seepage is generally not expected in excavations for this project (e.g., for footing construction and utility installation). If seepage is encountered in excavations during construction, the contractor is responsible for designing, implementing, and maintaining appropriate dewatering methods to control seepage and facilitate construction. In our experience, dewatering of excavations in clay soils can typically be accomplished using sump pits and pumps.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, “Excavations” and its appendices, and in accordance with any applicable local, state, and federal safety regulations. The contractor should be aware that slope height, slope inclination, and excavation depth should in no instance exceed those specified by these safety regulations. Flatter slopes than those dictated by these regulations may be required depending upon the soil conditions encountered and other external factors. These regulations are strictly enforced and if they are not followed, the owner, contractor, and/or earthwork and utility subcontractor could be liable and subject to substantial penalties. Under no circumstances should the information provided in this report be interpreted to mean that Terracon is responsible for construction site safety or the contractor’s activities. Construction site safety is the sole responsibility of the contractor who shall also be solely responsible for the means, methods, and sequencing of the construction operations.

Construction Observation and Testing

The earthwork efforts should be observed by the Geotechnical Engineer (or others under their direction). Observation should include documentation of adequate removal of surficial materials (vegetation, topsoil, and pavements), evaluation and remediation of existing fill materials, as well as proofrolling and mitigation of unsuitable areas delineated by the proofroll.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, as recommended by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. Where not specified by local ordinance, one density and water content test should be performed for every 100 linear feet of compacted utility trench backfill and a minimum of one test performed for every 12 vertical inches of compacted backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. If unanticipated conditions are observed, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

Shallow Foundations

If the site has been prepared in accordance with the requirements noted in Earthwork, the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

Description	Continuous Footings	Mat Foundation
Suitable Bearing Material [1, 2]	Suitable native soils or engineered fill extending to suitable native materials	Minimum 24 inches of LVC materials
Maximum net allowable bearing pressure [1]	2,500 psf	1,500 psf
Minimum dimensions	16 inches (formed) 12 inches (trenched) 30 inches (column)	NA
Minimum embedment below finished grade for frost protection [3]	42 inches	18 inches [4]
Approximate total settlement [5]	<1 inch	About 1 inch
Anticipated differential settlement [5]	<3/4 inch	
Equivalent fluid density for passive pressure resistance below 3 feet [6]	290 pcf	
Ultimate coefficient of sliding friction [6]	0.32	

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the foundation base elevation and includes a safety factor of 3. Assumes any unsuitable fill or soft soils, if encountered, will be undercut and replaced with engineered fill.

Continued…

2. All new engineered fill beneath footings should be constructed as recommended in Fill Compaction Requirements of the Earthwork section of this report.
3. And to reduce the effects of seasonal moisture variations in the subgrade soils. For perimeter foundations and foundations beneath unheated areas.
4. If the potential for 2 inches of heave (due to frost and seasonal increases in moisture content) and some additional settlement due to seasonal decreases in moisture content
5. below mat bearing level can be tolerated, if not, support the base of the mat at a minimum depth of 36 inches or on lean concrete/flowable fill or granular LVC that extends to a minimum depth of 36 inches.
6. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the foundations, , and the quality of the earthwork operations.
7. This is an ultimate value and does not include a safety factor.

Mat Foundation Design Considerations

Based on the provided project information, we understand that a mat foundation is planned for the aluminum seating and press box. The planned depth of the mat and removal of 1 foot of soil overburden will have a compensatory effect and help to limit settlement to recompression of the mat subgrade to the weight of soil removed plus any net additional load.

The design of mat foundations is typically performed in an iterative process between the Geotechnical Engineer and Structural Engineer. Use of finite element analysis is often performed when loads acting on the mat are asymmetric or non-uniform, but estimates of soil pressure and resulting settlement can converge quickly absent of sophisticated design procedures in cases where uniform loads are acting upon the mat. This procedure is outlined in ACI 336.2 “Suggested Analysis and Design Procedure for Combined Footings and Mats”.

For the initial iteration of this design, we have assumed that the pressure acting on the soil is uniform across the footprint of the mat. This assumption would only be true for a flexible foundation or thin mat where load redistribution cannot be achieved through the mat foundation. The resulting settlement from this assumption would produce a dish-shaped settlement profile with the settlement at the center of the mat approximately twice that of the edges. For a uniform soil pressure of 1,500 psf acting across the mat area, settlement is expected to be on the order of 1 inches at the center and the margins.

We anticipate that the Structural Engineer will design the mat to provide some level of rigidity either through thickness or ribs/cellular construction techniques to promote more uniform settlement. The perfectly rigid foundation with uniform settlement has loads

redistributed to the margins. The following moduli of subgrade reaction are recommended to analyze mat stresses for this condition:

Modulus of Subgrade Reaction	Location
100 pci	Mat interior
200 pci	Edge of foundation to 0.25*B toward the center

The Structural Engineer should provide our Geotechnical Engineer with the anticipated slab stresses so that settlement and the corresponding soil modulus can be subsequently estimated and compared to the values in our current analysis. If these values deviate significantly, revised estimates of soil modulus will be provided for further iteration until convergence is attained.

Foundation Design Parameters – Overturning and Uplift Loads

Shallow foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center-third of the foundation (e.g., e < b/6, where b is the foundation width). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing may be required to satisfy this condition.

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils with consideration to the IBC basic load combinations.

Item	Description
Soil Moist Unit Weight	100 pcf
Soil Effective Unit Weight[1]	40 pcf
Soil weight included in uplift resistance	Soil included within the prism extending up from the top perimeter of the footing at an angle of 20 degrees from vertical to ground surface

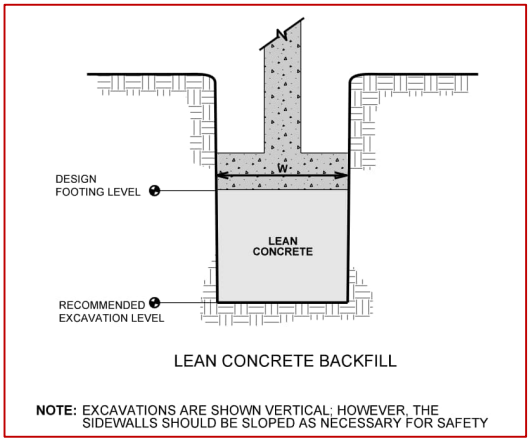
1. Effective (or buoyant) unit weight should be used for soil above the foundation level and below a water level. The high groundwater level should be used in uplift design as applicable.

Foundation Construction Considerations

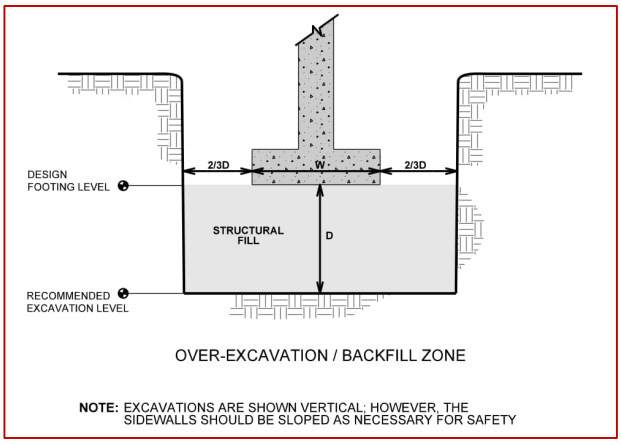
As noted in Earthwork, the footing excavations should be evaluated under the observation of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry

material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are observed at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. The lean concrete replacement zone is illustrated on the sketch below.



Overexcavation for structural fill placement below footings should be conducted as shown below. The overexcavation should be backfilled up to the footing base elevation, well graded granular material (e.g., KDOT AB-3) aggregate or an approved alternate gradation) placed and compacted as recommended in the Earthwork section.



General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Support of improvements above existing fill is discussed in this report. Even with the construction observation/testing recommended in this report, the owner must accept the risk that unsuitable materials within or buried by the fill will not be discovered. This may result in larger than normal settlement and damage to any improvements supported above existing fill, requiring additional maintenance. This risk cannot be eliminated without removing the existing fill from below the planned improvements, but it can be reduced by thorough observation and testing as discussed herein.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly affect excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others.

Construction and site development have the potential to affect adjacent properties. Such impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties are commonly associated with contractor means and methods and are not addressed in this report. The owner and contractor should consider a preconstruction/precondition survey of surrounding development. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

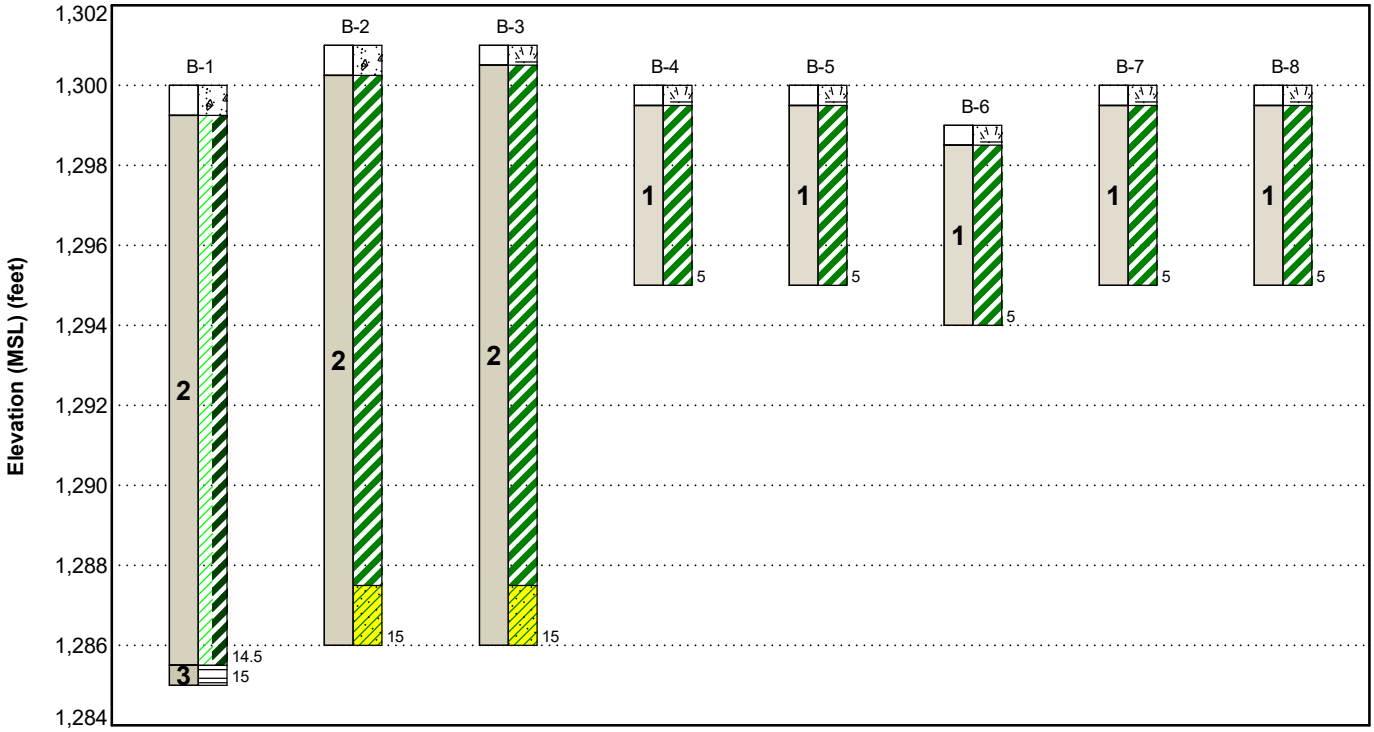
Figures

Contents:

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

GeoModel



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	**Possible Fill**	Fat clay, trace shale and sandstone fragments
2	**Native Clay**	lean to fat clay, fat clay, Sandy lean clay, stiff to hard
3	**Shale**	Highly weathered

LEGEND

- Concrete
- Fat Clay
- Lean Clay/Fat Clay
- Sandy Lean Clay
- Highly Weathered Shale
- Topsoil

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

Attachments

Exploration and Testing Procedures

Field Exploration

Number of Borings	Approximate Boring Depth (feet)	Location
3	15	Proposed grandstand, press box canopy, and viewing area
5	5	Proposed turf area

Boring Layout and Elevations: Terracon's drill crew used a hand-held GPS unit to establish our boring locations in the field at the locations indicated on our Exploration Plan. The ground surface elevations indicated on the boring logs are approximate and were obtained using Google Earth. The ground surface elevations at the boring locations could differ from the actual value. Consider the approximate locations and ground surface elevations of the borings accurate only to the degree implied by these methods.

Subsurface Exploration Procedures: We drilled the Borings B-1 through B-3 with a truck-mounted drill rig using continuous flight augers to advance the boreholes. We obtained representative samples primarily by the split-barrel sampling procedure. In the split-barrel sampling procedure, a standard, 2-inch O.D., split-barrel sampling spoon is driven into the boring with a 140-pound hammer falling 30 inches. We recorded the number of blows required to advance the sampling spoon the last 12 inches of an 18-inch sampling interval as the standard penetration resistance value, N. We used an automatic SPT hammer to advance the split-barrel. We considered the effect of the automatic hammer's efficiency in our interpretation and analysis. Borings B-4 through B-8 were advanced using a hand auger and samples obtained from the auger cuttings.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer. Our drill crew prepared boring logs in the field as part of the drilling operations. These boring logs include visual classifications of the materials encountered during drilling and the driller's interpretation of the subsurface conditions between samples. The final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in the laboratory.

Laboratory Testing

We estimated the unconfined compressive strength of the cohesive samples with a hand penetrometer. The hand penetrometer test values can be correlated with the unconfined compressive strengths and provide a better estimate of soil consistency than visual and tactual examination alone. The project engineer reviewed the field data and assigned laboratory tests. The laboratory testing program included the following types of tests:

- Moisture Content
- Atterberg Limits

The laboratory test results are provided on the boring logs or as separate attachments included in the Exploration Results section of this report.

An engineer examined the soil/rock samples in the laboratory as part of the testing program. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with our *General Notes* and the *Unified Soil Classification System*, respectively. The estimated group symbols using the *Unified Soil Classification System* are shown in the appropriate column on the boring logs. Rock descriptions are according to *Sedimentary Rock Classification* and have been estimated from disturbed samples. Observation of core samples and petrographic analysis may reveal other rock types. We are including our *General Notes,* a brief description of the Unified System, and a description of *Sedimentary Rock Classification* in the Supporting Information section of the report.

Site Location and Exploration Plans

Contents:

Site Location

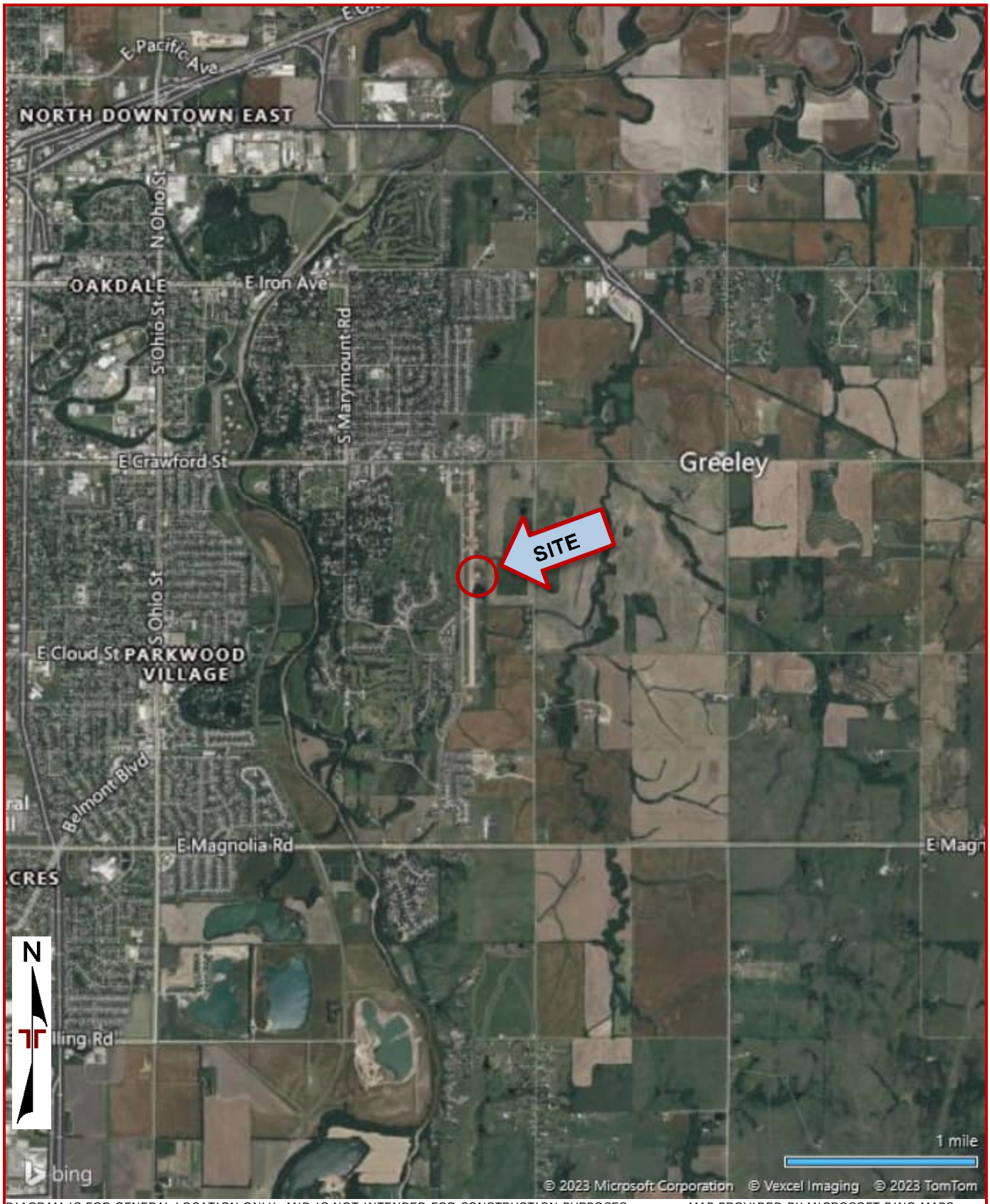


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES MAP PROVIDED BY MICROSOFT BING MAPS

Exploration Plan

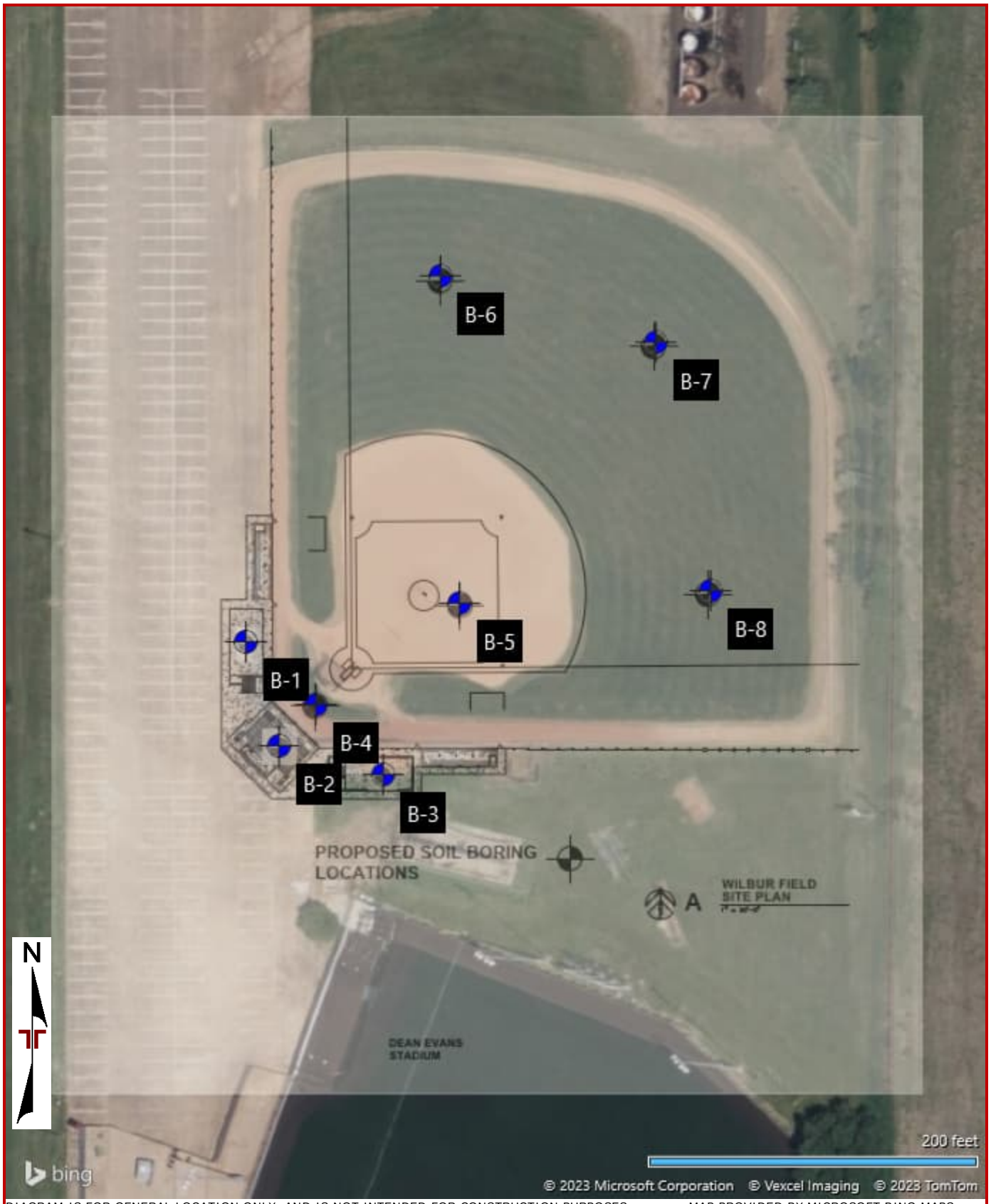


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES MAP PROVIDED BY MICROSOFT BING MAPS

Exploration and Laboratory Results

Contents:

Boring Logs (B-1 through B-8)

Note: All attachments are one page unless noted above.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-1

Location: See Exploration Plan

Latitude: 38.8185° Longitude: -97.5637°

Depth (Ft.) Elevation.: 1300 (Ft.)

Model Layer	Graphic Log	Description	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		Concrete, approximately 9-inches thick 0.8 1299.25									
2		**LEAN TO FAT CLAY (CL/CH)**, olive brown to brown, stiff			X	18	2-5-9 N=14	1	6000 (HP)	22.8	45-16-29
					X	18	2-4-5 N=9	2	6000 (HP)	22.5	
			5								
		- trace sand below 8.5'			X	18	3-5-7 N=12	3	6500 (HP)	21.4	
			10								
		- very stiff below 13.5' 14.5 1285.5			X	18	4-6-10 N=16	4	9000+ (HP)	17.3	
3		15.0 **SHALE**, olive brown, highly weathered 1285	15								
		Boring Terminated at 15 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
746

Hammer Type
Automatic

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Power Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-2

Location: See Exploration Plan

Latitude: 38.8183° Longitude: -97.5636°

Elevation.: 1301 (Ft.)

