

PROJECT MANUAL
for
FIRE ALARM SYSTEM REPLACEMENT
Armory Bldg. 4200
RJB Complex
Bismarck, North Dakota

Bids must be uploaded to the electronic bid depository at bidexpress.com NOT later than 1:00 PM CT on Wednesday, February 11, 2026. The Office of the Adjutant General will NOT accept paper, faxed or emailed bids.

Bidding documents referred to herein upon which all bids for construction work shall be based are as follows:

One (1) Title Sheet and ten (10) Electrical Sheets E0.1, E0.2, E1.1, E1.2, E1.3, E1.4, E2.1, E2.2, E2.3, and E2.4; dated October 13, 2025.

Specifications and sections included in accordance with Table of Contents and any Addenda issued prior to opening of bids.

CONTRACTING OFFICER

BG Jackie A. Huber
Deputy Adjutant General
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511
Phone: (701) 333-2069

ENGINEER

Apex Engineering Group
600 South 2nd Street, Suite 145
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DATED: 20 January 2026

TABLE OF CONTENTS

Cover Page	1 Only
A. Table of Contents	1 Only
B. Invitation to Bid (IFB 26-04)	1 – 2
C. Instructions to Bidders (AIA Document A701-2018)	1 – 8
D. Sample Bid Form - Total Construction (IFB 26-04)	1 – 2
E. Form of Bid Bond (AIA Document A310-2010)	1 – 2
F. Standard Form of Agreement (AIA Document A101-2017)	1 – 7
G. Insurance and Bonds (AIA Document A101-2017 Exhibit A)	1 – 6
H. General Conditions of the Contract for Construction (AIA Document A201-2017)	1 – 35
I. Labor Standards Provisions (AGND Document 418, April 2024 Edition)	1 – 2
J. Federal Provisions (AGND Document 419, March 2025 Edition)	1 – 4
K. Specifications	
<u>Division 01000 – General Requirements</u>	
01 1100 – Summary of Work	1 – 6
01 2000 – Description of Bid Items	1 – 2
01 3000 – Administrative Requirements	1 – 6
01 5000 – Temporary Facilities and Controls	1 – 3
01 6000 – Product Requirements	1 – 3
01 7000 – Execution and Closeout Requirements	1 – 9
01 7800 – Closeout Submittals	1 – 5
<u>Division 26 - Electrical</u>	
26 0000 – Description of Alternates	1 – 2
26 0500 – Basic Electrical Requirements	1 – 5
26 0505 – Selective Demolition for Electrical	1 – 2
26 0519 – Electrical Wire and Cables	1 – 9
26 0526 – Grounding and Bonding	1 – 4
26 0529 – Hangers and Supports	1 – 5
26 0534 – Conduit	1 – 11
26 0535 – Surface Raceway Systems	1 – 3
26 0537 – Boxes	1 – 4
26 0553 – Identification for Electrical Systems	1 – 4
26 2420 – Elevator Fused Disconnect Switches	1 – 4
26 2813 – Fuses	1 – 2
<u>Division 28 – Electronic Safety and Security</u>	
28 4600 – Fire Detection and Mass Notification	1 – 22

END OF TABLE OF CONTENTS

NOTE: Listing of specifications under specific construction categories does not relieve the Contractors from becoming familiar with all specifications affecting his work.

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INVITATION TO BID

FIRE ALARM SYSTEM REPLACEMENT Armory Bldg. 4200, RJB Complex Bismarck, North Dakota IFB 26-04

An electronic bid depository will be utilized for bidding. If you have **never** registered in Bid Express, the first step is to create an account at bidexpress.com.

REGISTRATION INSTRUCTIONS:

1. <https://bidexpress.com>
2. Click the "Create Vendor Account" button
3. Complete "My Info"
4. Click "Register" button
5. IMPORTANT: BIDDERS MUST update their Bid Express account to reflect the "CENTRAL Time" zone. The OWNER accepts no responsibility for omissions made by the bidder during registration.

Once your business is registered, email a copy of your North Dakota Contractor's License to ng.nd.ndarng.list.g9-contracts@army.mil. Upon confirmation of your North Dakota Contractor's License by this Agency, you will then be invited to access the electronic bid depository, (Bid Express) where the drawings, engineer specifications, addendums and project manual may be downloaded at no charge. Your emailed request must include the IFB number, along with contact information which includes your name, business name, address, and telephone number. All addendums related to this project will be uploaded to Bid Express. To receive timely notifications of addendums, complete the registration and invitation process in Bid Express. Do not wait until bid opening day to request your invite to Bid Express.

The closing date for submission of bids is Wednesday, February 11, 2026, at 1:00 p.m. CT. The electronic bid depository locks promptly at 1:00 p.m. CT and will not accept late bids. Bidders must begin the electronic submission process well in advance of the bid response deadline to allow for transmission and resolution of any technical difficulties. Be advised, the OWNER is not responsible for a Bidder's failure to timely submit a Bid Response due to any technical difficulties. If you experience technical difficulties, do not contact the OWNER. You must contact the customer service department at Bid Express (888) 352-2439. Be advised, paper, faxed or emailed bids will NOT be accepted by the OWNER. Questions pertaining to the project specifications or drawings must be directed to the project engineer, Apex Engineering Group Inc., one week prior to the bid opening. Therefore, the deadline for questions from prospective bidders is Wednesday, February 4, 2026.