Model Layer	Graphic Log	Depth (Ft.)	Description	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.8	Concrete, approximately 9-inches thick									
2			**FAT CLAY (CH)**, trace sand, olive brown to brown, stiff				18	3-5-8 N=13	1	8500 (HP)	25.5	
							18	4-6-6 N=12	2	8500 (HP)	22.5	
				5								
							18	5-6-6 N=12	3	9000+ (HP)	19.5	
				10								
		13.5		1287.5								
			SANDY LEAN CLAY (CL), brown, stiff				18	6-5-6 N=11	4	5500 (HP)	15.8	
		15.0		1286								
			Boring Terminated at 15 Feet	15								

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
746

Hammer Type
Automatic

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Power Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-3

Location: See Exploration Plan

Latitude: 38.8183° Longitude: -97.5634°

Elevation.: 1301 (Ft.)

Model Layer	Graphic Log	Depth (Ft.)	Description	Elevation (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5	Topsoil, approximately 6-inches thick	1300.5									
2			**FAT CLAY (CH)**, trace calcareous nodules, brown, very stiff				X	18	4-9-14 N=23	1	9000+ (HP)	17.7	
							X	18	7-9-8 N=17	2	9000+ (HP)	15.7	
					5								
			- trace sand below 8.5'				X	18	5-6-9 N=15	3	9000+ (HP)	15.6	
					10								
		13.5		1287.5									
			SANDY LEAN CLAY (CL), brown, stiff				X	13	3-4-5 N=9	4	2000 (HP)	18.1	
		15.0		1286	15								
			Boring Terminated at 15 Feet										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
746

Hammer Type
Automatic

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Power Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-4

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 38.8184° Longitude: -97.5636° Depth (Ft.) Elevation.: 1300 (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5 Topsoil, approximately 6-inches thick 1299.5									
1		**FAT CLAY (CH)**, dark brown to gray brown, very stiff to hard, (possible fill)									
						1		1	6000 (HP)	21.3	
						1		2	9000+ (HP)	16.6	
		5.0 1295	5								
		Boring Terminated at 5 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
Hand Auger

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Hand Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-5

Location: See Exploration Plan

Latitude: 38.8186° Longitude: -97.5633°

Model Layer	Graphic Log	Depth (Ft.)	Elevation.: 1300 (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5	Topsoil, approximately 6-inches thick 1299.5									
1			**FAT CLAY (CH)**, dark brown to gray brown, very stiff, (possible fill)				1		1	7500 (HP)	20.1	
							1		2	6500 (HP)	23.1	
		5.0	1295	5								
			Boring Terminated at 5 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
Hand Auger

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Hand Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-6

Location: See Exploration Plan

Latitude: 38.8191° Longitude: -97.5633°

Model Layer	Graphic Log	Depth (Ft.)	Elevation.: 1299 (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5	Topsoil, approximately 6-inches thick 1298.5									
1			**FAT CLAY (CH)**, dark brown to gray brown, stiff, (possible fill)									
							1		1	2000 (HP)	26.8	
							1		2	3000 (HP)	26.8	
		5.0	1294	5								
			Boring Terminated at 5 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
Hand Auger

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Hand Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-7

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 38.8190° Longitude: -97.5628° Depth (Ft.) Elevation.: 1300 (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5 Topsoil, approximately 6-inches thick 1299.5									
1		**FAT CLAY (CH)**, trace shale and sandstone fragments, dark brown to gray brown, stiff, (possible fill)									
						1		1	2000 (HP)	24.0	
						1		2	2000 (HP)	25.1	
		5.0 1295	5								
		Boring Terminated at 5 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
Hand Auger

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Hand Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Wilbur Field
851 Markley Road | Salina, KS
Terracon Project No. 01235149

Terracon
1815 S Eisenhower St
Wichita, KS

Boring Log No. B-8

Location: See Exploration Plan

Latitude: 38.8186° Longitude: -97.5627°

Model Layer	Graphic Log	Depth (Ft.)	Elevation.: 1300 (Ft.)	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	SAMPLE NUMBER	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.5	Topsoil, approximately 6-inches thick 1299.5									
1			**FAT CLAY (CH)**, trace shale and sandstone fragments, dark brown to gray brown, stiff, (possible fill)				1		1	3000 (HP)	23.0	
							1		2		19.1	
		5.0	1295	5								
			Boring Terminated at 5 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
No free water observed

Drill Rig
Hand Auger

Driller
AT/TS

Logged by

Boring Started
07-18-2023

Boring Completed
07-18-2023

Notes

Advancement Method
Hand Auger

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Supporting Information

Contents:

Note: All attachments are one page unless noted above.

Terracon
1815 S Eisenhower St
Wichita, KS

General Notes

Sampling	Water Level	Field Tests
Grab Sample Split Spoon	Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N — Standard Penetration Test Resistance (Blows/Ft.) (HP) — Hand Penetrometer (T) — Torvane (DCP) — Dynamic Cone Penetrometer UC — Unconfined Compressive Strength (PID) — Photo-Ionization Detector (OVA) — Organic Vapor Analyzer

Descriptive Soil Classicification

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

Location And Elevation Notes

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

Strength Terms

Relative Density of Coarse-Grained Soils (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		Consistency of Fine-Grained Soils (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Relative Density	**Standard Penetration or N-Value (Blows/Ft.)**	**Consistency**	**Unconfined Compressive Strength Qu (tsf)**	**Standard Penetration or N-Value (Blows/Ft.)**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

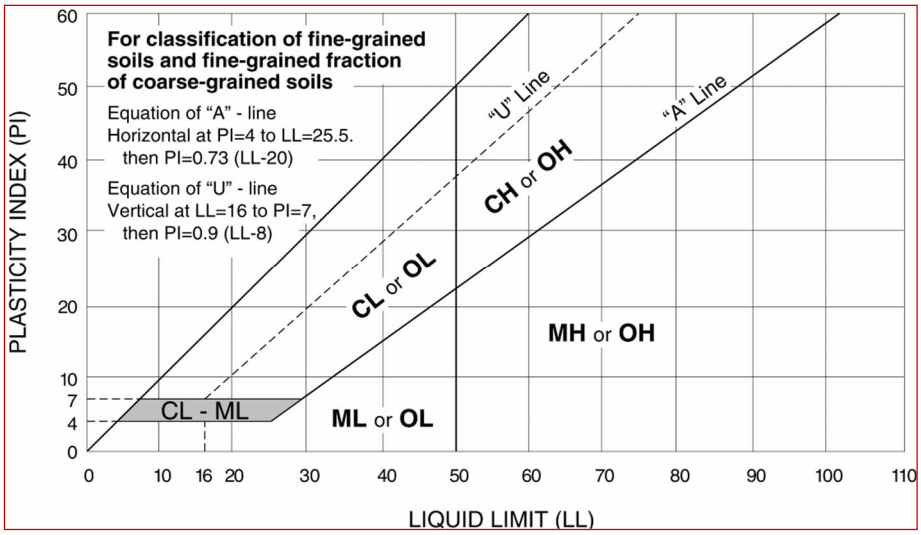
Relevance of Exploration and Laboratory Test Results

Exploration/field results and/or laboratory test data contained within this document are intended for application to the project as described in this document. Use of such exploration/field results and/or laboratory test data should not be used independently of this document.

Unified Soil Classification System

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]				Soil Classification	
				Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines [C]	Cu≥4 and 1≤Cc≤3 [E]	GW	Well-graded gravel [F]
			Cu<4 and/or [Cc<1 or Cc>3.0] [E]	GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH	GM	Silty gravel [F, G, H]
			Fines classify as CL or CH	GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines [D]	Cu≥6 and 1≤Cc≤3 [E]	SW	Well-graded sand [I]
			Cu<6 and/or [Cc<1 or Cc>3.0] [E]	SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH	SM	Silty sand [G, H, I]
			Fines classify as CL or CH	SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots above "A" line [J]	CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]	ML	Silt [K, L, M]
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OL	Organic clay [K, L, M, N]
					Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay [K, L, M]
			PI plots below "A" line	MH	Elastic silt [K, L, M]
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OH	Organic clay [K, L, M, P]
					Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.
[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.
[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
[F] If soil contains ≥ 15% sand, add "with sand" to group name.
[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.
[H] If fines are organic, add "with organic fines" to group name.
[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.
[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
[N] PI ≥ 4 and plots on or above "A" line.
[O] PI < 4 or plots below "A" line.
[P] PI plots on or above "A" line.
[Q] PI plots below "A" line.



Rock Classification Notes

WEATHERING	
Term	**Description**
Fresh	Mineral crystals appear bright; show no discoloration. Features show little or now staining on surfaces. Discoloration does not extend into intact rock.
Slightly weathered	Rock generally fresh except along fractures. Some fractures stained and discoloration may extend <0.5 inches into rock.
Moderately weathered	Significant portions of rock are dull and discolored. Rock may be significantly weaker than in fresh state near fractures. Soil zones of limited extent may occur along some fractures.
Highly weathered	Rock dull and discolored throughout. Majority of rock mass is significantly weaker and has decomposed and/or disintegrated; isolated zones of stronger rock and/or soil may occur throughout.
Completely weathered	All rock material is decomposed and/or disintegrated to soil. The rock mass or fabric is still evident and largely intact. Isolated zones of stronger rock may occur locally.

STRENGTH OR HARDNESS		
Description	**Field Identification**	**Uniaxial Compressive Strength, psi**
Extremely strong	Can only be chipped with geological hammer. Rock rings on hammer blows. Cannot be scratched with a sharp pick. Hand specimens require several hard hammer blows to break.	>36,000
Very strong	Several blows of a geological hammer to fracture. Cannot be scratched with a 20d common steel nail. Can be scratched with a geologist's pick only with difficulty.	15,000-36,000
Strong	More than one blow of a geological hammer needed to fracture. Can be scratched with a 20d nail or geologist's pick. Gouges or grooves to ¼ inch deep can be excavated by a hard blow of a geologist's pick. Hand specimens can be detached by a moderate blow.	7,500-15,000
Medium strong	One blow of geological hammer needed to fracture. Can be distinctly scratched with 20d nail. Can be grooved or gouged 1/16 in. deep by firm pressure with a geologist's pick point. Can be fractured with single firm blow of geological hammer. Can be excavated in small chips (about 1-in. maximum size) by hard blows of the point of a geologist's pick;	3,500-7,500
Weak	Shallow indent by firm blow with geological hammer point. Can be gouged or grooved readily with geologist's pick point. Can be excavated in pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.	700-3,500
Very weak	Crumbles under firm blow with geological hammer point. Can be excavated readily with the point of a geologist's pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.	150-700

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	**Spacing**	**Description**	**Spacing**
Intensely fractured	< 2.5 inches	Laminated	< ½-inch
Highly fractured	2.5 – 8 inches	Very thin	½ – 2 inches
Moderately fractured	8 inches to 2 feet	Thin	2 inches – 1 foot
Slightly fractured	2 to 6.5 feet	Medium	1 – 3 feet
Very slightly fractured	> 6.5 feet	Thick	3 – 10 feet
		Massive	> 10 feet

ROCK QUALITY DESIGNATION (RQD) [1]	
Description	**RQD Value (%)**
Very Poor	0 - 25
Poor	25 – 50
Fair	50 – 75
Good	75 – 90
Excellent	90 - 100

1. The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

SAMPLE COPY - STATUTORY BOND

Statutory Bond shall be furnished in quadruplicate, two (2) copies shall have Power of Attorney attached. Wording of Statutory furnished must be an exact copy of this sample and on 8½" x 11" paper.

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENTS:
_____, as Principal, and

_____, a Corporation organized under the laws of the State of _____, as Surety are held and firmly bound unto the State of _____, in the penal sum of _____
_____Dollars $_____ lawful money of the United States, for the payment of which sum well and truly made, said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assignees, jointly and severally by these presents.

Signed, sealed and delivered on this _____day of _____, 20____.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT WHEREAS said Principal has entered into a written contract with _____
_____, hereinafter called the "Owner" dated _____
20_____, for the construction or marking of the following described improvements:

all in accordance with the detailed Drawings and Specifications on file in the office of the Owner.

NOW THEREFORE, if the said Principal or the Subcontractor, or Sub-Subcontractors, of said Principal shall pay all indebtedness incurred for supplies, materials or labor furnished, used or consumed in connection with, in or about the construction or making of the above described improvements, including gasoline, lubrications, oils, fuel oils, greases, coat and similar items used or consumed directly in furtherance of such improvements, this obligation shall be void, otherwise it shall remain in full force and effect.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect any such change, extension of time, alteration or addition to the terms of the Contract or to the Specifications.

(SEAL) _____
Principal
By: _____

(SEAL) _____
Surety
By: _____

DRAFT

AIA® Document A101™ – 2017

Standard Form of Agreement Between Owner and Contractor
where the basis of payment is a Stipulated Sum

AGREEMENT made as of the «–» day of «-» in the year «Two Thousand Twenty Three»
(In words, indicate day, month, and year.)

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

«Salina Baseball Enterprises- »« »
«- »
«Salina, KS 67401- »
«–»

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

« »« »
« »
« »
« »

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

«Berkley Family Recreational Area- »
«Lighting Upgrades, Salina, KS–»
«JGR Project #22-3274- »

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

«Jones Gillam Renz Architects, Inc.- »« »
«730 N Ninth St, Salina, KS 67401- »
«Telephone: 785-827-0386 »
« »

The Owner and Contractor agree as follows.

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

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

The parties should complete A101™–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

TABLE OF ARTICLES

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« »] The date of this Agreement.

[«X »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[«X »] By the following date: « »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

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

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

«Two Hundred Dollars and Zero Cents ($200.00) per day. »

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

«N/A »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 All payments to the Contractor will be made by the City of Salina. Provided that an Application for Payment is received by the Architect not later than the «20th- » day of a month, Architect to submit to City of Salina and Salina Baseball Enterprises by the 25th day of the month for approval, the City of Salina ~~Owne~~r shall make payment of the amount certified to the Contractor not later than the «20th- » day of the «following- » month. If an Application for Payment is received by the Architect after the application date fixed above, Architect will submit to the City of Salina and Salina Baseball Enterprises within five (5) business days, payment of the amount certified shall be made by the City of Sallina ~~Owner~~ not later than «twenty- » («20- ») days after the Architect submits the invoice to the City of Salina.~~receives the Application for Payment.~~
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- **.4** For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- **.5** Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

«Ten percent (10%) »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«N/A »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

«Only as agreed to by Owner. »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- **.1** the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- **.2** a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

«1- » % «of unpaid balance »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

«N/A »

« »
« »
« »

§ 6.2 Binding Dispute Resolution
For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[«- »] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[«X »] Litigation in a court of competent jurisdiction

[« »] Other *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

«N/A »

.5 Drawings

Number	Title	Date
See Exhibit C	List of Drawings	

.6 Specifications

Section	Title	Date	Pages
See Exhibit B	Table of Contents		

.7 Addenda, if any:

Number	Date	Pages
Addendum 1		

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[«N/A- »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[«N/A- »] The Sustainability Plan:

Title	Date	Pages

[«X- »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Supplementary Conditions	SC		

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

«Exhibit D – City of Salina Contracted Provisions Addendum, 6 pages »

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

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
« »« »	« »« »
(Printed name and title)	*(Printed name and title)*

Exhibit D

CITY OF SALINA CONTRACTUAL PROVISIONS ADDENDUM

This Addendum to is entered into this _____ day of _____, 20____, by and between **Salina** Baseball Enterprises, Inc., a Kansas corporation ("Baseball Enterprises"), and _____, a _____ ("Contractor").

Recitals

A. Baseball Enterprises is a party to an agreement with the City of Salina, Kansas ("City"), dated _____ ____, 2020 (the "Berkley Family Recreational Area Lighting Agreement"), setting forth the terms and conditions under which the City and Baseball Enterprises will make contributions to the proposed improvements to Wilbur Field and Dean Evans Field ("Improvements").

B. Pursuant to the "Berkley Family Recreational Area Lighting Agreement", Baseball Enterprises and the City agreed that Baseball Enterprises will incorporate certain mandatory contractual provisions into all contractual agreements related to work to be performed on the Improvements.

C. Baseball Enterprises and the Contractor have entered into a contract, dated _____, 20___, providing for Contractor's provision of _____ in connection with the Improvements (the "Contract").

D. This Addendum contains the mandatory contractual provisions required by the City to be attached to and incorporated in the Contract between Baseball Enterprises and the Contractor.

The parties, in consideration of the mutual promises set forth in this Addendum and the Contract, agree and covenant:

1. Incorporation of Addendum; Order of Precedence. This Addendum, including the Recitals set forth above, is hereby incorporated into the Contract as though more fully set forth therein. For any finding or determination of any contradiction between the Contract and this Addendum, the more stringent requirement will prevail.

2. Designation of City as Third-Party Beneficiary. The Contractor agrees that the City is an express third-party beneficiary of the provisions of this Addendum, shall be entitled to the rights and benefits hereunder, and may enforce the provisions of this Addendum in the same manner as if it were a party hereto.

3. Insurance Requirements.

3.1. Types and Amount of Coverage. The Contractor agrees to obtain insurance coverage as specified in the attached and incorporated Insurance Requirements Summary and shall not make any material modification or change from these specifications without the prior approval of the City. If the Contractor subcontracts any of its obligations under the Contract, the Contractor shall require each such subcontractor to obtain insurance coverage as specified in the Insurance Requirements Summary. Failure of the Contractor or its subcontractors to comply with these requirements shall not be construed as a waiver of these requirements or provisions and shall not relieve the Contractor of liability.

3.2. Rating. All insurance policies shall be issued by insurance companies rated no less than A- VII in the most recent "Bests" insurance guide and admitted in the State of Kansas. Except as otherwise specified in the Insurance Requirements Summary, all such policies shall be in such form and contain such provisions as are generally considered standard for the type of insurance involved.

3.3. Certificate of Insurance. Prior to commencing the performance of any work or services under the Contract, the Contractor shall furnish the City with a certificate of insurance listing the City as the Certificate Holder and evidencing compliance with the insurance requirements in the Contract. The City reserves the right to require complete certified copies of all insurance policies procured by the Contractor pursuant to the Contract, including any and all endorsements affecting the coverage required hereunder.

4. Indemnification. To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the City, its agents, representatives, officers, officials and employees from and against all claims, damages, losses and expenses (including but not limited to attorney fees and court costs) attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property, including loss of use resulting therefrom, to the extent that such claims, damages, losses, and expenses relate to, arise out of, or are alleged to have resulted from the wrongful acts, errors, mistakes, omissions, or defective work or services of the Contractor, its employees, agents, or any tier of subcontractors in the performance of the Contract.

5. Injury to Persons or Damage to Property. The Contractor acknowledges responsibility for any injury to person(s) or damage to property caused by its employees or agents in the performance of its duties under the Contract and shall immediately notify the City's Risk Management Department at (785) 309-5705 in the event of such injury to person(s) or damage to property.

6. Applicable Law; Venue. The Contract and its validity, construction and performance shall be governed by the laws of Kansas. In the event of any legal action to enforce or interpret the Contract, the sole and exclusive venue shall be in the Saline County, Kansas District Court.

7. Equal Opportunity. In conformity with the Kansas act against discrimination and Chapter 13 of the Salina Code, the Contractor and its subcontractors, if any, agree that:

(1) The Contractor shall observe the provisions of the Kansas act against discrimination and Chapter 13 of the Salina Code and in doing so shall not discriminate against any person in the performance of work under the Contract because of race, sex, religion, age, color, national origin, ancestry or disability;
(2) The Contractor shall include in all solicitations, or advertisements for employees, the phrase "equal opportunity employer," or a similar phrase to be approved by the City's human relations director;
(3) If the Contractor fails to comply with the manner in which the Contractor reports to the Kansas human rights commission in accordance with the provisions of K.S.A. 44-1031 and amendments thereto, the Contractor shall be deemed to have breached the Contract and it may be canceled, terminated or suspended, in whole or in part, by the City;
(4) If the Contractor is found guilty of a violation of Chapter 13 of the Salina Code or the Kansas act against discrimination under a decision or order of the Salina human relations commission or the Kansas human rights commission which has become final, the Contractor shall be deemed to have breached the Contract and it may be canceled, terminated or suspended, in whole or in part, by the City;
(5) The Contractor shall not discriminate against any employee or applicant for employment in the performance of the Contract because of race, sex, religion, age, color, national origin, ancestry or disability; and
(6) The Contractor shall include similar provisions in any subcontract under the Contract.

8. **Construction Requirements**. If the Contractor is obligated under the Contract to construct or make repairs to any portion of the Improvements, Contractor shall comply with the following requirements:

8.1. Performance and Payment Bonds. If compensation payable to Contractor for work on the Improvements exceeds $50,000, then prior to the commencement of any work on the Improvements, the Contractor shall furnish a performance bond, running independently to the City, and a statutory payment bond running to the state of Kansas. The performance bond shall be conditioned upon the prompt, full, and complete performance by the Contractor as principal of its covenants, obligations, and agreements as contained in the Contract and related contract documents, including but not limited to performance by the Contractor of its warranty obligations set forth in Section 9 below. The statutory payment bond shall be conditioned upon the Contractor, as principal, paying all indebtedness incurred for labor, supplies, equipment, and materials furnished in making the Improvements called for by the Contract and related contract documents. Each bond shall be in an amount at least equal to the contract price for the Improvements. The form of each bond shall be subject to approval by the City. Each bond shall be executed by such sureties as are authorized to conduct business in the state of Kansas. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act. The performance bond shall be delivered to the City Clerk. The Contractor shall file the payment bond with the Clerk of the Saline County District Court in accordance with K.S.A. 60-1111(b) and deliver a file-stamped copy to the City Clerk.

8.2. Contractor's Warranty to City. Contractor's warranties under the Contract shall extend to the City. The following minimum warranties and related obligations of the Contractor shall apply to the extent they exceed the warranties and obligations of the Contractor under the provisions of the Contract:

A. If within two years after final completion of the Improvements as a whole (as evidenced by final payment and release of all retainage), any Improvements constructed by the Contractor or its subcontractors are found to be defective, the Contractor shall promptly, without cost to the City and in accordance with the City's written instructions:

(i) Correct such defective Improvements; or

(ii) If the defective Improvements have been rejected by the City, remove and replace them with Improvements that are not defective; and satisfactorily correct or repair, or remove and replace, any damage to other Improvements or other land or areas resulting therefrom.

B. If the Contractor does not promptly comply with the terms of the City's written instructions, or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective Improvements corrected or repaired or may have the rejected Improvements removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by the Contractor.