In addition to downloading from "Bid Express", the bidding documents are on file at plan rooms and builder's exchanges in the following North Dakota locations: Bismarck, Fargo, Grand Forks, Mandan, and Minot, as well as Rapid City, SD and Minneapolis, MN.

Bids will be accepted for Total Construction. All modifications to bid prices must be made by the individual bidder, through the utilization of the electronic bid depository at bidexpress.com. The OWNER is not responsible for handling or overseeing last minute modifications. Therefore, faxed, or emailed modifications will NOT be accepted by the OWNER.

Bids will be read aloud via teleconference at 2:00 p.m. CT on Wednesday, February 11, 2026. To listen to the bid opening, you must call in using the following ID and PIN Number: 701-333-2840; ID No. 32068#; PIN No. 32068#

Each bid must be accompanied by a bidder's bond made payable to The Adjutant General, State of North Dakota, and executed by the bidder as principal and by a surety company authorized to conduct business in North Dakota, in a sum equal to five percent (5%) of the bidder's highest total bid combination, including all add alternates to the bid items; conditioned that if the bid is accepted and the contract awarded, the bidder within ten (10) business days after notice of such award, will effect and execute a contract in accordance with the terms of their bid and provide payment and performance bonds as required by North Dakota laws and regulations. A template entitled "AIA Document A310, Bid Bond", is provided within the electronic project manual and should be used to execute the bid guarantee.

In compliance with Section 43-07-12 of the North Dakota Century Code, each contractor submitting a bid must upload a copy of their North Dakota Contractor's License issued by the ND Secretary of State. Contractors must be licensed for the highest amount of their total bid combination including add alternates; and their ND Contractor's License must have been in effect at least ten (10) days prior to the date of the bid opening.

No bid will be read or considered which does not fully comply with the requirement herein for a bid bond and a ND Contractor's License. Both documents must be uploaded to "Bid Express" as separate attachments to your bid. A Certificate of Good Standing will NOT be accepted in lieu of a North Dakota Contractor's License. No exceptions will be made to deficient bids.

The OWNER reserves the right to hold all legitimate bids for a period of thirty (30) days following the date fixed for the bid opening. It is the intent of the OWNER to award a contract to the lowest and best bidder. The OWNER further reserves the right to reject any or all bids and to waive irregularities and shall incur no legal liability for the State of North Dakota for the payment of any funds until the contract is awarded and approved by the proper authorities.

In compliance with Section 48-01.2-10 of the North Dakota Century Code, the successful bidder (awardee) shall be required to furnish payment and performance bonds covering the faithful performance of the contract award and the payment of all obligations thereunder, and all additional obligations required by the laws of the State of North Dakota. Each payment and performance bond shall be in an amount equal to the full amount of the contract award. Questions may be directed to the Office of the Adjutant General, Contract Management Branch, Bismarck, North Dakota, Telephone (701) 333-2069.

DATED: 20 January 2026

OFFICE OF THE ADJUTANT GENERAL
Bismarck, North Dakota

By: /s/ JACKIE A. HUBER
Brigadier General, NDNG
Deputy Adjutant General
Contracting Officer



AIA[®] Document A701[®] – 2018

Instructions to Bidders

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

THE OWNER:
(Name, legal status, address, and other information)

OFFICE OF THE ADJUTANT GENERAL
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511

THE ARCHITECT:
(Name, legal status, address, and other information)

TABLE OF ARTICLES

- 1 DEFINITIONS
- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
- 5 CONSIDERATION OF BIDS
- 6 POST-BID INFORMATION
- 7 PERFORMANCE BOND AND PAYMENT BOND
- 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

ADDITIONS AND DELETIONS:
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or Invitation to Bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect or Owner, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.
- .7 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and the prices in this Bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor.
- .8 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor. unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to bid opening, directly or indirectly, to any other Bidder or to any competitor.
- .9 no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.

§ 2.2 Site Investigation and Conditions Affecting the Work

§ 2.2.1 The Bidder acknowledges that the Bidder has taken steps reasonably necessary to ascertain the nature and location of the Work, and that the Bidder has investigated and is satisfied as to the general and local conditions which can affect the Work or its cost, including but not limited to:

- .1 conditions bearing upon transportation, disposal, handling, and storage of materials;
- .2 the availability of labor, water, electric power, and roads;
- .3 uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- .4 the conformation and conditions of the ground; and
- .5 the character of equipment and facilities needed preliminary to and during work performance.

§ 2.2.2 The Bidder also acknowledges that the Bidder is satisfied as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from the drawings and specifications made a part of the Bidding Documents. Any failure of the Bidder to take the actions described and acknowledged in this paragraph will not relieve the Bidder from responsibility for estimating properly the difficulty and cost of successfully performing the Work, or for proceeding to successfully perform the Work without additional expense to the Owner.