C. Where defective Improvements (and damage to other Improvements resulting therefrom) has been corrected or removed and replaced under this paragraph, the warranty period hereunder with respect to such Improvements will be extended for

an additional period of two years after such correction or removal and replacement has been satisfactorily completed.

D. The obligations under this paragraph are in addition to any other obligation or warranty, and shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitations or repose.

IN WITNESS WHEREOF, the parties hereunto have executed this Addendum this ____ day of _____, 20____.

[CONTRACTOR NAME], [Contractor Legal Entity]

By: _____

Name: _____

Title: _____

Date: _____ ____, 20____

SALINA BASEBALL ENTERPRISES, INC.,
a Kansas not-for-profit corporation

By: _____

Name: _____

Title: _____

Date: _____ ____, 20____

INSURANCE REQUIREMENTS SUMMARY

Pursuant to Section 3 of the Addendum, the Contractor shall obtain, pay for, and maintain – and shall require each of its authorized subcontractors to obtain and maintain – for the duration of the Contract, policies of insurance meeting the following requirements:

1. General Requirements.

A. Additional Insured. With the exception of the workers' compensation and professional liability policies to be obtained by the Contractor hereunder, all policies shall name the City of Salina ("City"), its agents, representatives, officers, officials, and employees as additional insured(s). Insurance for the additional insured shall extend to Products/Completed Operations and be as broad as the insurance for the named insured, including defense expense coverage, and, with respect to the commercial general liability policy required hereunder, shall be endorsed to apply as primary and non-contributory insurance before any other insurance or self-insurance, including any deductible, maintained by, or provided to, the additional insured(s).

B. Waiver of Subrogation. Where allowed by law, all policies will include a waiver of subrogation in favor of the City, its agents, representatives, officers, officials, and employees.

C. Claims Made Policies. If coverage is written on a claims-made basis for any of the policies required by this Addendum, the Contractor must maintain the coverage for a minimum of two (2) years from the date of final completion of all work under the Contract.

D. Premium and Deductible Expenses. The Contractor shall be responsible for all premiums and retention or deductible expense for any and all policies required by this Addendum.

2. Specific Coverage Requirements.

A. Commercial General Liability ("CGL"). The Contractor shall maintain CGL coverage written on ISO Occurrence form CG00 01 or an industry equivalent, which shall cover liability arising from Personal Injury, Bodily Injury, Property Damage, Premises and Operations, Products and Completed Operations, Contractual Liability, Independent Contractors and Advertising Injury. The policy limits shall not be less than the following:

- Each occurrence $1,000,000
- General aggregate $2,000,000
- Personal and Advertising Liability $1,000,000

The policy shall contain an endorsement that modifies the general aggregate to apply separately to each project. The Contractor shall maintain the Products and Completed Operations liability coverage for a period of at least two (2) years after completion of all work under the Contract.

B. Business Automobile Liability ("BAL"). The Contractor shall maintain BAL coverage written on ISO form CA 00 01 or an industry equivalent. Coverage shall be applicable to all autos and other vehicles subject to compulsory auto liability laws that are owned, hired,

rented or used by the Contractor and include automobiles not owned by but used on behalf of the Contractor. The BAL policy limits shall not be less than the following:

- Combined single limit $1,000,000

C. Workers' Compensation/Employer's Liability. The Contractor shall maintain workers' compensation and employer's liability coverage with policy limits not less than the following:

- Workers' Compensation (Coverage Part A)
  - Statutory
- Employer's Liability (Coverage Part B)
  - $100,000 each accident
  - $500,000 disease – policy limit
  - $100,000 disease – each employee

SECTION 01010

GENERAL WORK REQUIREMENTS

1. GENERAL
Should conflict occur between these General Work Requirements and the General Conditions, the requirements of this Section take precedence.

2. INTENT OF DOCUMENTS
The Contract Drawings are complementary and what is called for by anyone shall be as binding as if called by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work.

3. MANUFACTURER'S DIRECTIONS
All manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturers, unless herein specified to the contrary.

4. BUILDING PERMIT
As stated in Subparagraph 4.7.1, AIA DOCUMENT A201, General Conditions, the Contractor shall secure and pay for all building permits as required by City of Salina.

5. MATERIALS - EQUIPMENT - SUBSTITUTION
   A. In general, these Specifications identify the required materials and equipment by naming one or more manufacturers, brand, model, catalog number, and/or other identification; the first-named manufacturer's product used as a basis for design; the other named brands considered equivalent. Equivalent brand manufacturers named must furnish products consistent with the Specifications for the first-named product, as determined by the Architect. Base Bid shall include only those brands named and must be used on the project, except as hereinafter provided.
   B. Materials or equipment specified exclusively, Base Bid shall be based on same and used on project, except as hereinafter provided.
   C. Prior to receipt of bids, should Contractor wish to incorporate in Base Bid, brands or products other than those named in the Specifications, he shall submit written request for substitution to Architect not later than seven (7) days prior to date bids are due. Architect will consider request and items approved will be listed in an addendum issued to all bidders.
   D. After execution of Contract, substitution of product brands for those named in the Specifications will be considered, only if request is received within thirty (30) days after Contract Date and request includes showing credit due Owner.
   E. Materials specified equivalent and those proposed for substitution must be equal or better than first-named material in construction, efficiency, utility, aesthetic design, and physical size shall not be larger than space provided for it. Request for substitution by full description and technical data in two (2) copies, including manufacturer's name, model, catalog number, photographs or cuts, physical dimensions, operating characteristics, and any other information for comparison.
   F. Owner reserves the right:
      1) To require any or all bidders, before execution of Contract, to state what materials they will use.
      2) To require "if bound with the Bid Form," the Contractor to fill out a BID SUPPLEMENT listing the BASE BID and "ADD" or "DEDUCT" for other materials he proposes to use.

6. APPROVAL OF SUBCONTRACTORS - MATERIALS
   A. The Contractor, if requested, must submit for approval before signing Agreement, list of Subcontractors and material suppliers enumerating items of work to be performed, name of materials, equipment, etc., to be furnished and/or installed. Refer to Paragraph - MATERIALS - EQUIPMENT - SUBSTITUTION.
   B. If the list is not requested prior to signing of Agreement, list, as described in previous paragraph, shall be furnished within ten (10) days of signing Agreement.

7. PROTECTION - Supplement, ARTICLE 10, AIA GENERAL CONDITIONS
   A. Refer to Paragraph - WEATHER CONDITIONS.
   B. Each Contractor shall assume responsibility for his materials stored on the premises.

C. Contractor shall take charge and assume general responsibility for proper protection of project during construction.

D. The Contractor shall protect trees, shrubs, lawns, and all landscape from damage, providing guards and covering. Damaged work shall be repaired or replaced at his expense. Protect streets and sidewalks and make repairs at his expense.

1) Water Protection. The Contractor shall, at all times, protect the excavation, trenches, and/or the building from damage by rain water, spring water, ground water, backing up of drains or sewers and all other water. He shall provide all pumps and equipment and enclosures to provide this protection.

2) Bracing, Shoring, and Sheeting. The Contractor shall provide all shoring, bracing and sheeting as required for safety and for the proper execution of the work and have same removed when the work is completed.

3) Guard Lights. The Contractor shall provide and maintain guard lights at all barricades, railings, obstructions in the streets, roads or sidewalks and at all trenches or pits adjacent to public walks or roads.

4) Weather Conditions. The Contractor shall, at all times, provide protection against weather; rain, winds, storms, frost, or heat, so as to maintain all work, materials, apparatus, and fixtures, free from injury or damage. At the end of the day's work, all new work likely to be damaged shall be covered.

8. WEATHER CONDITIONS

The Contractor shall protect all portions of their work and all materials, at all times from damage by water, freezing, frost and is to repair, replace and make good to the satisfaction of the Architect, any portion of same which may in the Architect's opinion, have been damaged by the elements.

9. GRADES, LINES, LEVELS, AND SURVEYS

The Owner will establish the lot lines, restrictions and a bench mark. All other grades, lines, levels, and bench marks shall be established and maintained by the Contractor, who shall be responsible for same. The Contractor shall verify all grades, lines, levels, and dimensions as shown on the Drawings and he shall report all errors or inconsistencies in the above to the Architect before commencing work.

A. The Contractor shall provide and maintain well-built batter boards at all corners. He shall establish bench marks in not less than two (2) widely separated places. As the work progresses, he shall establish bench marks at each floor, giving exact levels of the various floors.

B. As the work progresses, the Contractor shall lay out in the forms and the rough flooring the exact location of all partitions as a guide to all trades.

C. The Contractor shall verify all grades, lines, levels, and dimensions as shown on the Drawings and he shall report any errors or inconsistencies in the above to the Architect before commencing work.

12. REQUIREMENTS IMMEDIATELY AFTER EXECUTION OF CONTRACT

Immediately after execution of the Contract, the Contractor shall deliver to the Architect the following items which are described more fully in following Articles:

Schedule of Values
Schedule of Operations
Progress Charts
Samples
Superintendent's name and resume of experience
List of Subcontractors and Material Suppliers

A. Schedule of Values on AIA Form G702, or other form approved by the Architect, a detailed breakdown of the Contract Sum indicating the amounts allotted to the various divisions of the work for labor and material. The schedule will serve as a guide to the Architect in determining the amounts due each month as the work progresses. The schedule shall be broken down as directed by the Architect.

B. Schedule of Operations based on the above Schedule of Values and indicating the progress of the work up to the first day of each month shall be prepared by the Contractor in a form approved by the Architect and shall be delivered to the Architect in duplicate with each application for payment.

C. Progress Charts based on the above specified schedule of operations and indicating the progress of the work up to the first day of each month shall be prepared by the Contractor in a form approved by the Architect and shall be delivered to the Architect in duplicate with each application for payment. Progress charts shall be in the form of a bar graph. Along with progress charts the Contractor shall provide an estimated monthly cash flow chart.

13. CONSTRUCTION PROCEDURE

A. Each Contractor shall schedule his work so as to cause a minimum of interference with business operations during all of the construction work.

B. Precautions and Cooperation

1) Notify the Owner 7 days in advance before any utility (natural gas, water, electricity, or sewer) is to be interrupted.

2) With proper notification, interruption in utilities up to 4 hours will be permitted without special provisions by the Contractor. *If any interruption of a utility exceeds 4 hours the contractor must make arrangements for temporary alternate utility service.

3) Interruption of utilities must be coordinated with the Owner with changeovers and out of service at night. Weekend and evening changeovers of utilities shall occur with no additional cost to the Owner.

4) Openings to be cut in existing exterior walls must be saw cut. No jackhammer work will be permitted. Notify the Owner 7 days in advance of cutting of exterior walls.

14. TIME EXTENSIONS ADVERSE WEATHER

A. The Contractor shall comply with all provisions of the General Conditions in submitting any request for extension of Contract Time due to unusually severe weather.

B. Definitions:

1. Adverse Weather - Atmospheric conditions at a definite time and place which are unfavorable to construction activities.

2. Unusually Severe Weather - Weather which is more severe than the adverse weather anticipated for the season, location, or activity involved.

C. In order for any request of time extension due to unusually severe weather to be valid, the Contractor must document both of the following conditions.

1. The weather experienced at the project site during the Contract period is more severe that the adverse weather anticipated for the project location during any given month.

2. The unusually severe weather actually caused a delay to the completion of the project. The delay must be beyond the control and without fault or negligence by the Contractor.

D. The following schedule of monthly anticipated adverse weather delays will constitute the baseline for monthly weather time evaluations. The Contractor's Progress Schedule must reflect these anticipated adverse weather delays in all-weather affected activities:
MONTHLY ANTICIPATED ADVERSE WEATHER DELAY WORK DAYS BASED ON FIVE (5) DAY WORK WEEK.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
10	8	7	6	7	7	5	5	5	4	5	9

END OF SECTION 01010

SECTION 01019

SPECIAL PROVISIONS

1. GENERAL
   Should conflict occur between these Special Provisions and the General Conditions, the requirements of the Special Provisions shall take precedence.

2. TIME OF CONSTRUCTION – PENALTY CLAUSE
   a. Time of Construction - The Contractor will commence the work within ten (10) days after the Architect shall have given the Contractor written notice to commence construction to the satisfaction of the Owner within the calendar days as stated in Paragraph 3, below. The time for completion herein set forth shall be extended for the period of any reasonable delay which is due exclusively to causes beyond the control and without the fault of the Contractor, including acts of God, fires, floods, and direction by the Architect. It is impractical to perform any operation of construction and acts of omissions of the Owner with respect to matters for which Owner is solely responsible; provided, however, that no such extension of time for completion shall be granted the Contractor, unless within ten (10) days after the happening of any event relied upon by the Contractor for such extension of time, the Contractor shall have made a request, therefore, in writing to the Architect. Extended time will be submitted with pay request for Owner's approval.
   b. Penalty Clause - The time of completion of the construction of the project is of the essence of this Contract. Should the Contractor neglect, refuse, or fail to complete the project (100%) within the time herein agreed upon, after giving effect to extensions of time, if any, herein provided; the Owner shall have the right to deduct from and retain out of such money, which may then be due or which may become due and payable to the Contractor, the sum of THREE HUNDRED DOLLARS ($300.00) per day for each and every day that such construction is delayed in its completion beyond the specified time. If the amount due and to become due from the Contractor to the Owner is insufficient to pay in full any such penalites, the Contractor shall pay to the Owner the amount necessary to effect such payment in full; provided, however, that the Owner shall promptly notify the Contractor in writing of the manner in which the amount retained, deducted or claimed. No award is given to the Contractor for early completion.
   c. Joint Responsibility - The Contractor and/or Subcontractors causing the delay in completion of the project shall be responsible for payment of the penalty. In no case shall the total penalty for all contracts exceed the sum of daily penalty multiplied by the number of days of delay in completion.

3 WORK SEQUENCE, SCHEDULE FOR COMPLETION AND LIQUIDATED DAMAGES
   a. Schedule requirements for each area are outlined as follows.

Work	**Available Start**	**Substantial Completion**	**Liquidated Damages**
Site Preparation and Construction	October 1, 2023	Dean Evans - March 1, 2024	$300/Calendar Day
Site Preparation and Construction	October 1, 2023	Wilbur – April 1, 2024	$300/Calendar Day

   b. Schedule requirements for final completion – 30 days following substantial completion with liquidated damages equivalent to those identified for substantion completion.

4. ALTERNATES - Refer to Alternate Schedule, Section 01030
   a. Alternates specified are not a part of Base Bid, but are Alternates to same, their acceptance being at option of Owner.

5. CASH ALLOWANCES
   a. Costs included in Allowances: Cost of Product to Contractor or Subcontractor, less applicable trade discounts, delivery to site, except those taxes saved by use of Owner's tax exemption.
   b. Costs Not Included in the Allowance: Fees for overhead and profit, product handling at the site, including unloading, uncrating, and storage; protection of Products from elements and from damage and labor for installation and finishing.
   c. Architect Responsibilities:
      1. Consult with Contractor in consideration and selection of Products, suppliers and installers.
      2. Select Products in consultation with Owner and transmit decision to Contractor.
      3. Prepare Proposal Requests and Change Orders.
   d. Contractor Responsibilities:
      1. Assist Architect/Engineer in selection of Products, suppliers and installers.
      2. Obtain proposals from suppliers and installers and offer recommendations.
      3. On notification of selection by Architect, execute purchase agreement with designated supplier and installer.
      4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.

5. Promptly inspect Products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
6. Product handling at the site, including unloading, uncrating and storage, protection of Products from elements and from damage and labor for installation and finishing.
7. The Contractor shall include in his Bid all fees for all cash allowances.

e. Funds will be drawn from Cash Allowances only by written authorization from Owner.
f. Cash Allowances:
   2. Inspection and Testing Allowance – The contractor shall include in his bid, an allowance of **$5,000.00** for direct cost of testing by the approved testing companies. The contractor shall bear all costs associated with coordination, administration scheduling, and supervision of testing companies, and include those costs in his bid.
   3. Contingency Allowance – In addition to the specification sections listed above, include an allowance of **$20,000.00** in the general bid and contract amount to be included in the contractors base bid. This allowance shall be used at the sole discretion of the Architect and/or Owner specifically for hidden conditions discovered in the field or on site, the addition of labor, parts and/or materials required for timely completion in conjunction with the general scope of work.

6. ENUMERATION OF DRAWINGS AND SPECIFICATIONS
   a. Correlation. Accompanying these Specifications are the Drawings, which jointly with these Specifications, are intended to explain each other and describe and coordinate the work to be performed under the Contract.
   b. Verification of Documents. Before submitting his bid, each Bidder shall check his set(s) of Drawings and Specifications and advise the Architect if any sheets are missing.
   c. Specifications Explanations. For convenience of reference, the Specifications are separated into Titled Divisions and Sections. Such separation shall not, however, operate to make the Architect an arbiter to establish limits between the Contractor and Subcontractor or Sub-Subcontractor.
   d. Drawings. Refer to LIST OF DRAWINGS.
   e. Specifications. Refer to TABLE OF CONTENTS.

7. WARRANTIES
   Before being eligible for final payment, Contractor shall deliver to Owner, through Architect, all special warranties specified for materials, equipment and installation.

8. OPERATING INSTRUCTIONS
   Before being eligible for final payment, Contractor shall deliver to Owner, through Architect, three (3) copies of manufacturer's operating and maintenance instructions, and one (1) CD/DVD containing a complete set or manufacturers operating instructions, a complete set of shop drawings on each piece of equipment. Electronic files shall be in PDF format with files organized into single documents for Architectural, Mechanical, and Electrical divisions.

9. AS-BUILT DRAWINGS
   Before being eligible for final payment, the Electrical and Mechanical Contractors shall prepare and deliver to Owner, through Architect, One (1) CD/DVD containing AS-BUILT DRAWINGS in PDF format. These drawings shall consist of marked-up prints, and shall show the correct location of every item of equipment, piping, conduit, panel boards, ductwork, switches, valves, etc. If marked-up prints are used, and scanned, they shall be new white prints without miscellaneous markings. All markings shall be clearly legible and identified.

10. CERTIFICATE OF COMPLIANCE
    Upon completion of project, Contractor is to furnish written Certification to the Architect that he has complied with every paragraph of the Specifications and Drawings.

11. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS
    Upon completion of project, Contractor shall submit to Owner a signed Contractor's Affidavit of Release of Liens prior to final payment.

12. CONTRACTOR'S MONTHLY APPLICATION FOR PAYMENT FORM
    Contractor's monthly Application for Payment shall be submitted as per General Conditions. AIA Document G702, Application and Certificate for Payment is approved and acceptable.

13. FILING AND RECORDING OF BONDS
    In addition to furnishing the number of combination Performance Bond and Labor and Materials Payment Bond, and Statutory Bond, if required, the Contractor shall file copies of such bonds with Clerk of the District

Court and furnish Architect with receipt furnished by Clerk of the District Court, covering charges for filing and recording of said bonds.

14. STATUTORY BONDS
In addition to furnishing the combination Performance and Labor and Materials Payment Bond specified in General Conditions, the Contractor shall furnish Statutory Bond in an amount not less than 100% of the Agreement in such numbers and form stated in Sample Copy bound in the Specifications. Statutory Bond shall be filed and recorded with Clerk of the District Court, as specified in Paragraph - FILING AND RECORDING OF BONDS.

15. DOCUMENTS FURNISHED CONTRACTORS
The Contractor will be furnished, free of charge, the following working drawings and specifications, including modifications for construction of the project - 20 sets. The Contractor will be responsible for distribution of these sets to the Subcontractors and suppliers. The Contractor shall pay the actual cost of reproduction and postage for all additional sets requested by him.

16. TESTING AND INSPECTIONS
a. The Contractor shall be responsible for coordination and scheduling of all inspections and testing as required by the Contract documents. The Contractor shall include a testing and inspection allowance in his bid as described in paragraph 5.f.3 of this section. The Contractor shall pay all costs associated with testing and all direct costs from the testing/inspection company and shall be deducted from the testing and inspection allowance. Re-testing/inspection costs associated with incorrect or defective work shall be paid by the Contractor and such costs are not to be deducted from the allowance.
b. All sampling and testing procedures shall be performed by the inspection compamy responsible for inspection and testing.

17. SALES TAX EXEMPTIONS
a. Materials and equipment incorporated into this project are **EXEMPT** from the payment of sales tax under the laws of the State of Kansas and such sales tax shall not be included in the Bid of the Bidder.
b. The Owner will provide the Contractor with a proper exemption certificate within twenty (20) days of the Contract date.
    1) Should the Owner fail to provide an exemption certificate within the required time period, the Contractor shall be reimbursed monthly for all sales tax amounts for which he becomes liable until such certificate is provided.
    2) To minimize the Contractor's record keeping expense, the Owner shall provide an exemption certificate within sixty (60) days or it shall be presumed that the project will proceed on a non-exempt basis, and the Contract amount shall be equitably adjusted in writing in a lump sum amount sufficient to cover the Contractor's sales tax expense.
    3) Upon issuance of a proper exemption certificate to the Contractor, the Contractor shall assume full responsibility for his own proper use of the certificate, and shall pay all costs of any legally assessed penalties relating to the Contractor's use of the exemption certificate.

END OF SECTION 01019

CONTRACTOR'S REQUEST FOR INFORMATION

TO:

REQUEST FOR INFORMATION NO. _____
REQUESTED BY: _____
RESPONSE REQUIRED BY: _____

RE:

SPECIFICATION REFERENCE: _____
DRAWING REFERENCE: _____

SUBJECT: DISCREPANCY: _____ CLARIFICATION: _____ OTHER: _____

REQUEST:
_____
_____
_____
_____
_____
_____
_____

SIGNED: _____ DATE: _____

ARCHITECT'S RESPONSE: This information is provided as an interpretation of the Contract Documents for implementation. It shall not be authorization for change to the Contract Sum or the Contract Completion Time. Should this information result in a claim for a change in the Contract Sum or Contract Completion Time, the Contractor shall notify the Architect within twenty (20) calendar days of receipt.
_____
_____
_____
_____
_____
_____
_____

Response Distribution
Original - Contractor
cc: Salina Baseball Enterprises

SIGNED: _____ DATE: _____

NON-NEGOTIABLE
BAILMENT RECEIPT

_____
Receipt Number

BAILOR: Owner - _____

BAILEE: Contractor/Supplier - _____

PROJECT: _____

LOCATION OF STORAGE: _____

The goods and materials described below are held and stored pursuant to the Contract by and between Bailee, as Contractor/Supplier, and Bailer as Owner for Work to be performed at the above referenced Project location. Said goods and materials are to be transferred or delivered to the project site in conjunction with the performance of Bailee's contract referenced above or upon the direction of Bailor or the Program Manager and no other. The Bailee acknowledges that it has no ownership rights or title in, nor shall claim any lien or interest in or upon, said goods and materials.

QUANTITY	DESCRIPTION OF ITEM

Received and Acknowledged
Contractor/Supplier

DATED: _____ BY:_____
Authorized Signature

FINAL LIEN WAIVER AND RELEASE

Reference that certain Agreement between _____, as Contractor, and _____as Owner, dated _____, on the project known as _____ located at _____ _____ for work to be performed by said Contractor.

Reference also that certain invoice of Contractor to said Owner in the Amount of $_____ for work, labor and materials installed in or furnished for said project by and through _____.

The receipt by Contractor of Owner's remittance for the amount said invoice, contingent upon the final clearance and payment of said remittance, shall constitute payment for the full contract amount, including change orders and all other claims or demands of any nature whatsoever which Contractor has or may have in connection with the Project or Contract referenced herein, of $_____, for which Contractor (a) agrees to and does hereby waive and release said property, project and the Owner and all bond or payment sureties and guarantors from; and (b) does hereby agree to protect, indemnify, defend and hold harmless said property, project, Owner, sureties and guarantors against;

(1) any and all liens, statutory or otherwise, and

(2) any or all obligations under any bond or guaranty for payment furnished by or to said Owner, whether pursuant to agreement or requirement of law, and

(3) any and all other claims whatsoever, statutory or otherwise,

for any and all work, labor and materials furnished by or through said Contractor, its subcontractors and material suppliers for the entirety of said project.

The remittance of the Owner, identified as payment of said above invoice and endorsed by Contractor and marked "paid" or otherwise canceled by the bank against which said remittance was drawn shall constitute conclusive proof that said invoice was paid and the payment thereof was received by the Contractor, and thereupon, this final lien waiver shall become effective automatically and without requirement of any further act, acknowledgment or receipt of the part of said Contractor.

Contractor does further warrant that Contractor has not and will not assign its claims for payment nor its right to perfect a lien against said property and project, and the undersigned representative of the contractor has the right to execute this waiver and release thereof.

The undersigned representative of Contractor does hereby certify under oath that he is fully authorized and empowered to execute this instrument for and in behalf of said Contractor and to bind them hereto and does in fact so execute this final lien release.

Dated this _____ day of _____, 20____.

Contractor:

_____

By:

_____

Title:

_____

Subscribed and affirmed to before me, the undersigned Notary Public within and for the State of _____ and the County of _____, this _____ day of_____, 20____, in the City of _____.

_____
Notary Public within and for said
County and State

SECTION 01030

ALTERNATES

GENERAL

A. The Contractor shall state in their Bid Form the amount of dollars to be ADDED or DEDUCTED from their Base Bid for the following Alternates.

B. Alternates are not in order of acceptance.

C. It shall be the responsibility of the Contractor to advise all necessary personnel and suppliers as to the nature and extent of all Alternates selected by the Owner.

1. ALTERNATE NO. 1
   If added by addendum

   Add/Deduct $_____

2. ALTERNATE NO. 2
   If added by addendum

   Add /Deduct $ _____

3. ALTERNATE NO. 3
   If added by addendum

   Add/Deduct $ _____

END OF SECTION 01030

SECTION 01040

COORDINATION

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Coordination.
- B. Coordination Drawings.
- C. General installation Provisions
- D. Cleaning & Protection.

1.02 COORDINATION
- A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify that utility requirement characteristics of operating equipment are compatible with site utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements and installation of utility work which are indicated diagrammatically on Drawings prior to initiating work on site. Bring discrepancies to the attention of the Architect in a timely manner, follow routing shown for pipes and conduit as closely as practicable. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. The Contractor is to coordinate his Work with the Work of the Owner's Contractors.
- E. Coordinate completion and clean up of work of separate sections in preparation for Substantial Completion.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
- G. Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
  1. Where installation of one part of the Work is dependent on installation of other components either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
  2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- H. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
  1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.
- I. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of schedules.
  2. Installation and removal of temporary facilities.
  3. Delivery and processing of submittals.
  4. Conducting progress meetings.
  5. Orchestrating pre-installation and quality assurance meetings.
  6. Project Close-out activities.

1.03 GENERAL INSTALLATION PROVISIONS
- A. Inspection of Conditions: Require the Installer of each major work component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
   1. Where applicable, comply fully with manufacturer's instructions, including each step in sequence.
   2. Should manufacturer's instructions conflict with Contract Documents, request clarification from Architect before proceeding.
   3. Installation must be performed to conform to the requirements of manufacturer's warranty, including but not limited to temperature, precipitation, and humidity conditions.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure work true to line and level. Allow for movement as required for proper installation.

E. Recheck measurements and dimensions before starting each installation.

F. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

1.04 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion. Special care shall be taken to ensure that existing site components that are to remain after construction is protected throughout the construction process.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period.

C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
   1. Excessive static or dynamic loading.
   2. Excessive internal or external pressures.
   3. Excessively high or low temperatures.
   4. Thermal shock.
   5. Excessively high or low humidity.
   6. Air contamination or pollution.
   7. Water or ice.
   8. Solvents.
   9. Chemicals.
   10. Light.
   11. Radiation.
   12. Puncture.
   13. Abrasion.
   14. Heavy traffic.
   15. Soiling, staling and corrosion.
   16. Bacteria.
   17. Rodent and insect infestation.
   18. Combustion.
   19. Electrical current.
   20. High speed operation.
   21. Unusual wear or other misuse.
   22. Contact between incompatible materials.
   23. Destructive testing.
   24. Misalignment.
   25. Excessive weathering.
   26. Unprotected storage.
   27. Improper shipping or handling.
   28. Theft.
   29. Vandalism.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01040

SECTION 01095

REFERENCE STANDARDS AND DEFINITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Definition
- C. Specification Format and Content Explanation
- D. Industry Standards
- E. Submittals

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to this section.

1.03 DEFINITIONS
- A. Indicated: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on locating is intended.
- B. Directed: Terms such as "directed", "requested", "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect," "requested by the Architect," and similar phrases.
- C. Approve: The term "approved," where used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in General, Supplementary, and Special Provisions.
- D. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- E. Furnish: The term "furnish" is used to mean "supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations."
- F. Install: The term "install" is used to describe operations at Project Site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protection, cleaning, and similar operation."
- G. Provide: The term "provide" means to furnish and install, complete and ready for the intended use."
- H. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
  1. The term "experienced" when used with the term "Installer" means having a minimum of 5 previous Projects similar in size and scope to this Project, being familiar with the precautions required, and having complied with requirements of the authority having jurisdiction.
  2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
- I. Assignment of Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility of fulfilling Contract requirements remains with the Contractor
  1. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with the others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

K. Testing Laboratories: A "Testing Laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and , if required, to interpret results of those inspections or tests.

1.04 SPECIFICATION FORMAT AND CONTENT EXPLANATION

A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-Division format and MASTER FORMAT numbering system.

B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Abbreviated Language: Language used in Specifications and other Contract Documents in the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the full context of the Contract Documents so indicates.

2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.

a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

1.05 INDUSTRY STANDARDS

A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of the date of the Contract Documents.

C. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numerical values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

1.06 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01095

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Summary
- C. Pre-Construction Conference
- D. Progress Meetings

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to this section.

1.03 SUMMARY
- A. This Section specifies administrative and procedural requirements for project meetings including, but not limited to:
  1. Pre-Construction Conference
  2. Coordination Meetings
  3. Progress Meetings
- B. Construction schedules are specified in another Division-1 Section.

1.04 PRE-CONSTRUCTION CONFERENCE
- A. The Contractor shall schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 14 days after notice to proceed and prior to commencement of construction activities. The Contractor shall conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: Salina Public School District, the Architect and their consultants, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress including such topics as:
  1. Tentative construction schedule.
  2. Critical Work sequencing.
  3. Designation of responsible personnel.
  4. Procedures for processing field decisions and Change Orders.
  5. Procedures for processing Applications for Payment.
  6. Distribution of Contract Documents.
  7. Submittal of Shop Drawings, Product Data, and Samples.
  8. Preparation of record documents.
  9. Use of the premises.
  10. Office, Work, and storage areas.
  11. Equipment deliveries and priorities.
  12. Safety procedures.
  13. First aid.
  14. Security.
  15. Housekeeping.
  16. Working hours.
  17. Testing agencies and procedures.
  18. Pre-Construction Survey of pre-existing conditions.
  19. Temporary utilities.
  20. Quality Control.
- D. The Contractor shall record meeting results and distribute copies to everyone in attendance and to others affected by decisions of actions resulting from each meeting.

1.05 PROGRESS MEETINGS
- A. Conduct progress meetings at the Project site at a minimum of monthly intervals or as directed by Architect. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.
- B. Attendees: In addition to representatives of the Owner and Architect, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractors Construction Schedule, whether on time, ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so; discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed with the Contract Time.
2. Review the present and future needs of each entity present, including such items as:
   a. Interface requirements.
   b. Time.
   c. Sequences.
   d. Deliveries.
   e. Off-site fabrication status.
   f. Access.
   g. Site utilization.
   h. Temporary facilities and services.
   i. Hours of Work.
   j. Hazards and risks.
   k. Housekeeping.
   l. Quality and Work standards.
   m. Change Orders.
   n. Documentation of information for payment requests.
   o. Outstanding items; Submittals, Proposal Requests, RFI's.
   p. Quality assurance.
   q. Safety.

D. Reporting: As soon as possible after each progress meeting date, the General Contractor is to distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and reports.

1. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 PRODUCT (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01200

SECTION 01270

UNIT PRICES

PART 1 - GENERAL

1. GENERAL
   A. Work contemplated under various proposed Unit Prices shall include all labor, materials, equipment and services necessary for, or incidental to, completion of all Work under each item.
   B. Unit Prices shall comply with similar conditions of the Drawings and Specifications provided under the Base Bid.
   C. Furnish separate Bids for each Unit Price in the space provided on the Form of Bid stating the amount to ADD to the Base Bid in the event of acceptance.
   D. Each Unit Price proposed shall include all ultimate costs for all omissions, additions, substitutions, and adjustments made by all trades involved.

2. UNIT PRICES
   A. Unit Prices generally will not be considered in determining the lowest responsible Bidder for the Project. However, if the Owner feels the low Bidder has submitted an inordinately high unit price, it may factor in an estimated number of units and calculate the total unit prices. If this is done, the lowest responsible bidder will be determined by comparing the Base Bid, Alternates if any, and the Unit Price calculation.

   B. Unit Prices shall be as listed below:

      1. UNIT PRICE NO. 1
         Remove unsuitable soil and replace with low volume change material. Existing unsuitable soil shall be excavated and removed from site. New material shall meet the requirements of the geotechnical report. New material shall be placed in lifts as required by the geotechnical report. The Base Bid shall include all removal, replacement, and conditioning as identified by the geotechnical report. The unit pricing is for incidental areas that are not identified, described, or could not be interpreted from the geotechnical investigation.

         Add $_____/C.Y.

END OF SECTION 01270

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Summary
- C. Submittal Procedures
- D. Contractors Construction Schedules
- E. Submittal Schedule
- F. Daily Construction Reports
- G. Pre-Existing Conditions Video Survey.
- H. Shop Drawings
- I. Product Data
- J. Samples
- K. Information Submittals
- L. Communications Facilitating Contract Administration
- M. Architect's Action
- N. Contractor's Action on Returned Submittals

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to this section.

1.03 SUMMARY
- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
  1. Submittal procedures.
  2. Contractor's construction schedule.
  3. Submittal schedule.
  4. Daily construction reports.
  5. Construction photographs.
  6. Shop Drawings.
  7. Product Data.
  8. Samples.
  9. Informational Submittals.
  10. Communications.
- B. Administrative Submittals: Refer to other Division-1 sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
  1. Permits.
  2. Applications for Payment.
  3. Performance and payment bonds.
  4. Insurance certificates.
  5. List of Subcontractors.
- C. The Schedule of Values submittal is included in Division 1 Section "Applications for Payment".
- D. Inspection and test reports are included in Division 1 Section "Quality Control Services".
- E. The Product List submittal is included in Division 1 Section "Materials and Equipment".

1.04 SUBMITTAL PROCEDURES
- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Separate submittal packages are required for each school if multiple schools are included in the same contract. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay and to allow sufficient review time.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
   a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received. Such action shall not be grounds for an extension of time or delay claim by the Contractor.

3. The Architect may request submittals in addition to those indicted in the technical sections when deemed necessary to adequately describe the work covered in the respective section.

4. Units of weights and measurements used on all submittals shall be the same as used in the Contract Documents.

5. Processing: 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.
   a. Allow at least **"7"** working days in Architect's office for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination with work by others or NIC.
   b. If an intermediate submittal is necessary, process in the same manner as the initial submittal.
   c. Allow at least four (4) working days for reprocessing each submittal.
   d. 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.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
   1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings, Product Data, and Samples to record the Contractor's review and approval markings and the action taken.

   2. Include the following information on the label for processing and recording action taken.
      a. Project name.
      b. Date.
      c. Name and address of Architect.
      d. Name and address of Contractor.
      e. Name and address of subcontractor.
      f. Name and address of supplier.
      g. Name of manufacturer.
      h. Number and title of appropriate Specification Section.
      i. Drawing number and detail references, as appropriate.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using the approved transmittal form. Submittals received by Architect from sources other that the Contractor will be returned without action.
   1. Record relevant information and requests for data on the transmittal. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's signed certification that information complies with Contract Document requirements.
   2. Submit to Project Architect at business address.

1.05 CONTRACTOR'S CONSTRUCTION SCHEDULES

A. Interim Schedules: The Contractor, within 10 calendar days after notice of contract award, shall submit an interim construction schedule to the Owner's representative and Architect. The schedule shall be in the form of a bar chart or a Critical Path Method (CPM) schedule. The schedule shall include as many activities as necessary to sufficiently detail the work to be performed during the first 30 working days of construction. The interim schedule shall also detail, in general, the balance of the construction work past the first 30 working days.

B. Developing the Schedule: The Contractor shall meet jointly with the subcontractors, suppliers, and the Owner's representatives when developing the schedule.

C. Owner's Review: Within five (5) working days after receipt of the Contractor's CPM schedule, the Construction Consultant shall meet with Contractor for the final review, of the CPM schedule. Review of the schedule by the Owner does not relieve the Contractor's responsibility for the schedule's accuracy or the ability of the Contractor to meet the dates set forth therein, nor does such review constitute an acknowledgment or admission by the Owner of the reasonableness of durations or logic of the schedule.

D. Importance of Update Submittals: The updated CPM submittal, including a written schedule recovery statement if required, shall accompany the Contractor's Application for Payment. The Contractor's application for payment will not be processed until the updated CPM schedule has been received by the Owner.

E. Narrative Report: The Contractor shall prepare a narrative report as a part of each schedule update, in a form agreed upon by the Owner's representative. The narrative report shall include a description of the current status of the work, problem areas, current and anticipated delaying factors and their estimated impact on performance of other activities and completion dates; and an explanation of corrective action taken or proposed.

F. The Progress Schedule shall indicate the monthly anticipated adverse weather days pursuant to the Supplemental and General Conditions and indicate the constraints of anticipated adverse weather on planned activities. Monthly Update: Submittals of the Progress Schedule shall indicate actual adverse weather days and their impact on planned activities.

G. Any adjustments in Contract Time executed by Change Order shall be included in the Monthly Update Submittals of the Project Schedule.

1.06 SUBMITTAL SCHEDULE

A. After development and acceptance of the Contractors construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products, as well as the Contractor's construction schedule.
2. Prepare the schedule in chronological order; include submittals required during the first 30 days of construction. Provide the following information:
   a. Scheduled date for the first submittal.
   b. Related Section number.
   c. Submittal category.
   d. Name of subcontractor.
   e. Description of the part of the Work covered.
   f. Scheduled date for resubmittal.
   g. Scheduled date the Architect's final release or approval.

B. Distribution: Following response to initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

C. Schedule Updating: Revise the submittal schedule after each meeting or activity, where revisions have been recognized or made relating to submittals. Issue the updated schedule concurrently with report of each such meeting.

1.07 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report, recording the following information concerning events at the site; and submit copies to the Architect and Construction Consultant at weekly intervals:

1. List of subcontractors at the site.
2. Approximate count of personnel at the site.
3. High and low temperatures, general weather conditions.
4. Accidents and unusual events.
5. Meetings and significant decisions.
6. Stoppages, delays, shortages, losses.
7. Meter readings and similar recordings.
8. Emergency procedures.
9. Orders and requests of governing authorities.

10. Change Orders received, implemented.
11. Services connected, disconnected.
12. Equipment or system tests and start-ups.
13. Partial Completions, occupancies.
14. Substantial Completions authorized.
15. Type and usage of major pieces of heavy equipment.

1.08 SHOP DRAWINGS

A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings. Shop drawings quality is subject to approval.

B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
   1. Dimensions.
   2. Relationship to building grids or coordinates.
   3. Interface with adjacent construction.
   4. Identification of products and materials included.
   5. Compliance with specified standards.
   6. Notation of coordination requirements.
   7. Notation of dimensions established by field measurement.

C. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets 8-1/2" x 11", 11" x 17" or 24" x 36".

D. Initial and Interim Submittal: Submit one correctable translucent reproducible print and three blue-line prints for review. The reproducible print will be returned. Clearly indicate revisions from previous submittals.

E. Final Submittal: Submit one correctable translucent reproducible print and 6 blue-line prints. If the Drawing is required for maintenance manuals submit 8 prints. Two blue-line prints will be retained by the Architect; the translucent reproducible print and remainder of the copies will be returned. One print shall be maintained by the Contractor as a "Record Document".

F. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

1.09 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
   1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
      a. Manufacturer's printed recommendations.
      b. Compliance with recognized trade association standards.
      c. Compliance with recognized testing agency standards.
      d. Application of testing agency labels and seals.
      e. Notation of dimensions verified by field measurement.
      f. Notation of coordination requirements.
      g. Any limitations on warranty or guarantee of manufacturer.
   2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

B. Submittals: Submit 6 copies of each required submittal. The Architect will retain two, and will return the other marked with action taken and corrections or modifications required.
   1. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

C. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

1. Do not proceed with installation until a copy of the applicable Product Data is in the installer's possession.
2. Provide copies for Record Documents described in Section 01700 - Project Closeout.

D. Do not permit use of unmarked copies of Product Data in connection with construction.

1.10 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified (where applicable) and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts, or container of materials, color range sets, and swatches showing color, texture, and pattern.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated.
   Prepare Samples to match the Architect's Sample. Include the following:
   a. Generic description of the Sample.
   b. Sample source.
   c. Product name or name of manufacturer.
   d. Compliance with recognized standards.
   e. Availability and delivery time.
2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
   a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 2), that show approximate limits of the variations.
   b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
   c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

B. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 6 series: Four will be returned marked with the action taken.

1. Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 6 sets: Four sets will be returned with comments.

C. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

1. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
2. Sample sets may be used to obtain final acceptance of the construction associated with each set.

D. Distribution of Samples; Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

E. Field Samples: Field samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

1. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.
2. Allow at least 7 days after completion and curing (where applicable) of field sample for architect's review. Notify Architect in writing upon completion of field sample.
3. Where required, give Architect notice and an opportunity to observe field erection or application of field sample.

1.11 INFORMATIONAL SUBMITTALS

A. Coordination drawings are a special type of Informational Submittal that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
   1. Preparation of coordination drawings is specified in Division 1 Section "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
   2. Submit coordination drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.
   3. The Architect will not take responsive action.

B. Quality Control submittals on certain types of documentary data or informational submittals upon which the Architect will not take responsive action. Quality control submittals include mix designs, design data, design calculations, test reports, certificates, manufacturer's installation instructions, and manufacturer's field reports.
   1. Identify conflicts between manufacturer's instructions and Contract Documents.
   2. Submit quality control submittals concurrent with Shop Drawings, Product Data, Samples, and Product Data, in quantities specified for Product Data, unless indicted otherwise.
   3. Where individual Specification Sections require submission of structural computations, material properties and other information needed for structural analysis, submit copies of all required information to the governing city's Codes Administration Department upon receipt of returned information from Architect.

1.12 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

A. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Architect. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor.

B. All requests for information regarding or clarification of the plans and specifications shall be made in writing using Contractor's Request for Information form depicted at the end of Division-1 Section “Contract Considerations.” Contractor is responsible for reproduction of forms. Deliver to Architect business address.

1.13 ARCHITECT'S ACTION

A. Except for submittals for record, information, or similar purposes, where action and return is required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.
   1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follow, to indicate the action taken:
   1. Final Unrestricted Release: Where submittals are marked "Approved," that part of the Work for which the submittal was made may proceed provided it complies with requirements of the Contract Documents: Final acceptance will depend upon that compliance.
   2. Restricted Release: When submittals are marked "Approved as Noted," that part of the Work for which the submittal was made may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents: Final acceptance will depend on that compliance. Revise in accordance with the notations and resubmit. Repeat as necessary to obtain "Approved" action mark.
   3. Returned for Resubmittal: When submittal is marked "Revise and Resubmit," do not proceed with that part of the Work for which the submittal was made, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat as necessary to obtain a different action mark.
      a. Do not permit submittals marked "Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
   4. Other Action: Where a submittal is primarily for information or record purposes, special processing, or other activity, the submittal will be returned, marked "Action Not Required".

5. No Action: No Shop Drawings should be submitted by Contractor except as required by the specifications or drawings. Shop drawings submitted without being required will be returned without action. The Contractor is required to perform all contract requirements in all cases.

C. Meaning of Architect's Approval: Review is only for conformance with the design concept and for compliance with the information given in the Contract Documents. Approval does not authorize changes involving additional cost unless stated in separate Change Order or letter. Contractor is not relieved of responsibility for any deviations in submittals from requirements of the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all trades. Approval of a specific item does not indicate approval of an assembly of which the item is a component.

1.14 CONTRACTOR'S ACTION ON RETURNED SUBMITTALS

A. The Contractor shall coordinate distribution of all Shop Drawings, Product Data and Samples for the Project.

B. The Contractor is responsible to reproduce and distribute copies of stamped returned submittals as required for this use in construction, or in corrections for resubmittal.

C. The Contractor is responsible to reproduce and distribute copies of stamped returned submittals as required for his use and subcontractor's use in preparing and submitting other submittals such as coordination drawings, record drawings, close-out, maintenance manuals, etc. Refer to other sections of the Specifications for requirements.

1. The Contractor shall maintain a current stamped shop drawing file and log indexed to the Specification Sections which shall be available to the Architect at the job site during the course of the work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Contractor's Quality Control
- B. Pre-Installation Conferences
- C. Initial and Follow-up Inspections
- D. Field samples
- E. Manufacturers' field services and reports
- F. References
- G. Inspection and testing laboratory services
- H. Quality Assurance and Control of Installation
- I. Safety

1.02 RELATED SECTIONS
- A. Section 01040 - Coordination and Meetings
- B. Section 01300 - Submittals
- C. Section 01700 - Project Close-out

1.03 CONTRACTOR'S QUALITY CONTROL

A. The quality of all work shall be the responsibility of the contractor. Sufficient inspections and tests of all items of work, including that of subcontractors, to ensure conformance to applicable specifications and drawings with respect to the quality of materials, workmanship, construction finish, functional performance, and identification shall be performed on a continuing basis. The Contractor shall furnish qualified personnel, appropriate facilities, instruments, and testing devices necessary for the performance of the quality control function. The controls shall be adequate to cover all construction operations both on and off site, shall be keyed to the proposed construction sequence and shall be correlated by the Contractor's quality control personnel.

1.04 PRE-INSTALLATION CONFERENCES

A. Pre-installation conferences shall be performed prior to beginning each feature of work for any on-site construction work. Preparatory inspections for the applicable feature of work shall include; review of submittal requirements and all other contract requirements with the foreman or supervisors directly responsible for the performance of the work; check to assure that provisions have been made to provide required field control testing; examine the work area to ascertain that all preliminary work has been completed; verify all field dimensions and advise the Project Architect of any discrepancies; and perform a physical examination of materials and equipment to assure that they conform to approved shop drawings or submittal date and that all materials and/or equipment are on hand; review special requirements, review shop drawings and sample construction or mock-ups as appropriate.

B. The General Contractor shall prepare agenda, preside at conference, records minutes, and distribute copies within five days after conference to participants, with copies to the Architect and Owner.

1.05 INITIAL AND FOLLOW-UP INSPECTIONS

A. An Initial Inspection shall be performed as soon as a representative portion of the particular feature of the work is complete and shall include examination of the quality of workmanship as well as a review of the work for compliance with contract requirements. The initial inspection shall be performed by the Contractor's Quality Control Representative and results noted in the Contractor's Daily Reports. Any deviations from the Contract requirements shall be brought to the immediate attention of the Architect.

B. Follow-up inspections shall be performed continuously as any particular feature of work progresses, to assure compliance with contract requirements until completion of that feature of the work. Any deviations or concerns shall be noted in the Contractor's Daily Reports and brought to the immediate attention of the Architect.

1.06 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications Sections for review.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Architect.

1.07 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. Submit qualifications of observer to Architect 30 days in advance of required observations. Observer subject to approval of Architect, Owner, and Program Manager.

B. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, [and test, adjust, and balance of equipment as applicable, and to initiate instructions when necessary.

C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Submit report within 30 days of observation to Architect/Engineer for review.

1.08 REFERENCES

A. Conform to reference standard by date of issue or current date of contract Documents.

B. Obtain copies of standards when required by Contract Documents.

C. Should specified reference standards conflict with Contract Documents, then request clarification from Architect before proceeding.

D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.09 INSPECTION AND TESTING LABORATORY SERVICES

A. The Contractor shall appoint, employ, and pay for services of an independent firm to perform inspection and testing, except when a specification section specifically states that testing of that work be provided for by the Contractor. Earthwork and structural testing will be by Owner-furnished laboratory. Mechanical and electrical testing will be furnished by the Contractor.

B. The independent firm will perform inspections, tests, and other services specified in individual specification Sections and as required by the Architect.

C. Reports will be submitted by the independent firm to the Architect, in duplicate, indicating observations and results of tests and indicating compliance or noncompliance with Contract Documents.

D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, and assistance as requested.

1. Notify Architect and independent firm 48 hours prior to expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

E. Retesting required because of nonconformance to specified requirements shall be performed by the same independent firm on instructions by the Architect. Payment for retesting will be charged to the contractor by deducting inspection or testing charges from the Contract Sum.

1.10 QUALITY ASSURANCE/CONTROL OF INSTALLATION

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

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, then request clarification from Architect before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality. Work which properly should be done by skilled labor shall not be attempted with common laborers. The Contractor shall have on the job, at all times, ample equipment to carry on the work properly, including such tools as may be necessary to meet emergency requirements.

1.11 SAFETY

A. Contractors who perform any work under this Contract will fully comply with the provisions of the Federal Occupational Safety and Health Act of 1970 and to the rules and regulations promulgated pursuant to this Act.

Contractor must submit a safety program to the Architect prior to starting work on the site. This program should indicate the Contractor's plan to comply with OSHA requirements for the various conditions of the project. The Contractor shall appoint a safety representative on site. The safety program and Contractor's representative names must both be posted. The Architect will take no action on the Contractor's safety program, but will forward it to the Owner for information only. The Contractor is responsible for safety on the Project site per the Contract Documents.

B. Hazardous Material. In the event the Contractor encounters material on the site, reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop work and notify the Architect and Owner. Such notification shall be documented in writing.

C. Provide any and all measures of protection required by the "City of Salina" for the protection of the public and employees during excavation operations and at completion of work. Measures taken shall include but not limited to; sidewalks, barricades, warning lights and signs; and shall comply with American Standard Safety Code and all local laws and ordinances. Maintain in good condition during operations.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01400

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Related Documents
- B. Summary
- C. Submittals
- D. Quality Assurance
- E. Project Conditions
- F. Temporary Construction and Support Facilities
- G. Operation, Termination, and Removal

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to this section.

1.03 SUMMARY
- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security, and protection.
- B. Temporary utilities required include but are not limited to:
  1. Water service and distribution.
  2. Temporary electric power and light.
  3. Telephone service.
  4. Storm sewer.
- C. Temporary construction and support facilities required include, but are not limited to:
  1. Field offices and storage sheds.
  2. Temporary roads and paving.
  3. Sanitary facilities, including drinking water.
  4. Dewatering facilities and drains.
  5. Temporary enclosures.
  6. Hoists and lifts.
  7. Waste disposal services.
  8. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities required include, but are not limited to:
  1. Barricades, warning signs, lights.
  2. Environmental protection.

1.04 SUBMITTALS
- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

1.05 QUALITY ASSURANCE
- A. Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:
  1. Building Code requirements.
  2. Health and safety regulations.
  3. Utility company regulations.
  4. Police, Fire Department, and Rescue Squad rules.
  5. Environmental protection regulations.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical facilities."
  1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
  2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).

C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.06 PROJECT CONDITIONS

A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.

B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES

A. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities of ready access within project limit lines.
   1. Maintain temporary construction and support facilities until near Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
   2. Location of all temporary buildings shall be subject to the approval of the Owner and the governing city.

B. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.

C. Temporary Heat: Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effect of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

D. Heating Facilities: Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.
   1. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.

E. Storage and Fabrication Sheds: Install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service, Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on the site.

G. Sanitary facilities include temporary toilets and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. All sanitary conveniences shall be satisfactory to the Owner and shall conform to the regulations of the City, County, and State Health Departments.
   1. Install where facilities will best serve the Project's needs.
   2. Provide toilet tissue, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.

H. Toilets: Install well-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

I. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

J. Project identification and Temporary Signs: The Contractor will not erect free-standing or post any signs on property without prior approval by the Owner. This includes signs on construction shacks, tool trailers, portable sheds etc., which might legitimately be temporarily parked on said property by and for the Contractor's use as part of this project. The Owner may provide and erect one or more project signs as they deem necessary.

K. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. 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. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.02 OPERATION, TERMINATION, AND REMOVAL

A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.
2. Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

B. Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of the Contractor. The Owner reserves the right to take possession of Project identification signs.
2. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
    a. Replace air filters and clean inside of ductwork and housings.
    b. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
    c. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

SECTION 01631

PRODUCT SUBSTITUTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Summary
- C. Definition
- D. Submittals
- E. Substitution

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to this section.

1.03 SUMMARY
- A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award for the Contract.
    1. Certain materials, products, or systems are specified for which no substitutions are allowed. Refer to individual Specification Sections for specific items.
- B. Refer to AIA Document A701 “Instructions to Bidders” for substitution requirements, during the bidding period.
- C. The Contractor's Construction Schedule and the Schedule of Submittals are included under Division 1 Section "Submittals."
- D. Standards: Refer to Division 1 Section "Reference Standards and Definitions:" for applicability of industry standards to products specified.
- E. Procedural requirements governing the Contractor's selection of products and product options are included under Division 1 Section "Materials and Equipment."

1.04 DEFINITIONS
- A. Definitions used in the Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of constructing required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "Substitutions." The following are not considered substitutions:
    1. Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
    2. Revisions to Contract Documents requested by the Owner or Architect.
    3. Specified options of products and construction methods included in Contract Documents.
    4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.05 SUBMITTALS
- A. Substitution Request Submittal: Requests for substitution must be received seven days prior to Bid Date. Only one request for substitution will be considered for each Product. Requests received less than seven days prior to Bid Date or after bids will not be considered.
    1. Submit 1 copy of each request for substitution for consideration. Submit requests in the form and in accordance with procedures stated herein. Use form depicted at end of this Section. Contractor is responsible for reproduction of forms.
    2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
        a. All requests:
            1) Product Data, including Drawings and descriptions of products, fabrication and installation procedures.

2) Samples, where applicable or requested.
3) A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance, and visual effect. Units of weights and measure shall be the same as used in the Contract Documents.
4) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.

b. Request after award of contract:
1) A statement indicating the substitution's effect on the Contractor's Construction schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
2) Cost information, including a proposal of the net change, if any in the Contract Sum.
3) Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

3. Architect's Action
a. <u>During bidding period:</u> Architect will request additional information or documentation if necessary for evaluation of request. Within 4 days prior to bid, the Architect will notify the contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitution cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be indicated by including the proposed substitution in an Addendum, issued prior to the bid date.
b. <u>After award of contract:</u> Within one week of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request. Within 2 weeks of receipt of the request, or one week of the receipt of the additional information or documentation, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name.

PART 2 PRODUCTS

2.01 SUBSTITUTIONS

A. Conditions: The Contractor's substitution request will be received and considered by the Architect when all of the following Conditions 1, 2 and 3 and one or more of the following Conditions 4, 5, 6, 7, 8 and 9 are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.
1. Extensive revisions to Contract Documents are not required.
2. Proposed changes are in keeping with the general intent of Contract Documents.
3. The request is timely, fully documented, and properly submitted.
4. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method is available within the Contract Time Frame.
5. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
6. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.

7. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
8. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
9. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.

B. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the contract documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01631

SUBSTITUTION REQUEST FORM

ONE ITEM PER FORM
FILL IN ALL BLANKS

Project: _____ Date: _____

We hereby submit for your review the following substitution for the following specified material for the above project:

Section	Page	Paragraph	Specified Material
_____	_____	_____	_____

PROPOSED SUBSTITUTION: _____

Attach complete technical data, including laboratory tests, if applicable. Include complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installation.

A. Does the Substitution effect dimensions shown on Drawings in any way?

_____

B. Will the undersigned pay for any changes to the building design, including engineering and detailing costs caused by the requested substitution?

_____

C. What effect does substitution have on schedule or other trades?

_____

D. What effect does substitution have on cost?

_____

E. Differences between proposed substitution and specified items are:
_____ Same _____ Different (Explain)

_____

F. Contractor represents that he has investigated the proposed product and determined that it meets or exceeds the quality of the specified product.

SUBMITTED BY:

_____ Accepted _____Accepted as Noted
_____ Not Accepted _____ Received Too Late

_____
(Firm)

_____ _____ _____
(Address) (By) (Date)

_____ _____
(Telephone) (Remarks)

_____ _____
(Signature)

SECTION 01700

PROJECT CLOSEOUT

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Summary
- C. Completion of a Building and/or Phase
- D. Final Completion and Final Payment
- E. Record Document Submittals
- F. Starting Systems
- G. Operating and Maintenance Instructions
- H. Final Cleaning

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division - 1 Specification sections, apply to this section.

1.03 SUMMARY
- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
  1. Inspection procedures.
  2. Project record document submittal.
  3. Operating and maintenance manual submittal.
  4. Submittal of warranties.
  5. Final cleaning.
  6. Record vellum drawings.
- B. Closeout requirements for specific construction activities are include in the appropriate Sections in Divisions 2 through 16.
- C. Refer to Division 1 Section "Warranties and Bonds" for specific requirements.

1.04 SUBSTANTIAL COMPLETION
- A. Substantial completion
  1. The Contractor and each Subcontractor shall carefully and regularly check their work for conformance with the Contract Documents as the work is being done. Unsatisfactory work shall be corrected as the work progresses and not be permitted to remain and become a part of the Punch List.
  2. The Contractor shall conduct a pre-punch list inspection. The written pre-punch list shall be distributed to affected subcontractors, Architect and Owner's Representative. The Contractor shall advise the Architect in writing upon completion of the pre-punch list. This notification shall so serve to notify the Architect that the Work is ready for the punch list inspection.
  3. The Architect shall make arrangements for his Punch List Inspection at the earliest possible date following Contractor notification of completion of the pre-punch list. Transmittal of the Punch List to the Contractor shall set the date for a Reinspection prior to issuance of a Certificate of Substantial Completion. Upon receipt of the Punch List, the Contractor shall within seven (7) days bring to the attention of the Architect in writing any questions that he or any of his Subcontractors may have concerning the requirements of the Punch List.
  4. When advised by the Contractor that the Punch List items have been completed, the Architect shall conduct a Reinspection with the Contractor, any needed Subcontractors (and the Owner's Representative where applicable) to determine whether the Certificate of Substantial Completion can be issued. A Certificate of Substantial Completion will only be issued after Codes Administration authorities' document final approval of the building or phase.

If the first reinspection requested by the contractor and performed by the architect/engineer determines that punch list items remain incomplete, and the outstanding items have not been previously questioned by the contractor as required in Paragraph 3 above, then, all subsequent reinspections by the architect will be paid for by the Contractor.

5. When issued, the Certificate of Substantial Completion shall name the date, triggering the beginning of the warranty period (with any items to have a later starting date specifically noted). The Certificate shall also have attached to it the uncompleted Punch List items, and shall name the date for their Final Completion. The Certificate of Substantial Completion shall also state the responsibilities of the Owner and the Contractor for maintenance, heat, utilities, insurance, and building security.
6. Acknowledgment of the Date of Substantial Completion by the signature of all parties on the Certificate implies possession of the premises by the Owner, and completion of incomplete Punch List items by the Contractor and the Subcontractors, at the Owner's convenience. The Owner shall cooperate in permitting the Contractor access to the work for the completion of Punch List items.
7. A Certificate of Substantial Completion for the Work, or portion of Work, as applicable, will only be issued after the requirements for the demonstration and instruction of operation and maintenance procedures as defined elsewhere by the Contract Documents, to the Owner's personnel have been satisfied by the Contractor.

B. Final Completion

1. Submit executed warranties, workmanship bonds, maintenance agreements, inspection certificates and similar required documentation for specific units of work, enabling Owner's unrestricted occupancy and use.
2. Submit maintenance manuals, tools, keys, spare parts, extra stock materials.
3. Complete instruction of Owner's operating personnel with start-up of all systems.
4. Complete final cleaning and remove temporary facilities.
   (Final cleaning - at closeout time of each building, clean, reclean entire work to normal level for "first class" maintenance/cleaning of building projects of a similar nature. Remove non-permanent protection and labels, polish glass, clean exposed finishes, touch-up minor finish damage, clean or replace filters of mechanical systems, remove debris and broom clean non-occupied spaces, sanitize plumbing/food service facilities, clean light fixtures and replace burned-out/dimmed lamps, sweep and wash paved areas, police yards and grounds, and perform similar cleanup operations needed to produce a "clean" condition as judged by Architect/Engineer.)
5. All punch list work must be completed, reviewed, and accepted by the Architect/Engineer.

1.05 FINAL COMPLETION AND FINAL PAYMENT

A. Provide submittals to Architect that are required by governing or other authorities. Confirm that all submittals required by the construction documents have been transmitted.

B. Final Completion: For the purpose of determining a date at which the project is finished, Final Completion may be defined to include, but is not limited to:

1. Substantial Completion.
2. Submission and acceptance by the Architect of Project Record Drawings.
3. Operation and Maintenance Data.
4. All applicable Owner training sessions with meeting notes distributed (video tapes, if applicable).
5. Final cleaning.
6. Adjusting.
7 Warranties submitted by General Contractor and accepted by Architect.
8. Spare parts and maintenance materials turned over to proper District personnel.
9. All punch list work completed, reviewed, and accepted by the Architect.

All of the above items are as required by individual specification requirements as found in the Contract Documents. These individual requirements shall take precedence over this definition if any conflict should arise.

C. Upon written notice by the Contractor that the Reinspection Punch List items are completed, the Architect shall verify this by inspection and shall issue to the Owner a final Certificate of Payment stating that, to the best of their knowledge, information and belief, the Work has been completed in accordance with the terms and conditions of the Contract Documents, and that the entire balance found to be due the Contractor, and noted in said final Certificate of Payment, is due and payable. The Owner shall endeavor to make payments within thirty (30) days.

1.06 RECORD DOCUMENT SUBMITTAL

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.

B. Record Drawings: A set of blue- or black-line drawings of the original bidding documents will be provided by the Owner to the Contractor for the following use:

1. If the Contractor elects to vary the work from the Contract Documents, and secures prior approval from the Architect, he shall record in a neat, readable manner, all such variances on the blue-or black-line drawings furnished.
   a. All deviations from the sizes, locations, and from all other features of all installations shown in the Contract Documents shall be recorded.
   b. In addition it shall be possible, using these Drawings, to correctly and easily locate, identify and establish sizes of piping, direction, etc., as well as all other features of work which will be concealed.
      1) Locations of underground work shall be established by dimensions to column lines or walls, by locating all turns, etc., and by properly referenced centerline or invert elevations and rates of fall.
      2) For work concealed in the building, sufficient information shall be given so it can be located with reasonable accuracy and ease. In some cases this may be by dimension, in others, it may be sufficient to illustrate the work on the drawings in relation to the spaces in the building near which it was actually installed. Architect's decision in this matter shall be final.
2. Blue- or Black-Line Record Document Drawings shall be kept up-to-date during the entire course of the work and shall be available upon request for examination by the Architect, and, when necessary, to establish clearances for other parts of the Work.
3. The following requirements apply to all Record Document Drawings:
   a. They shall be maintained at the Contractor's expense.
   b. All such Drawings shall be done carefully and neatly by a competent draftsperson and in an approved form.
   c. Additional drawings shall be provided as necessary for clarification.
   d. The Record Document Drawings (both blue- or black-line and reproducible) shall be returned to the Architect upon completion of the work and are subject to the approval of the Architect.
   e. Delete Architect title block and seal from Record Document Drawings.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

1. Legibly mark and record at each Product section description of actual Products installed, including the following:
   a. Manufacturer’s product name and product model number.
   b. Product substitutions or alternates utilized.
   c. Changes made by Addenda and Modifications.
2. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.
3. Record Project Manual shall be maintained at the Contractor's expense.
4. Record Project Manual shall be maintained in a neat, readable manner. Contract work variations shall be recorded in the correct corresponding Technical Section of the Project Manual.
5. Delete Architect seal from Record Project Manual.

D. Record Shop Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Shop Drawings as finally approved. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark drawings accurately; record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
   1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
   2. Mark new information that is important to the Owner, but was not shown on Shop Drawings.
   3. Note related Change Order numbers where applicable.
   4. Organize record shop drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on the cover of each set.

E. Record Product Data: maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.
   1. Upon completion of mark-ups, submit complete set of record Product Data to the Architect for the Owner's records.

F. Record Documents and Shop Drawings: Contractor to supply one complete set of approved shop drawings. Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to fine (main) floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenance, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenance concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract Drawings.

G. Miscellaneous Record Submittal: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittal in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.

H. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Submit two sets prior to final inspection. Bind properly indexed data in individual heavy-duty 3-inch, 3-ring vinyl-covered binders, 8-1/2 x 11 inch text page format, with pocket folders for folded sheet information.
   1. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
   2. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
   3. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified.
   4. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers where they can be reached for emergency service at all times, including nights, weekends, and holidays.
   5. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.

f. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
g. Emergency instructions.
h. Spare parts list.
i. Wiring diagrams.
j. Recommended "turn around" cycles.
k. Inspection procedures.

6. Part 3: Project documents and certificates, including the following:
   a. Shop drawings and product data.
   b. Air and water balance reports.
   c. Certificates.
   d. Photocopies of warranties and bonds.
7. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with Architect comments. Revise content of documents as required prior to final submittal.
8. Submit final volumes revised, within ten days after final inspection.

J. Record documents of all As-Built drawings and O&M manuals, in PDF format on a portable jump drive. All files shall be organized as directed in paragraph “I” above.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 STARTING SYSTEMS

A. Coordinate schedule of start-up of various equipment and systems.
B. Notify Architect, Owner, and Program Manager seven days prior to start-up of each item.
C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions which may cause damage.
D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
E. Verify wiring and support components for equipment are complete and tested.
F. Execute start-up under supervision of responsible manufacturer's representative (Contractors' personnel) in accordance with manufacturers' instructions.
G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
H. Submit a written report in accordance with Section 01400 that equipment or system has been properly installed and is functioning correctly.

3.02 OPERATING AND MAINTENANCE INSTRUCTIONS

A. General: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacture's representatives. Include a detailed review of the following items:
   1. Maintenance manuals.
   2. Record documents.
   3. Spare parts and materials.
   4. Tools.
   5. Lubricants.
   6. Fuels.
   7. Identification systems.
   8. Control sequences.
   9. Hazards.
   10. Cleaning.
   11. Warranties and bonds.
   12. Maintenance agreements and similar continuing commitments.
B. As part of instruction for operating equipment, demonstrate the following procedures:
   1. Start-up.
   2. Shutdown.
   3. Emergency operations.

4. Noise and vibration adjustments.
5. Safety procedures.
6. Economy and efficiency adjustments.
7. Effective energy utilization.

3.03 FINAL CLEANING

A. General: General cleaning during construction is required by the General Provisions and Covenants and included in Division 1 Section "Temporary Facilities".

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

a. Remove labels that are not permanent labels.

b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

c. Clean exposed exterior and interior hard-surfaced finished to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or place excess materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 01700

SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Related Documents
- B. Summary
- C. Definitions
- D. Warranty Requirements
- E. Submittals

1.02 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division - 1 Specification sections, apply to this section.
- B. Reference Section 02731, Synthetic Grass Turf System for specific warranty requirements and durations.
- C. Reference Section 01030 Alternates for requirements of pre-paid warranty / insurance policy.

1.03 SUMMARY
- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
  1. Refer to the General Conditions of the Contract for Construction of terms of the Contractor's warranty of workmanship and materials.
  2. General closeout requirements are included in Division - 1, Section "Project Closeout."
  3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions 2 through 16.
  4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporated the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.04 DEFINITIONS
- A. Standard Product Warranties are reprinted written warranties published by individual manufacturers for particular product and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.05 WARRANTY REQUIREMENTS
- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies other wise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
   1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.06 SUBMITTAL

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion of the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
   1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.
   2. In all other instances, warranty periods will not begin prior to Substantial Completion, regardless of equipment use prior to dates of Substantial Completion.

B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.
   1. Refer to individual Sections of Divisions 2 through 16 for specific content requirements, and particular requirements of submittal of special warranties.

C. Form of Submittal: At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organized the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

D. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
   1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the installer.
   2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.
   3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01740

SECTION 02070

SELECTIVE DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Disposal of Demolished Materials
- B. Clean-Up and Repair
- C. Repair
- D. Protection of existing site elements.

1.02 DISPOSAL OF DEMOLISHED MATERIALS
- A. Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.

1.03 CLEAN-UP AND REPAIR
- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protection and leave interior areas broom clean.

1.04 PROTECTION OF EXISTING SITE ELEMENTS
- A. Contractor shall take all necessary precaution to protect existing site elements during site access, demolition, construction, and installation of turf system.
  1. Site elements include but are not limited to the following: Track area and surface, goal posts, sprinkler piping, sprinkler heads, water and storm sewer piping, vegetation, trees, fencing, pavement, etc.
- B. Contractor shall be responsible to review site survey and perform personal inspection of site to verify existing conditions and constraints.
- C. Contractor shall be responsible to repair and/or replace any damaged site elements damaged as a result of the construction project. All repairs must be performed by qualified personnel. If required by the City of Salina, due to the nature of repair, contractors shall be licensed and/or registered with the City. The contractor shall bear all costs associated with repair and/or replacement caused by his own forces or his subcontractors.

1.05 REPAIR
- A. Repair demolition performed in excess of that required. Return structures and surfaces to condition existing prior to commencement of selective demolition work using the same materials as that removed unless noted otherwise on Construction Documents. Repair adjacent construction or surfaces soiled, or damaged by selective demolition work.

END OF SECTION 02070

SECTION 02110

SITE CLEARING

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Removal of surface debris.
- B. Removal of items as shown on plans.
- C. Clearing of plant life and grass.
- D. Topsoil excavation.

1.02 RELATED SECTIONS
- A. Section 02211 - Rough Grading.

1.03 REGULATORY REQUIREMENTS
- A. Conform to applicable local codes for disposal of debris.
- B. Coordinate clearing Work with Owner and utility companies.

PART 2 PRODUCTS

2.01 MATERIALS
- A. None.

PART 3 EXECUTION

3.01 PREPARATION
- A. None.

3.02 PROTECTION
- A. Locate, identify, and protect utilities that remain, from damage.
- B. Protect trees, plant growth, and features designated to remain, as final landscaping.
- C. Protect bench marks and existing structures from damage or displacement.

3.03 CLEARING
- A. Clear areas required for access to site and execution of Work.
- B. Remove items as shown on Plans.

3.04 REMOVAL
- A. Remove debris and extracted plant life from site.

3.05 TOPSOIL EXCAVATION
- A. Excavate topsoil from under future pavements and embankments.
- B. Stockpile on site and remove excess topsoil not being reused.

END OF SECTION 02110

SECTION 02205

SOIL MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Subsoil and topsoil materials.

1.02 RELATED SECTIONS
A. Geotechnical Engineering Report for Sports Field Improvements. Terracon Project # 01235149.

1.03 REFERENCES
A. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
B. ASTM D2487 - Classification of Soils for Engineering Purposes.

PART 2 PRODUCTS

2.01 SOIL MATERIALS
A. Fill Material: Under slabs and within the zone of influence of foundation elements must be a material approved by the geotechnical engineer and as indicated in the geotechnical report.
B. Fill and Backfill Material: Other areas, foundation backfill, site grading, and pavement, should be clean site material or similar borrow material, approved by the geotechnical Engineer. Foreign matter shall be limited in size to 1 ½ ” in greatest dimension, and be limited to no more than 5% by volume or weight.
C. Topsoil: Incorporate topsoil into subsoil 3”- 4”. Topsoil should be blended and contain the following components by percentage:

Organic Matter:	4 - 6 %
Sand (ASTM - 300 and 75% between .25mm and .75mm):	40 - 50%
Silt:	20 - 25%
Clay:	25 - 40%

2.02 SOURCE QUALITY CONTROL
A. Inspection and testing will be performed by an independent laboratory, Owner shall bear all related costs under provisions of General Requirements.
B. Tests and analysis of soil material will be performed in accordance with ANSI/ASTM D698.
C. If tests indicate materials do not meet specified requirements, change material and retest at no cost to Owner.

PART 3 EXECUTION

3.01 STOCKPILING
A. Stockpile materials on site at locations indicated or in areas that will not impact project completion.
B. Stockpile in sufficient quantities to meet project schedule and requirements.
C. Separate differing materials with dividers or stockpile apart to prevent mixing.
D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

3.02 STOCKPILE CLEANUP
A. Remove stockpile, leave area in a clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION 02205

SECTION 02211

ROUGH GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Removal of topsoil and subsoil.
- B. Cutting, grading, filling, and rough contouring the site.

1.02 RELATED SECTIONS
- A. Division 1 - General Requirements of Work.
- B. Section 02110 - Site Clearing.
- C. Section 02225 - Trenching:
- D. Section 02222 - Excavating

1.03 REFERENCES
- A. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ASTM D2167 - Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
- D. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. KDOT: Section 210 "Compaction of Earthwork" of the 1990 Edition of the Kansas Department of Transportation (KDOT) Standard Specifications.

PART 2 PRODUCTS

2.01 MATERIALS
- A. Topsoil: Existing topsoil and/or imported material topsoil from approved borrow area.
- B. Fill: Existing subsoil or locally available soil approved by Architect/Engineer.

PART 3 EXECUTION

3.01 EXAMINATION
- A. Verify site conditions under provisions of Division 1.
- B. Verify that survey benchmark and intended elevations for the Work are as indicated.
- C. Verify all existing utility locations and depths.

3.02 PREPARATION
- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of utilities.
- C. Protect above and below grade utilities that remain.
- D. Protect plant life and other features remaining as a portion of final landscaping.
- E. Protect benchmarks, existing structures, walls, and sidewalks, from excavating equipment and vehicular traffic.
- F. Protect site from soil erosion.

3.03 SUBSOIL EXCAVATION
- A. All excavation is unclassified.
- B. Excavate subsoil to 18” below new granular base at tennis courts. Moisture condition the existing on site soils or replace with low volume change fill.
- C. At sidewalk and unpaved areas remove existing vegetation and compact for new sidewalk or topsoil.
- D. At existing baseball field remove all infield dirt material and replace with suitable fill.
- E. Stockpile in area designated on site and/or other area acceptable to the Owner.

3.04 FILLING

A. Clear all areas to receive fill in accordance with Section 02110.

B. Scarify areas before placing fill material and fill to contours and elevations with approved, unfrozen materials.

C. Place fill material at maximum 8-inches compacted depth per layer for machine compaction and 4-inches compacted depth for hand-operated tampers.

D. Place fill materials on continuous layers and compact in accordance with Schedule at end of Section.

E Maintain optimum moisture content of fill materials to attain required compaction density.

F. Make grade changes gradual. Blend slope into level areas.

G Remove from site and legally dispose of all excavated material unsuitable for fill or leftover after completion of fill/backfill operations. Remove all rocks 1" or larger upon completion of grading.

H. Provide minimum 6-inch depth of topsoil on all areas not receiving paving and compact in accordance with Schedule at end of Section.

3.05 TOLERANCES

A. Top Surface of Subgrade: No deviation in excess of ½ inch from a true surface when a ten foot straight edge is applied along any portion of the surface.

B. Top Surface of Topsoil: Within one inch of plan elevations.

C. Finished surfaces shall be uniformly contoured, able to drain, free of ridges and depressions.

3.06 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Division 1.

B. Compaction testing will be performed in accordance with ANSI/ASTM D1556, ANSI/ASTM D698, ASTM D2167, and ASTM D2922.

C. Frequency of Tests: Minimum one test per 2,500 sq.ft. per compacted fill/backfill layer with no less than three tests per layer.

D. KDOT Type B Compaction: Visual observation, sheepsfoot walkout.

E. Proof Rolling: Proof roll subgrade in presence of Architect/Engineer using a pneumatic tired roller of not less than 8 tons.

F. If tests indicate Work does not meet specified requirements, remove Work, replace, and retest.

3.07 SCHEDULES

A. Court Area Subgrades and Subsoil Fill:

1. Compact to 95 percent of maximum density as determined by ASTM D698.

B. Areas Outside Pavement:

1. Compact to KDOT Type B, MR 90.
2. Provide 4” of topsoil at all unpaved areas and to 10’ outside of perimeter sidewalks outside the perimeter fence line.

END OF SECTION 02211

SECTION 02222

EXCAVATING

PART 1 - GENERAL

1.01 SECTION INCLUDES
- A. Excavating for field subgrade.
- B. Excavating for slabs-on-grade, paving, landscaping.
- C. Excavating for site structures.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 PREPARATION
- A. Identify required lines, levels, contours, and datum.
- B. Locate, identify, and protect utilities that remain, from damage.
- C. Notify utility company to remove and relocate utilities.
- D. Protect plant life, lawns, rock outcropping and other features remaining as a portion of final landscaping.
- E. Protect bench marks, existing structures, fences, sidewalks, paving and curbs from excavation equipment and vehicular traffic.

3.02 EXCAVATION
- A. Underpin adjacent structures which may be damaged by excavation work.
- B. Excavate subsoil required to accommodate field subgrade, slabs-on-grade, paving and site structures, construction operations.
- C. Machine slope banks to angle of repose or less, until shored.
- D. Do not interfere with 45 degree bearing splay of foundation.
- E. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- F. Hand trim excavation. Remove loose matter.
- G. Remove lumped subsoil, boulders, and rock.
- H. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- I. Correct areas over-excavated in accordance with Section 02223.
- J. Stockpile excavated material in area designated on site and remove excess material not being reused, from site.

3.03 FIELD QUALITY CONTROL
- A. Field inspection will be performed under provisions of the General Requirements.
- B. Provide for visual inspection of bearing surfaces.

3.04 PROTECTION
- A. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation, from freezing.

END OF SECTION 02222

SECTION 02225

TRENCHING

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Excavating trenches for utilities.
- B. Compacted fill from top of utility bedding to subgrade elevations.
- C. Backfilling and compaction.

1.02 RELATED SECTIONS
- A. Division 1 - General Requirements at Work.
- B. Section 02211 - Rough Grading: Topsoil and subsoil removal from site surface.
- C. Section 02725 - Site Drainage Piping: Storm sewer piping and bedding.

1.03 REFERENCES
- A. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ASTM D2167 - Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
- D. ASTM D2922 - Test Methods for Density of Soil and Soil- Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. Kansas Department of Transportation (KDOT) Standard Specifications, 1990 Edition. BD-1 Material: Subsection 1108.

1.04 DEFINITIONS
- A. Utility: Any buried pipe, conduit, or cable.

1.05 FIELD MEASUREMENTS
- A. Verify that survey benchmark and intended elevations for the Work are as shown on drawings.

1.06 COORDINATION
- A. Coordinate work under provisions of Division 1.
- B. Verify work associated with lower elevation utilities are complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.01 FILL MATERIALS
- A. Utilities and Storm Drains: Outside paved areas - existing subsoil material as specified in Section 02211.
- B. Flowable Fill may be used at the Contractor's option for all utility trenches. Flowable fill is required for trenches under pavements. The flowable fill shall be a commercial grade lean concrete of the following mix:
  1. Cement: 80 lbs. per Cu. Yd.
  2. Sand: 2,740 lbs. per Cu. Yd.
  3. Air Entrainment: 8 oz. per Cu. Yd.
  4. Water: 43 gallons per Cu. Yd.

PART 3 EXECUTION

3.01 PREPARATION
- A. Identify required lines, levels, contours, and datum.
- B. Protect plant life and other features remaining as a portion of final landscaping.
- C. Protect benchmarks, existing structures, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.

D. Maintain and protect above and below grade utilities which are to remain. Verify all utility locations and depths prior to construction.

E. Cut out soft areas of subgrade not capable of in site compaction. Backfill with an aggregated or subsoil material and compact to density equal to or greater than requirements for subsequent backfill material.

3.02 EXCAVATION

A. Excavate subsoil required for utilities.

B. Cut trenches sufficiently wide to enable installation and allow inspection.

C. Do not interfere with 45 degree bearing splay of foundations.

D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.

E. Remove lumped subsoil.

F. Correct areas over-excavated in accordance with Article 3.01E above.

3.03 BACKFILLING

A. Backfill trenches to required subgrade contours and elevations with unfrozen materials.

B. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.

C. Existing Subsoil Fill: Place and compact materials (to 95% Std. Proctor Density) in continuous layers not exceeding 8 inches compacted depth for machine compaction and 4 inches compacted depth for hand-operated tampers.

D. Maintain optimum moisture content of fill materials to attain required compaction density.

E. Tests lifts at an interval of 100' with a minimum of 2 tests per lift. Provide test reports to Architect/Engineer.

F. Remove surplus fill materials from site.

3.04 TOLERANCES

A. Top Surface of General Backfilling: Plus or minus one inch from required elevations.

3.05 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Division 1.

B. Compaction testing will be performed in accordance with ANSI/ASTM D1556, ANSI/ASTM D698, ASTM D2167, and ASTM D2922.

C. If tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.

D. Test Frequency: In accordance with Section 02211.

E. Compaction Requirements: In accordance with Section 02211.

3.06 PROTECTION OF FINISHED WORK

A. Protect finished Work.

B. Reshape and re-compact fills subjected to vehicular traffic during construction.

C. Correct all backfill settlement occurring within one year of Substantial Completion.

END OF SECTION 02225

SECTION 02260

EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes temporary excavation support and protection systems. **Contractor is responsible for all excavation support and protection systems as required by local, state, and OSHA regulations.**

B. Related Sections:

1. Division 1 Section "Temporary Facilities and Controls" for temporary utilities and support facilities.

1.3 PERFORMANCE REQUIREMENTS

A. Furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads.

1. Prevent surface water from entering excavations by grading, dikes, or other means.
2. Install excavation support and protection systems without damaging existing buildings, structures, and site improvements adjacent to excavation.
3. Monitor vibrations, settlements, and movements.

B. Excavation support and protection must comply with ASHA, state and local requirements.

1.4 QUALITY ASSURANCE

A. Preinstallation:

1. Review methods and procedures related to excavation support and protection system including, but not limited to, the following:
   a. Geotechnical report.
   b. Existing utilities and subsurface conditions.
   c. Proposed excavations.
   d. Proposed equipment.
   e. Monitoring of excavation support and protection system.
   f. Working area location and stability.
   g. Coordination with waterproofing.
   h. Abandonment or removal of excavation support and protection system.

1.5 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

B. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by geotechnical engineer. Owner will not be responsible for interpretations or conclusions drawn from the data.

1. Make additional test borings and conduct other exploratory operations necessary for excavation support and protection.
2. The geotechnical report is referenced elsewhere in the Project Manual.

C. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1. During installation of excavation support and protection systems, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations and positions for comparison with original elevations and positions. Promptly notify Architect if changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that are either new or in serviceable condition.

B. Shotcrete: Comply with Division 3 Section "Shotcrete" for shotcrete materials and mixes, reinforcement, and shotcrete application.

C. Cast-in-Place Concrete: ACI 301, of compressive strength required for application.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.

1. Shore, support, and protect utilities encountered.

B. Install excavation support and protection systems to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Locate excavation support and protection systems clear of permanent construction so that forming and finishing of concrete surfaces are not impeded.

D. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure that excavation support and protection systems remain stable.

E. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

END OF SECTION 02260

SECTION 02520

PORTLAND CEMENT CONCRETE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Concrete equipment slabs, sidewalks and stair steps, integral curbs, gutters.

1.02 PERFORMANCE REQUIREMENTS
A. Paving: Designed for parking and light duty commercial vehicles.

1.03 QUALITY ASSURANCE
A. Perform work in accordance with ACI 301, requirements of Sections 03100, 03200 and 03300.
B. Obtain cementitious materials from same source throughout.

1.04 ENVIRONMENTAL REQUIREMENTS
A. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.01 FORM MATERIALS
A. Wood or Steel form material, profiled to suit conditions.
B. Joint Filler: ANSI/ASTM D1751 type; 3/4 inch thick.

2.02 REINFORCEMENT
A. Welded Steel Wire Fabric: Plain type, ANSI/ASTM A185;
6x6-6/6 in flat sheets or coiled rolls;
B. Reinforcing Steel: ASTM A615; 40 ksi yield grade; deformed billet steel bars; unfinished.

2.03 CONCRETE MATERIALS
A. Cement: ASTM C150 Air Entraining - Type IA Portland type, natural color.
B. Fine and Coarse Mix Aggregates: ASTM C33.
C. Water: Potable, not detrimental to concrete.
D. Air Entrainment: ASTM C260.
E. Chemical Admixture: ASTM C494, as approved by architect.

2.04 CONCRETE MIX - BY PERFORMANCE CRITERIA
A. Mix concrete in accordance with, ACI 304. Deliver concrete in accordance with ASTM C94.
B. Provide concrete to the following criteria:
   1. Compressive Strength: Reference schedule below.
   2. Slump: 4 inches.
   3. Minimum Water/Cement Ratio: 6.5 gallon/5.5 sack.
   4. Air Entrained: 5 percent maximum.
   5. Note: Fly ash is not acceptable.
C. Use accelerating admixtures in cold weather only when approved by Architect/Engineer. Use of admixtures will not relax cold weather placement requirements.
D. Use calcium chloride only when approved by Architect/Engineer.
E. Use set retarding admixtures during hot weather only when approved by Architect/Engineer.

2.05 SOURCE QUALITY CONTROL
A. Submit proposed mix design of each class of concrete to the architect and appointed testing laboratory firm for review prior to commencement of work.
B. Tests on cement and aggregates shall be performed to ensure conformance with specified requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify compacted subgrade, granular base and stabilized soil is acceptable and ready to support paving and imposed loads.
B. Verify gradients and elevations of base are correct.

3.02 PREPARATION

A. Moisten base to minimize absorption of water from fresh concrete.
B. Coat surfaces of manholes, catch basins, and frames with oil to prevent bond with concrete pavement.
C. Notify Architect/Engineer minimum 24 hours prior to commencement of concreting operations.

3.03 FORMING

A. Place and secure forms to correct location, dimension, and profile.
B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.04 REINFORCEMENT

A. Place reinforcement at mid-height of slabs-on-grade.
B. Interrupt reinforcement at expansion joints.
C. Place dowels and reinforcement to achieve pavement and curb alignment as detailed.
D. Provide doweled joints 12 inch o.c. at interruptions of concrete.

3.05 PLACING CONCRETE

A. Place concrete in accordance with ACI 301.
B. Ensure reinforcement, inserts, embedded parts, and are not disturbed during concrete placement.
C. Place concrete continuously between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
D. Place concrete to indicated pattern.

3.06 JOINTS

A. Place 1/2 inch expansion joints at 60 foot intervals or more frequently as noted on drawings. Align curb, gutter, and sidewalk joints.
B. Place joint filler between paving components and building or other appurtenances. Recess top of filler 1/4 inch for sealant placement by Section 07900.
C. Provide scored or sawn joints at 4 feet intervals U.N.O. at sidewalks and curbs and 15 feet at pavement.
D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

3.07 FINISHING

A. Parking: Light broom.
B. Sidewalk Paving: Light broom, radius to 1/4 inch and trowel joint edges.
C. Handicapped Ramps: Reference ADA. Sloped sections shall have raised circular texture. Contractor may install pre-manufactured pavers in lieu of cast in place concrete.
D. Curbs and Gutters: Trowel finish.
E. Inclined Vehicular Ramps: Broom perpendicular to slope.
F. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.08 FIELD QUALITY CONTROL

A. Three concrete test cylinders shall be taken for every 100 or less cu yds of each class of concrete placed each day.
B. One additional test cylinder shall be taken during cold weather and cured on site under same conditions as concrete it represents.
C. One slump test shall be taken for each set of test cylinders taken.

3.09 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

3.10 SCHEDULES

A. Concrete Sidewalks, Ramps: 4,000 psi 28 day concrete, 4 inches thick, 6/6 - 10 x 10 inch mesh reinforcement, natural color Portland cement, broom finish, detectable warnings per ADA at ramps and curb cuts.
B. Concrete Aprons and Driveways: 4,000 psi 28 day concrete, 6 inches thick, 6/6 - 6x6 W.W.F. reinforced, natural color Portland cement, broom finish (automobile traffic).
C. Concrete Aprons and Driveways: 4,000 psi 28 day concrete, 6 inches thick, 6/6 - 6x6 W.W.F. reinforced, natural color Portland cement, broom finish (school bus and track traffic – 8" thick).
D. Curb and gutter shall conform to American Public Works Association recommendations.

END OF SECTION 02520

SECTION 03100

CONCRETE FORMWORK

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Formwork for cast-in place concrete, with shoring, bracing, and anchorage.
- B. Openings for other work.
- C. Form accessories.
- D. Form stripping.

1.02 DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, protect, and handle products to site per the suppliers and/or manufacturer's recommendations.
- B. Store off ground in ventilated and protected manner to prevent deterioration from moisture.

1.03 COORDINATION
- A. Coordinate this Section with other Sections of work which require attachment of components to formwork.
- B. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement before proceeding, request instructions from Architect/Engineer.

PART 2 PRODUCTS

2.01 WOOD FORM MATERIALS
- A. Form Materials: At the discretion of the Contractor.

2.02 PREFABRICATED FORMS
- A. Preformed Steel Forms: Minimum gage matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
- B. Glass Fiber Fabric Reinforced Plastic Forms: Matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.

2.03 FORMWORK ACCESSORIES
- A. Form Ties: Removable or Snap-off type, metal, size and shape to minimize filling, waterproofing, and refinishing concrete surfaces.
- B. Form Release Agent: Colorless mineral oil which will not stain concrete, or absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.
- C. Corners: Chamfer, exposed edges 1/2 inch unless otherwise noted or detailed on the drawings.
- D. Dovetail Anchor Slot: Galvanized steel, 22 gage thick, release tape sealed slots, anchors for securing to concrete formwork.
- E. Flashing Reglets: Galvanized steel 22 gage thick, longest possible lengths, with alignment splines for joints, release tape sealed slots, anchors for securing to concrete formwork.
- F. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.
- G. Waterstops: Rubber Polyvinyl chloride, minimum 1,750 psi tensile strength, minimum 50 degrees F to plus 175 degrees F working temperature range, maximum possible lengths, ribbed profile, preformed corner sections, heat welded jointing.

PART 3 EXECUTION

3.01 EXAMINATION
- A. Verify lines, levels, and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 EARTH FORMS

A. Earth forms if permitted, hand trim sides and bottom of earth forms. Remove loose soil prior to placing concrete.

3.03 ERECTION - FORMWORK

A. Erect formwork, shoring, and bracing to achieve design requirements, in accordance with requirements of ACI 301.
B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to over stressing by construction loads.
C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
D. Align joints and make watertight. Keep form joints to a minimum.
E. Obtain approval before framing openings in structural members which are not indicated on Drawings.
F. Provide chamfer strips on external corners of beams joists columns and exposed decorative concrete edges.
G. Install void forms in accordance with manufacturer's recommendations. Protect forms from moisture or crushing.

3.04 APPLICATION - FORM RELEASE AGENT

A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
C. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are effected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

A. Provide formed openings where required for items to be embedded in passing through concrete work.
B. Locate and set in place items which will be cast directly into concrete.
C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.
D. Position recessed reglets for brick veneer masonry anchors to spacing and intervals specified in Section 04300.
E. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.
F. Install waterstops continuous without displacing reinforcement. Heat seal joints watertight.
G. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
H. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.

3.06 FORM CLEANING

A. Clean forms as erection proceeds, to remove foreign matter within forms.
B. Clean formed cavities of debris prior to placing concrete.
C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.07 FORMWORK TOLERANCES

A. Construct formwork to maintain tolerances required by ACI 301

3.08 FIELD QUALITY CONTROL

A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

B. Do not reuse wood formwork more than 2 times for concrete surfaces to be exposed to view. Do not patch formwork.

3.09 FORM REMOVAL

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

C. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.

END OF SECTION 03100

SECTION 03200

CONCRETE REINFORCEMENT
SLAB-ON-GRADE

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Reinforcing steel bars, wire fabric, and accessories for cast-in-place concrete.

1.02 SUBMITTALS
A. Submit under provisions of the General Requirements.
B. Shop Drawings: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.

1.03 QUALITY ASSURANCE
A. Perform Work in accordance with CRSI - Manual of Standard Practice and ACI 301.

1.04 QUALIFICATIONS
A. Design reinforcement under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Kansas.

1.05 COORDINATION
A. Coordinate with placement of formwork, formed openings and other Work.

PART 2 PRODUCTS

2.01 REINFORCEMENT
A. Reinforcing Steel: ASTM A615, 40, 60, or 75 ksi yield grade as indicated on the drawings; deformed billet steel bars, unfinished.
B. Reinforcing Steel Plain Bar and Rod Mats: ASTM A704, ASTM A615, Grade 40 or 60 as indicated on the drawings; steel bars or rods, unfinished.
C. Stirrup Steel: ANSI/ASTM A82, unfinished.
D. Welded Steel Wire Fabric: ASTM A815; in flat sheets; unfinished.

2.02 ACCESSORY MATERIALS
A. Tie Wire: Minimum 16 gage annealed type.
B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions including load bearing pad on bottom to prevent vapor barrier puncture.
C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic coated steel type; size and shape as required, as indicated on plans and details.

2.03 FABRICATION
A. Fabricate concrete reinforcing in accordance with CRSI Manual of Practice.
B. Weld reinforcement in accordance with ANSI/AWS D1.4.
C. Locate reinforcing splices not indicated on drawings, at point of minimum stress.

PART 3 EXECUTION

3.01 PLACEMENT
A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
B. Do not displace or damage vapor barrier.
C. Accommodate placement of formed openings.

D. Maintain concrete cover around reinforcing as indicated on the drawings or if not indicated as follows:

Item	Coverage
Beams	1 1/2 inch
Column Ties	1 1/2 inch
Walls (exposed to weather or backfill)	2 inch
Footings and Concrete Formed Against Earth	3 inch
Slabs on Fill	1 inch

END OF SECTION 03200

SECTION 05500

METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Miscellaneous steel framing and supports.
   2. Metal floor plate and supports.
   3. Miscellaneous steel trim.
   4. Metal bollards.
   5. Loose bearing and leveling plates.

B. Products furnished, but not installed, under this Section include the following:
   1. Loose steel members.
   2. Anchor bolts, steel pipe sleeves, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:
   1. Shop primers.
   2. Shrinkage-resisting grout.
   3. Metal bollards.

B. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

PART 2 - PRODUCTS

2.1 METALS

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

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.2 MISCELLANEOUS MATERIALS

A. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
   1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

B. Water-Based Primer: Emulsion type, anticorrosive primer for mildly corrosive environments that is resistant to flash rusting when applied to cleaned steel, complying with MPI#107 and compatible with topcoat.

C. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

D. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.

E. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

F. Shrinkage-Resistant Grout: Factory-packaged, nonmetallic, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

G. Concrete: Comply with requirements in Section 033000 "Cast-in-Place Concrete" for normal weight, air-entrained concrete with a minimum 28-day compressive strength of 4,000 psi.

2.3 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously 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. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, not less than 8 inches (200 mm) from ends and corners of units and 24 inches (600 mm) o.c.

2.4 MISCELLANEOUS FRAMING AND SUPPORTS

A. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

2.5 SHELF ANGLES

A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 3/4-inch (19-mm) bolts, spaced not more than 6 inches (150 mm) from ends and 24 inches (600 mm) o.c., unless otherwise indicated.

1. Provide mitered and welded units at corners.
2. Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2 inches (50 mm) larger than expansion or control joint.

B. For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.

C. Galvanize and prime shelf angles located in exterior walls.

D. Furnish wedge-type concrete inserts, complete with fasteners, to attach shelf angles to cast-inplace concrete.

2.6 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

1. Provide with integrally welded steel strap anchors for embedding in concrete or masonry construction.

C. Galvanize exterior miscellaneous steel trim.

2.7 METAL BOLLARDS

A. Fabricate metal bollards from Schedule 40 steel pipe.

1. Cap bollards with 1/4-inch- (6.4-mm-) thick steel.

B. Fabricate sleeves for bollard anchorage from steel pipe with 1/4-inch- (6.4mm-) thick, steel plate welded to bottom of sleeve. Make sleeves not less than 8 inches (200 mm) deep and 3/4 inch (19 mm) larger than OD of bollard.

C. Prime steel bollards with zinc-rich primer.

D. Bollards shall be covered with plastic covers. Reference specification section 10850.

2.8 LOOSE BEARING AND LEVELING PLATES

A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.

B. Galvanize bearing and leveling plates.

2.9 GENERAL FINISH REQUIREMENTS

A. Finish metal fabrications after assembly.

2.10 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. 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.

C. Field Welding: Comply with the following requirements:

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. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLATION OF METAL BOLLARDS

A. Fill metal-capped bollards solidly with concrete and allow concrete to cure seven days before installing.

B. Anchor bollards in place with concrete footings. Center and align bollards in holes 3 inches (75 mm) above bottom of excavation. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

C. Fill bollards solidly with concrete, mounding top surface to shed water.

3.3 REPAIRS

A. Touchup Painting:

1. Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

END OF SECTION 05500

SECTION 07900

JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Preparing substrate surfaces.
- B. Sealant and joint backing.

1.02 QUALITY ASSURANCE
- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform acoustical sealant application work in accordance with ASTM C919.

1.03 QUALIFICATIONS
- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Applicator: Company specializing in performing the work of this section with minimum years documented experience.

1.05 WARRANTY
- A. Provide five year warranty.
- B. Warranty: Include coverage for installed sealants and accessories which fail to achieve air tight seal, water tight seal, and exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 SEALANTS
- A. Exterior vertical joints shall be filled with a one-part nonacid-curing silicone sealant. Sealant shall be Type S, Grade NS, Class 25, and providing 35% movement in both extension and compression for a total of 70% movement.
  1. Acceptable products are as follows:
     - a. "Chem-Calk Ncure 2000"; Bostik Construction Products Div.
     - b. "Dow Corning 790"; Dow Corning Corp.
     - c. "Silglaze N SCS 2501"; General Electric Co.
     - d. "Silpruf SCS 2000"; General Electric Co.
     - e. "864"; Pecora Corp.
     - f. "Rhodorsil 5C"; Rhone-Poulenc Inc.
     - g. "Spectrum 1"; Tremco, Inc.
- B. Exterior horizontal joints shall be filled with a Class 1, one-part silicone, self-leveling sealant system. Joint width to be not more than 1" width. Product to allow for _____ at 100%.
  1. Acceptable products are as follows:
     - a. "300 SL"; Pecora Corp
     - b. Substitutions to be submitted for approval."SCS 1702 Sanitary"; General Electric Co.
  2. Warranty – 10 years.

2.02 ACCESSORIES
- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: ASTM D1056; round, closed or open cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive work.
B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

A. Remove loose materials and foreign matter which might impair adhesion of sealant.
B. Clean and prime joints in accordance with manufacturer's instructions.
C. Perform preparation in accordance with manufacturer's instructions.
D. Protect elements surrounding the work of this section from damage or disfiguration.

3.03 INSTALLATION

A. Install sealant in accordance with manufacturer's instructions.
B. Measure joint dimensions and size materials to achieve required 2:1 width/depth ratios.
C. Install joint backing to achieve a neck dimension no greater than 1/3 of the joint width.
D. Install bond breaker where joint backing is not used.
E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

3.04 SCHEDULE

A. Interior: Caulk around all frames, windows, doors, openings, trim, etc., as required to seal or fill gaps, cracks, to make material transitions watertight and/or visually tight and finished.
B. Exterior: Caulk around all frames, windows, doors, openings, trim, material transitions etc., as required to seal or fill gaps, cracks, to make material transitions watertight and/or visually tight finished.
C. Paving: Caulk as required to seal or fill gaps, expansion joints, and cracks to make transitions watertight and/or visually tight.

END OF SECTION 07900

SECTION 13125
GRANDSTAND SYSTEMS AND BLEACHER

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Design, fabrication, and installation of new grandstands/seating components to existing steel substructure :
1. Steel Substructure
2. Decking system
3. Tread, riser, and seat plank system

1.2 REFERENCES
A. ASTM A36 - For Structural Steel
B. ASTM A123 - For zinc (Hot-Dip Gal vanized) Coatings on Iron and Steel Products, after fabrication.
C. ASTM A307 - For Carbon Steel Bolts and Studs.

1.3 SUBMITTALS
A. Submit shop drawings in accordance with Section 01300 - Submittals.
B. Shop Drawings: Submit shop drawings for final approval, upon which such drawings will be engineered sealed.

1.4 QUALITY ASSURANCE
A. Codes and Standards: Design, fabrication and installation shall be in accordance with local codes, and handicap requirements. 2015 International Building Code and 2010 ADA.
B. Manufacturer Qualifications: Minimum 10 years' experience in the design and manufacturer of grandstands.
C. Installer Qualifications: Employ persons trained and experienced in the installation ofgrandstands.
D. Welders: AWS certified

1.5 PROJECT CONDITIONS
A. New grandstand components to be installed over existing steel (galvanized) structure. Grandstand manufacturer shall provide all components for connection/installation of grandstand systems.

1.6 WARRANTY:
A. Grandstand components to be satisfactory as to design, workmanship, and materials For 1 year beginning after completion of project.

PART 2 PRODUCTS

2.1 MANUFACTURER
A. Company specializing in design, fabrication, and installation of aluminum/steel grandstands including retrofit systems.

2.2 PERMANENT GRANDSTANDS
A. Design: The design shall be in accordance with the accepted standards as published by The American Institute of Steel Construction, The Aluminum Association, and 2015 International Building Code.
B. Design Loads:
1. Live Load: 100 psf gross horizontal area.
2. Perpendicular Sway Load: 10plf of seat plank.
3. Lateral Sway Load: 24 plf seat plank.
4. Wind Load: 30 psf vertical projection.
5. Live Load for Seat Tread Planks: 120 plf.
6. Guard Rail loads:
a. Vertical: 100plf.
b. Horizontal: 50 plf.

C. Shop Connections: Welded and capable of carrying stress put upon them as per AWS standards.
D. Steel Members:
   1. Size/Shape components as required for the installation of all components to existing steel structure.
      a. Manufacturer to submit sealed engineering drawing, signed by Kansas licensed structural engineer, as documentation of engineered system, as required by adopted codes.
E. System/Component descriptions;
   1. Front walkway designed to meet local and state codes, including ADA seating requirements.
   2. Seat Height: 17 inches
   3. Walkway Elevation: match existing
   4. Aisle Width: 48 inches typical or to meet local and state codes.
   5. Seats: 2 x 10. (optional 2 x 12)
   6. Aisle Steps: typical 2 x 12 plank with contrasting nosing to delineate edge of step.
   7. FootPlank and Riser design: Fully closed deck design.
F. Guardrails:
   1. Furnished on sides and back of bleachers and front of elevated bleachers. Top rail to be 42'' above foot tread of walkway and aisle and 42'' above seat planks that abutt the guardrail at the sides and back of bleachers.
   2. Type of guardrail:
      a.'' Vert I Rail''1 1/2''x 1/8''hot rolled square steel top and bottom rail, 1/2'' 14 ga.square steel vertical pickets, 4'' o.c. with a powder coated finish.
G. Stairs and Ramps provided to meet all state and local codes.
H. Handicap Provisions:
   1. Wheel Chair areas will be provided in accordance with specified codes and the American's with Disabilities Act for wheel chair accessibility.
I. Extruded Aluminum.
   1. Seat plank, stanchions and backrest: aluminum alloy 6063-T6-clear anodized 204RI or optional powder coated finish. Colors per customer request.
      a. Provide custom color, as indicated on drawings (2 colors).
   2. Tread plank: aluminum alloy 6063-t6, mill finish.
   3. Riser plank: aluminum alloy 6063-T6, mill finish with optional powder coated color. 4 End caps: aluminum channel type, hold down clips: aluminum alloy 6063-T6, mill finish.
      a. Provide custom color, as indicated on drawings (2 colors).

PART 3-EXECUTION

3.1 INSTALLATION

A. All work performed by factory-trained technicians experienced in bleacher seating installation.
B. Projects as per approved shop drawings.

END OF SECTION 13125

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Single conductor building wire.

B. Wiring connectors.

C. Electrical tape.

D. Heat shrink tubing.

E. Wire pulling lubricant.

F. Cable ties.

1.2 RELATED REQUIREMENTS

A. Section 26 05 26 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.

1.3 REFERENCE STANDARDS

A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013.

B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2011 (Reapproved 2017).

C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010 (Reapproved 2014).

D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2014).

E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2017.

F. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

G. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2009.

H. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.

J. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.

K. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.

L. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.

M. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.

N. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
3. Notify Architect of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

1.6 FIELD CONDITIONS

A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F, unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Architect and obtain direction before proceeding with work.

PART 2 PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

C. Nonmetallic-sheathed cable is not permitted.

D. Underground feeder and branch-circuit cable is not permitted.

E. Service entrance cable is not permitted.

F. Armored cable is not permitted.

G. Metal-clad cable is not permitted.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

A. Provide products that comply with requirements of NFPA 70.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

D. Comply with NEMA WC 70.

E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.

F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.

G. Conductor Material:
   1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
   2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
   3. Tinned Copper Conductors: Comply with ASTM B33.

H. Minimum Conductor Size:
   1. Branch Circuits: 10 AWG.

I. Conductor Color Coding:
   1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
   2. Color Coding Method: Integrally colored insulation.
   3. Color Code:
      a. 480 V, 3 Phase System:
         1) Phase A: Brown.
         2) Phase B: Orange.
         3) Phase C: Yellow.
      b. Equipment Ground, All Systems: Green.

2.3 SINGLE CONDUCTOR BUILDING WIRE

A. Description: Single conductor insulated wire.

B. Conductor Stranding:
   1. Feeders and Branch Circuits:
      a. Size 10 AWG and Smaller: Solid.
      b. Size 8 AWG and Larger: Stranded.

C. Insulation Voltage Rating: 600 V.

D. Insulation:
   1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2.

2.4 WIRING CONNECTORS

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

B. Wiring Connectors for Splices and Taps:
   1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
   2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.

C. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.

D. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.

E. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.

F. Mechanical Connectors: Provide bolted type or set-screw type.

G. Compression Connectors: Provide circumferential type or hex type crimp configuration.

2.5 WIRING ACCESSORIES

A. Electrical Tape:
   1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.
   2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
   3. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.

C. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.

D. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that work likely to damage wire and cable has been completed.

B. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.

C. Verify that field measurements are as indicated.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Circuiting Requirements:
   1. Unless dimensioned, circuit routing indicated is diagrammatic.
   2. When circuit destination is indicated without specific routing, determine exact routing required.
   3. Arrange circuiting to minimize splices.

B. Install products in accordance with manufacturer's instructions.

C. Perform work in accordance with NECA 1 (general workmanship).

D. Installation in Raceway:
   1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
   2. Pull all conductors and cables together into raceway at same time.
   3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
   4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

E. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.

F. Make wiring connections using specified wiring connectors.
   1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
   2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
   3. Do not remove conductor strands to facilitate insertion into connector.
   4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
   5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

G. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
   1. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
      a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
      b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
   2. Wet Locations: Use heat shrink tubing.

H. Insulate ends of spare conductors using vinyl insulating electrical tape.

I. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.

J. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

END OF SECTION 26 05 19

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

D. Ground rod electrodes.

1.2 RELATED REQUIREMENTS

A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.

1.3 REFERENCE STANDARDS

A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System; 2012.

B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

C. NEMA GR 1 - Grounding Rod Electrodes and Grounding Rod Electrode Couplings; 2007.

D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

E. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.4 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 GROUNDING AND BONDING REQUIREMENTS

A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

B. Do not use products for applications other than as permitted by NFPA 70 and product listing.

C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

E. Grounding System Resistance:

1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.

2. Grounding Electrode System: Not greater than 5 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.

F. Bonding and Equipment Grounding:

1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.

G. Cable Tray Systems: Also comply with Section 26 05 36.

2.2 GROUNDING AND BONDING COMPONENTS

A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 05 26:
1. Use insulated copper conductors unless otherwise indicated.
a. Exceptions:
1) Use bare copper conductors where installed underground in direct contact with earth.
2) Use bare copper conductors where directly encased in concrete (not in raceway).

C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

D. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
2. Material: Copper-bonded (copper-clad) steel.
3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that work likely to damage grounding and bonding system components has been completed.

B. Verify that field measurements are as shown on the drawings.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install grounding and bonding system components in a neat and workmanlike manner in accordance with NECA 1.

C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or provide ground plates.
1. Outdoor Installations: Unless otherwise indicated, install with top of rod 6 inches below finished grade.

D. Make grounding and bonding connections using specified connectors.
   1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
   2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
   3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
   4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

E. Identify grounding and bonding system components in accordance with Section 26 05 53.

3.3 FIELD QUALITY CONTROL

A. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.

B. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

C. Submit detailed reports indicating inspection and testing results and corrective actions taken.

END OF SECTION 26 05 26

SECTION 26 05 34

CONDUIT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. Intermediate metal conduit (IMC).

C. Rigid polyvinyl chloride (PVC) conduit.

D. Conduit fittings.

E. Accessories.

1.2 RELATED REQUIREMENTS

A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.

B. Section 26 05 26 - Grounding and Bonding for Electrical Systems.

1. Includes additional requirements for fittings for grounding and bonding.

1.3 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2015.

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2015.

C. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit (EIMC); 2005.

D. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

E. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2013.

F. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2003.

G. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.

H. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2013.

I. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2016.

J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. UL 1 - Flexible Metal Conduit; Current Edition, Including All Revisions.

L. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.

M. UL 360 - Liquid-Tight Flexible Steel Conduit; Current Edition, Including All Revisions.

N. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.

O. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.

P. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.

Q. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.

B. Project Record Documents: Record actual routing for conduits installed underground, conduits embedded within concrete slabs, and conduits 2 inch (53 mm) trade size and larger.

1.5 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 CONDUIT APPLICATIONS

A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.

B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.

C. Underground:
   1. Under Slab on Grade: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or rigid PVC conduit.
   2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit, intermediate metallic conduit (IMC), or rigid PVC conduit.
   3. Exterior, Embedded Within Concrete: Use rigid PVC conduit.
   4. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground.
   5. Where rigid polyvinyl (PVC) conduit larger than 2 inch (53 mm) trade size is provided, use galvanized steel rigid metal conduit elbows for bends.
   6. Where steel conduit is installed in direct contact with earth where soil has a resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape to provide supplementary corrosion protection.
   7. Where steel conduit emerges from concrete into soil, use corrosion protection tape to provide supplementary corrosion protection for a minimum of 4 inches on either side of where conduit emerges.

D. Embedded Within Concrete:
   1. Within Slab on Grade: Not permitted.
   2. Within Slab Above Ground: Not permitted.

E. Exposed, Exterior: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).

2.2 CONDUIT REQUIREMENTS

A. Fittings for Grounding and Bonding: Also comply with Section 26 05 26.

B. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Minimum Conduit Size, Unless Otherwise Indicated:
   1. Branch Circuits: 1 inch trade size.

E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. Allied Tube & Conduit: www.alliedeg.com/#sle.
   2. Republic Conduit: www.republic-conduit.com/#sle.
   3. Wheatland Tube Company: www.wheatland.com/#sle.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

C. Fittings:
   1. Manufacturers:
      a. Bridgeport Fittings Inc: www.bptfittings.com/#sle.

b. O-Z/Gedney, a brand of Emerson Industrial Automation: www.emersonindustrial.com/#sle.
c. Thomas & Betts Corporation: www.tnb.com/#sle.

2. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
3. Material: Use steel or malleable iron.
4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.4 INTERMEDIATE METAL CONDUIT (IMC)

A. Manufacturers:
1. Allied Tube & Conduit: www.alliedeg.com/#sle.
2. Republic Conduit: www.republic-conduit.com/#sle.
3. Wheatland Tube Company: www.wheatland.com/#sle.

B. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.

C. Fittings:
1. Manufacturers:
a. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
b. O-Z/Gedney, a brand of Emerson Industrial Automation: www.emersonindustrial.com/#sle.
c. Thomas & Betts Corporation: www.tnb.com/#sle.

2. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
3. Material: Use steel or malleable iron.
4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.5 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

A. Manufacturers:
1. Cantex Inc: www.cantexinc.com/#sle.
2. Carlon, a brand of Thomas & Betts Corporation: www.carlon.com/#sle.

B. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.

C. Fittings:
1. Manufacturer: Same as manufacturer of conduit to be connected.
2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.6 ACCESSORIES

A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil.

B. Conduit Joint Compound: Corrosion-resistant, electrically conductive; suitable for use with the conduit to be installed.

C. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

D. Pull Strings: Use nylon cord with average breaking strength of not less than 200 pound-force.

E. Sealing Compound for Sealing Fittings: Listed for use with the particular fittings to be installed.

F. Modular Seals for Conduit Penetrations: Rated for minimum of 40 psig; Suitable for the conduits to be installed.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as shown on drawings.

B. Verify that mounting surfaces are ready to receive conduits.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install conduit in a neat and workmanlike manner in accordance with NECA 1.

C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.

D. Install intermediate metal conduit (IMC) in accordance with NECA 101.

E. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.

F. Conduit Routing:
   1. Unless dimensioned, conduit routing indicated is diagrammatic.
   2. When conduit destination is indicated and routing is not shown, determine exact routing required.
   3. Arrange conduit to provide no more than the equivalent of four 90 degree bends between pull points.
   4. Arrange conduit to provide no more than 150 feet between pull points.

G. Connections and Terminations:
   1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
   2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
   3. Use suitable adapters where required to transition from one type of conduit to another.
   4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
   5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
   6. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
   7. Secure joints and connections to provide maximum mechanical strength and electrical continuity.

H. Underground Installation:
   1. Minimum Cover, Unless Otherwise Indicated or Required:
      a. Underground, Exterior: 24 inches.
      b. Under Slab on Grade: 12 inches to bottom of slab.
   2. Provide underground warning tape in accordance with Section 26 05 53 along entire conduit length for service entrance where not concrete-encased.

I. Concrete Encasement: Where conduits not otherwise embedded within concrete are indicated to be concrete-encased, provide concrete in accordance with Section 03 30 00 with minimum concrete cover of 3 inches on all sides unless otherwise indicated.

J. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
   1. Where conduits are subject to earth movement by settlement or frost.

K. Provide grounding and bonding in accordance with Section 26 05 26.

3.3 PROTECTION

A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION 26 05 34

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electrical identification requirements.

B. Identification nameplates and labels.

C. Wire and cable markers.

D. Voltage markers.

E. Underground warning tape.

F. Warning signs and labels.

1.2 RELATED REQUIREMENTS

A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

1.3 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

B. UL 969 - Marking and Labeling Systems; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.

B. Sequencing:

1. Do not install identification products until final surface finishes and painting are complete.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.6 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.1 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:

1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.

a. Panelboards:

1) Identify ampere rating.

2) Identify voltage and phase.

3) Identify main overcurrent protective device. Use identification label for panelboards with a door. For power distribution panelboards without a door, use identification nameplate.

4) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.

b. Enclosed switches, circuit breakers, and motor controllers:

1) Identify voltage and phase.

2) Identify load(s) served. Include location when not within sight of equipment.

2. Service Equipment:

a. Use identification nameplate to identify each service disconnecting means.

3. Use voltage marker to identify highest voltage present for each piece of electrical equipment.

B. Identification for Conductors and Cables:

1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 05 19.
2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
3. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.
4. Use underground warning tape to identify direct buried cables.

2.2 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:
1. Materials:
a. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.
3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.
4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched text.
5. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch high; Four, located at corners for larger sizes.

B. Identification Labels:
1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

C. Format for Equipment Identification:
1. Minimum Size: 1 inch by 2.5 inches.
2. Legend:
a. Equipment designation or other approved description.
3. Text: All capitalized unless otherwise indicated.
4. Minimum Text Height:
a. Equipment Designation: 1/2 inch.
5. Color:
a. Normal Power System: White text on black background.

2.3 WIRE AND CABLE MARKERS

A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.

B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.

C. Legend: Power source and circuit number or other designation indicated.

D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.

E. Minimum Text Height: 1/8 inch.

F. Color: Black text on white background unless otherwise indicated.

2.4 VOLTAGE MARKERS

A. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.

B. Minimum Size:
1. Markers for Equipment: 1 1/8 by 4 1/2 inches.

C. Legend:
1. Markers for Voltage Identification: Highest voltage present.

D. Color: Black text on orange background unless otherwise indicated.

2.5 UNDERGROUND WARNING TAPE

A. Materials: Use non-detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.
   1. Exception: Use foil-backed detectable type tape where required by serving utility or where directed by Owner.

B. Non-detectable Type Tape: 6 inches wide, with minimum thickness of 4 mil.

C. Foil-backed Detectable Type Tape: 3 inches wide, with minimum thickness of 5 mil, unless otherwise required for proper detection.

D. Legend: Type of service, continuously repeated over full length of tape.

E. Color:
   1. Tape for Buried Power Lines: Black text on red background.

PART 3 EXECUTION

3.1 PREPARATION

A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
   1. Surface-Mounted Equipment: Enclosure front.
   2. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
   3. Interior Components: Legible from the point of access.
   4. Conductors and Cables: Legible from the point of access.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.

E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

F. Install underground warning tape above buried lines with one tape per trench at 6 inch(es) below finished grade.

G. Mark all handwritten text, where permitted, to be neat and legible.

3.3 FIELD QUALITY CONTROL

A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION 26 05 53

SECTION 26 24 16

PANELBOARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Power distribution panelboards.

B. Overcurrent protective devices for panelboards.

1.2 RELATED REQUIREMENTS

A. Section 26 05 26 - Grounding and Bonding for Electrical Systems.

B. Section 26 43 00 - Surge Protective Devices.

1.3 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

B. NECA 407 - Standard for Installing and Maintaining Panelboards; 2015.

C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2014.

D. NEMA PB 1 - Panelboards; 2011.

E. NEMA PB 1.1 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less; 2013.

F. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2017.

G. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.

I. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.

J. UL 67 - Panelboards; Current Edition, Including All Revisions.

K. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures; Current Edition, Including All Revisions.

L. UL 869A - Reference Standard for Service Equipment; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.

C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. Panelboard Keys: Two of each different key.

1.5 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store panelboards in accordance with manufacturer's instructions and NECA 407.

B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

C. Handle carefully in accordance with manufacturer's written instructions to avoid damage to panelboard internal components, enclosure, and finish.

1.7 FIELD CONDITIONS

A. Maintain ambient temperature within the following limits during and after installation of panelboards:
   1. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Eaton Corporation: www.eaton.com.

B. Schneider Electric; Square D Products: www.schneider-electric.us.

C. Siemens Industry, Inc: www.usa.siemens.com.

2.2 PANELBOARDS - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
   1. Altitude: Less than 6,600 feet.
   2. Ambient Temperature:
      a. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.

C. Short Circuit Current Rating:
   1. Provide panelboards with listed short circuit current rating as indicated on the drawings.
   2. Listed series ratings are not acceptable.

D. Panelboards Used for Service Entrance: Listed and labeled as suitable for use as service equipment according to UL 869A.

E. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.

F. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.

G. Bussing: Sized in accordance with UL 67 temperature rise requirements.
   1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
   2. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.

H. Conductor Terminations: Suitable for use with the conductors to be installed.

I. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Outdoor Locations: Type 3R.
   2. Boxes: Galvanized steel unless otherwise indicated.
      a. Provide wiring gutters sized to accommodate the conductors to be installed.
      b. Increase gutter space as required where sub-feed lugs, feed-through lugs, gutter taps, or oversized lugs are provided.
   3. Fronts:
      a. Fronts for Surface-Mounted Enclosures: Same dimensions as boxes.
      b. Fronts for Flush-Mounted Enclosures: Overlap boxes on all sides to conceal rough opening.
      c. Finish for Painted Steel Fronts: Manufacturer's standard grey unless otherwise indicated.
   4. Lockable Doors: All locks keyed alike unless otherwise indicated.

J. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

K. Surge Protective Devices: Where factory-installed, internally mounted surge protective devices are provided in accordance with Section 26 43 00, list and label panelboards as a complete assembly including surge protective device.

L. Load centers are not acceptable.

2.3 POWER DISTRIBUTION PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, power and feeder distribution type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
   1. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
   1. Phase Bus Material: Aluminum or copper.
   2. Ground Bus Material: Aluminum or copper.

D. Circuit Breakers:
   1. Provide bolt-on type.
   2. Provide thermal magnetic circuit breakers unless otherwise indicated.

E. Enclosures:
   1. Provide surface-mounted enclosures unless otherwise indicated.
   2. Fronts: Provide lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
   3. Provide clear plastic circuit directory holder mounted on inside of door.

2.4 OVERCURRENT PROTECTIVE DEVICES

A. Molded Case Circuit Breakers:
   1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489; ratings, configurations, and features as indicated on the drawings.
   2. Interrupting Capacity:
      a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than:
         1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
         2) 14,000 rms symmetrical amperes at 480 VAC.
      b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
   3. Conductor Terminations:
      a. Provide mechanical lugs unless otherwise indicated.
      b. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
      a. Provide field-adjustable magnetic instantaneous trip setting for circuit breaker frame sizes 225 amperes and larger.
   5. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.
   6. Do not use handle ties in lieu of multi-pole circuit breakers.

2.5 SOURCE QUALITY CONTROL

A. Factory test panelboards according to NEMA PB 1.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as shown on the drawings.

B. Verify that the ratings and configurations of the panelboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive panelboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. Install panelboards securely, in a neat and workmanlike manner in accordance with NECA 1 (general workmanship), NECA 407 (panelboards), and NEMA PB 1.1.

D. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

E. Install panelboards plumb.

F. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform.

G. Provide grounding and bonding in accordance with Section 26 05 26.

H. Install all field-installed branch devices, components, and accessories.

I. Multi-Wire Branch Circuits: Group grounded and ungrounded conductors together in the panelboard as required by NFPA 70.

J. Provide filler plates to cover unused spaces in panelboards.

3.3 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Correct deficiencies and replace damaged or defective panelboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of panelboard fronts.

3.5 CLEANING

A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION 26 24 16

SECTION 26 28 16.16

ENCLOSED SWITCHES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Enclosed safety switches.

1.2 RELATED REQUIREMENTS

A. Section 26 05 26 - Grounding and Bonding for Electrical Systems.

B. Section 26 05 29 - Hangers and Supports for Electrical Systems.

C. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

B. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2014.

C. NEMA KS 1 - Heavy Duty Enclosed and Dead-Front Switches (600 Volts Maximum); 2013.

D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

E. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.

F. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.

G. UL 98 - Enclosed and Dead-Front Switches; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate the work with other trades. Avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and within working clearances for electrical equipment required by NFPA 70.
2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
4. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.5 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for enclosed switches and other installed components and accessories.

B. Project Record Documents: Record actual locations of enclosed switches.

1.6 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

B. Handle carefully in accordance with manufacturer's written instructions to avoid damage to enclosed switch internal components, enclosure, and finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Eaton Corporation; _____: www.eaton.com/#sle.

B. Schneider Electric; Square D Products; _____: www.schneider-electric.us/#sle.

C. Siemens Industry, Inc; _____: www.usa.siemens.com/#sle.

D. Source Limitations: Furnish enclosed switches and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.2 ENCLOSED SAFETY SWITCHES

A. Description: Quick-make, quick-break enclosed safety switches listed and labeled as complying with UL 98; heavy duty; ratings, configurations, and features as indicated on the drawings.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Voltage Rating: Suitable for circuit voltage.

D. Provide with switch blade contact position that is visible when the cover is open.

E. Conductor Terminations: Suitable for use with the conductors to be installed.

F. Provide solidly bonded equipment ground bus in each enclosed safety switch, with a suitable lug for terminating each equipment grounding conductor.

G. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
   1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
      a. Outdoor Locations: Type 3R.
   2. Finish for Painted Steel Enclosures: Manufacturer's standard, factory applied grey unless otherwise indicated.

H. Provide safety interlock to prevent opening the cover with the switch in the ON position with capability of overriding interlock for testing purposes.

I. Heavy Duty Switches:
   1. Comply with NEMA KS 1.
   2. Conductor Terminations:
      a. Provide mechanical lugs unless otherwise indicated.
      b. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   3. Provide externally operable handle with means for locking in the OFF position, capable of accepting three padlocks.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings of the enclosed switches are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive enclosed safety switches.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

D. Provide required support and attachment in accordance with Section 26 05 29.

E. Install enclosed switches plumb.

F. Except where indicated to be mounted adjacent to the equipment they supply, mount enclosed switches such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.

G. Provide grounding and bonding in accordance with Section 26 05 26.

H. Identify enclosed switches in accordance with Section 26 05 53.

3.3 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

3.4 CLEANING

A. Clean dirt and debris from switch enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION 26 28 16.16

SECTION 26 43 00

SURGE PROTECTIVE DEVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Surge protective devices for branch panelboard locations.

1.2 RELATED REQUIREMENTS

A. Section 26 05 26 - Grounding and Bonding for Electrical Systems.

B. Section 26 24 16 - Panelboards.

1.3 ABBREVIATIONS AND ACRONYMS

A. SPD: Surge Protective Device.

1.4 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.

B. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2014.

C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

D. UL 1449 - Standard for Surge Protective Devices; Current Edition, Including All Revisions.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate size and location of overcurrent device compatible with the actual surge protective device and location to be installed. Notify Architect of any conflicts or deviations from the contract documents to obtain direction prior to ordering equipment.

1.6 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Include detailed component information, voltage, surge current ratings, repetitive surge current capacity, voltage protection rating (VPR) for all protection modes, maximum continuous operating voltage (MCOV), nominal discharge current (I-n), short circuit current rating (SCCR), connection means including any required external overcurrent protection, enclosure ratings, outline and support point dimensions, weight, service condition requirements, and installed features.

C. Certificates: Manufacturer's documentation of listing for compliance with the following standards:
   1. UL 1449.

D. Operation and Maintenance Data: Include information on status indicators and recommended maintenance procedures and intervals.

E. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.7 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.8 FIELD CONDITIONS

A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.9 WARRANTY

A. Manufacturer's Warranty: Provide minimum five year warranty covering repair or replacement of surge protective devices showing evidence of failure due to defective materials or workmanship.

B. Exclude surge protective devices from any clause limiting warranty responsibility for acts of nature, including lightning, stated elsewhere.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Field-installed, Externally Mounted Surge Protective Devices:
   1. ABB/GE: www.geindustrial.com/#sle.
   2. Current Technology; a brand of Thomas & Betts Power Solutions: www.tnbpowersolutions.com/#sle.
   3. Schneider Electric; Square D Brand Surgelogic Products: www.surgelogic.com/#sle.

B. Factory-installed, Internally Mounted Surge Protective Devices:
   1. Same as manufacturer of equipment containing surge protective device, to provide a complete listed assembly including SPD.

C. Source Limitations: Furnish surge protective devices produced by a single manufacturer and obtained from a single supplier.

2.2 SURGE PROTECTIVE DEVICES - GENERAL REQUIREMENTS

A. Description: Factory-assembled surge protective devices (SPDs) for 60 Hz service; listed, classified, and labeled as suitable for the purpose intended; system voltage as indicated on the drawings.

B. Unless otherwise indicated, provide field-installed, externally-mounted or factory-installed, internally-mouonted SPDs.

C. Protected Modes:
   1. Delta Systems: L-G, L-L.

D. UL 1449 Voltage Protection Ratings (VPRs):
   1. 480V Delta System Voltage: Not more than 1,800 V for L-G mode and 3,000 V for L-L mode.

E. UL 1449 Maximum Continuous Operating Voltage (MCOV): Not less than 115% of nominal system voltage.

F. Enclosure Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
   1. Outdoor locations: Type 3R.

G. Mounting for Field-installed, Externally Mounted SPDs: Unless otherwise indicated, as specified for the following locations:
   1. Provide surface-mounted SPD where mounted in non-public areas or adjacent to surface-mounted equipment.

H. Equipment Containing Factory-installed, Internally Mounted SPDs: Listed and labeled as a complete assembly including SPD.
   1. Panelboards: See Section 26 24 16.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as shown on the drawings.

B. Verify that the service voltage and configuration marked on the SPD are consistent with the service voltage and configuration at the location to be installed.

C. Verify that electrical equipment is ready to accept connection of the SPD and that installed overcurrent device is consistent with requirements of drawings and manufacturer's instructions.

D. Verify system grounding and bonding is in accordance with Section 26 05 26. Do not energize SPD until deficiencies have been corrected.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in a neat and workmanlike manner in accordance with NECA 1.

B. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

C. Unless indicated otherwise, connect service entrance surge protective device on load side of service disconnect main overcurrent device.

D. Install conductors between SPD and equipment terminations as short and straight as possible, not exceeding manufacturer's recommended maximum conductor length. Breaker locations may be reasonably rearranged in order to provide leads as short and straight as possible. Twist conductors together to reduce inductance.

3.3 FIELD QUALITY CONTROL

A. Procure services of a qualified manufacturer's representative to observe installation and assist in inspection, testing, and adjusting. Include manufacturer's reports with field quality control submittals.

3.4 CLEANING

A. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION 26 43 00

SECTION 26 56 68

EXTERIOR ATHLETIC LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes lighting for baseball fields.

1.3 SUBMITTALS

A. Coordination Drawings: Plans drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
   1. Luminaires.
   2. Luminaire support structures.
   3. Limits of athletic fields.
   4. Proposed underground utilities and structures.
   5. Existing underground utilities and structures.
   6. Athletic field support structures.

B. Field quality-control reports.

C. Sample warranty.

D. Product Data: For each type of lighting product.
   1. Arrange in order of luminaire designation.
   2. Include data on features, accessories, and finishes.
   3. Include physical description and dimensions of the luminaires.
   4. Means of attaching luminaires to supports and indication that attachment is suitable for components involved.

E. Product Schedule: For luminaires and poles. Use same designations indicated on Drawings.

F. Delegated-Design Submittal: For exterior athletic lighting indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
   1. Drawings and specifications for construction of lighting system.
   2. Manufacturer's determination of LLF used in design calculations.
   3. Lighting system design calculations for the following:
      a. Target illuminance.
      b. Point calculations of horizontal illuminance at minimum grid size and area.
   4. Electrical system design calculations for the following:
      a. Total connected and estimated peak-demand electrical load, in kilowatts, of lighting system.
      b. Capacity of feeder required to supply each lighting pole.
   5. Wiring requirements, including required conductors, cables, and wiring methods.
   6. Structural analysis data and calculations.
      a. Submit drawings and calculations sealed by a State of Kansas licensed professional engineer.
      b. Foundation Designs: The foundation must be designed based on IBC design for foundations.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Manufacturer Qualifications: Manufacturer's responsibilities include fabricating sports lighting and providing professional engineering services needed to assume engineering responsibility.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of luminaires, and luminaire alignment products and to correct misalignment that occurs subsequent to successful acceptance tests. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, and unauthorized repairs and alterations from special warranty coverage.
   1. Luminaire Warranty: Luminaire and luminaire assembly shall be free from defects in materials and workmanship for a period of five years from date of Substantial Completion.
   2. Alignment Warranty: Accuracy of alignment of luminaires shall remain within specified illuminance uniformity ratios for a period of five years from date of successful completion of acceptance tests.
      a. Realign luminaires that become misaligned during the warranty period.
      b. Replace alignment products that fail within the warranty period.
      c. Verify successful realignment of luminaires by retesting as specified in "Field Quality Control" Article.

B. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Techline Sports Lighting

B. Acceptable Alternate Manufacturers:
   1. Musco
   2. Qualite

2.2 PERFORMANCE REQUIREMENTS

A. Illumination Criteria:
   1. Minimum Average Target Illumination:
      a. Infield: 50 FC
      b. Outfield: 30 FC
   2. Maximum-to-Minimum Uniformity Ratio:
      a. Infield: 1.5:1
      b. Outfield: 2.5:1

B. Illumination Calculations: Computer-analyzed point method complying with IES RP-6 to optimize selection, location, and aiming of luminaires.
   1. Grid Pattern Dimensions: 30’ x 30’
   2. LLF to be 0.90 for all calculations.
   3. Luminaire-Mounting Height: 80 feet.
   4. Luminaire Placement: As shown on drawings..

C. Lighting Control: Digital, with a minimum of five preset selections, with off, on, dim, and timer functions. System shall communicate wirelessly and be capable of operation via smartphone or pushbutton station at controller. Controller shall be housed in lockable weatherproof enclosure.

D. Electric Power Distribution Requirements:
   1. Electric Power: 480 V; single phase.
      a. Include required overcurrent protective devices and individual lighting control for each sports field.
      b. Include indicated feeder capacity.

E. Maximum Total Load: As indicated on drawings. If proposed system exceeds electrical provisions as indicated, required increases shall be made at no additional cost to Owner.
   1. Maximum Total Voltage Drop from Panel to Load: 3 percent, including voltage drops in branch circuit and feeder.

2.3 LUMINAIRES

A. LED Luminaires:
   1. Listed and labeled, by an NRTL acceptable to authorities having jurisdiction, for compliance with UL 1598 for installation in wet locations.
   2. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating condition.
   3. Exposed Hardware: Stainless-steel latches, fasteners, and hinges.
   4. Spill-Light Control Devices: Internal louvers and external baffles furnished by manufacturer and designed for secure attachment to specific luminaire.

2.4 SUPPORT STRUCTURES

A. Poles shall be high strength low alloy tapered tubular steel meeting ASTM-A595 Standards and shall be hot-dipped galvanized. All connections of pole sections shall be achieved slip fitting the top section over the lower section a minimum of 1.5 times the diameter of the larger section. Poles may be direct buried or utilize concrete foundations. Manufacturers shall submit separate pricing for both installation methods.

B. Lighting Structure: The lighting structure shall be designed so that the foundation and pole will withstand winds of 80 mph based upon IBC building code standards utilizing 50 year mean recurrent Isotach wind map data. Where existing poles are being used for new lighting systems, provide analysis that proposed weight and effective projected area of fixtures, crossarms and accessories does not exceed those of the existing system.

C. Provide all required brackets, arms, appurtenances, bases, anchorages and foundations.

2.5 POWER DISTRIBUTION AND CONTROL

A. Wiring Method for New Feeders: Underground nonmetallic raceway, min.1”; No. 10 AWG minimum conductor size for power wiring.

B. Electrical Enclosures Exposed to Weather: NEMA 250, Type 3R enclosure constructed from stainless steel or other corrosion-resistant material, with hinged doors fitted with padlock hasps or lockable latches.

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. Examine roughing-in for luminaire electrical and communications conduit to verify actual locations of connections before pole or luminaire installation.

C. Examine foundations for suitable conditions where luminaires will be installed.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with NECA 1.

B. Wiring Method: Install cables in raceways, except when cables are installed within boxes and poles. Conceal raceways and cables.
   1. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections and wiring methods.

C. Coordination layout and installation of luminaires with other construction.

D. Use web fabric slings (not chain or cable) to raise and set structural members. Protect equipment during installation to prevent corrosion.

E. Install poles and other structural units level, plumb, and square.

F. Install luminaires at height and aiming angle as indicated on Drawings.

G. Except for embedded structural members, grout void between pole base and foundation. Use nonshrinking or expanding concrete grout firmly packed in entire void space. Use a short piece of

1/2-inch- diameter pipe to make a drain hole through grout. Arrange to drain condensation from interior of pole.

H. Install controls housings in cabinets mounted on poles at least 8 feet above finished grade.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Perform the following tests and inspections:
   1. After installing sports lighting system and after electrical circuits have been energized, perform proof-of-performance field measurements and analysis for compliance with requirements.
   2. Make field measurements at intersections of grids, dimensioned and located as specified in "Performance Requirements" Article and as described below:
      a. Baseball Fields: Measure at least 25 points of the infield and 100 points of the outfield. Extend the grid 15 feet outside the foul lines, extending to outfield boundary or fence.
   3. Perform analysis to demonstrate correlation of field measurements with specified illumination quality and quantity values and corresponding computer-generated values that were submitted with engineered design documents. Submit a report of the analysis.

C. Correction of Illumination Deficiencies for Playing Areas: Make corrections to illumination quality or quantity, measured in field quality-control tests, that varies from specified illumination criteria by plus or minus 10 percent.
   1. Add or replace luminaires; change mounting height and aiming; or install louvers, shields, or baffles.
   2. If luminaires are added or mounting height is changed, revise aiming and recalculate and modify or replace support structures if indicated.
   3. Do not replace luminaires with units of higher or lower wattage without Engineer's approval.
   4. Retest as specified above after repairs, adjustments, or replacements are made.
   5. Report results in writing.

D. Sports lighting will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.4 ADJUSTING

A. Adjust luminaires and supports to maintain orientation and aiming as recommended by manufacturer.

B. Program controls as directed by Owner.

END OF SECTION 26 56 68