§ 2.2.3 The Owner assumes no responsibility for any conclusions or interpretations made by the Bidder based on the information made available by the Owner. Nor does the Owner assume responsibility for any understanding reached or representation made concerning conditions which can affect the Work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this Contract.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or Invitation to Bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

Bidding Documents may be downloaded from bidexpress.com after receiving access or obtained through local plan rooms and exchanges. Refer to the Invitation to Bid.

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.4 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Bidders and sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written or verbal request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.2.4 Where a clear understanding of the work is prevented due to contradictions between the drawings and the specifications, and there is not sufficient time to make an interpretation, correction, or change as per subparagraph 3.2.3, the Bidder shall consider the more restrictive conditions as governing and/or shall bid the larger quantity or

better quality of work. Appropriate adjustment, if required, will be made after contract award.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents. Under no condition, shall Bids be submitted on work or materials not approved by the Architect for this specific project, even though approval might have been given on other projects previously.

§ 3.3.6 Those requesting Architect consideration of their products as "equal" in accord with subparagraph 3.3.2, shall make such request in electronic PDF format providing space for Architect approval and/or comments on each item requested. An electronic PDF copy of the request form, with Architect action on same, will be returned to the proposer.

§ 3.3.7 Bidders and Sub-bidders submitting proposals on individually specified items of Work or on Work included in complete Specification sections, must quote in accord with all requirements of Plans and Specifications without modification or exclusion.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

Addenda will be uploaded to bidexpress.com and provided to local plan rooms and exchanges.

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids, or one which includes additional prior approvals, or one which is essential to the bidding process.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge receipt of all Addenda on the Bid Form. Failure to acknowledge all Addenda may cause rejection of Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids must be uploaded to the electronic depository at bidexpress.com. A sample Bid response form is included in the project manual labeled as "Sample Bid Form".

§ 4.1.2 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.3 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:

(Insert the form and amount of bid security.)

Bidders Bond: 5%. Reference AIA Document A310 for an electronic template.

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish payment and performance bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder and all additional obligations required by the laws of the State of North Dakota. Should the Bidder refuse to enter into such Contract or fail to furnish payment and performance bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with paragraph 6.2.

§ 4.2.3 If a Bid Bond is required, it may be secured through the Bidder's usual sources provided the surety is licensed to do business in the State of North Dakota. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the attorney-in-fact's power of attorney. AIA Document A310, Bid Bond, will be provided by the Owner and should be used to execute the surety bond.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning _____ days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

Bids must be uploaded to the electronic bid depository at bidexpress.com.

§ 4.3.2 Bids shall be submitted by the date and time and at the place indicated in the Invitation to Bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted or withdraw its Bid entirely through the online bid depository at bidexpress.com.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error

in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:
(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or Invitation to Bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and best Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgement, is in the Owner's best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Specifications, and to determine the lowest and best Bidder on the basis of the sum of the Bid Items and Alternates accepted.

§ 5.3.3 If this Contract is funded in whole or in part with federal funds, the Owner shall not make any award or permit any award (subcontract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in federal assistance programs under the DOD implementation of 2 CFR Part 180 (at 2 CFR Part 1125).

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect,

after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Such bonds must cover all additional obligations required by the laws of the State of North Dakota.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 Required payment and performance bonds shall be secured through a surety licensed to do business within the state of North Dakota. If any surety upon any bond furnished in connection with the Contract becomes unacceptable to the State of North Dakota, or if any such surety fails to furnish reports as to the financial conditions of the surety from time to time as requested by the state of North Dakota, or if the Contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer, the Contractor shall promptly furnish such additional security as may be required to protect the interests of the State of North Dakota and of persons supplying labor or materials in the prosecution of the Work contemplated by this Contract.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.1.5 Companies executing the bond as sureties must be among those appearing in the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein.

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required payment and performance bonds to the Owner within ten days of notification of award of a contract for the Work. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or before the date of the Contract execution.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- 1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.4 Building Information Modeling Exhibit, if completed:

N/A

.5 Drawings

Number

Title

Date

.6 Specifications

Section

Title

Date

Pages

.7 Addenda:

Number

Date

Pages

.8 Other Exhibits:

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

AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

The Sustainability Plan:

Title

Date

Pages

Supplementary and other Conditions of the Contract:

Document

Title

Date

Pages

.9 Other documents listed below:

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

BID OPENING: BIDS WILL ONLY BE ACCEPTED VIA THE BID DEPOSITORY AT WWW.BIDEXPRESS.COM UNTIL 1:00 PM CT ON 11 FEBRUARY 2026.

TOTAL CONSTRUCTION
INVITATION NO: IFB 26-04

Office of the Adjutant General
ATTN: NGND-G9-CM
030 Fraire Barracks Lane (58504)
P.O. Box 5511
Bismarck, North Dakota 58506-5511

11 February 2026

The undersigned being familiar with the local conditions affecting the cost of the work, and after careful and complete examination of all sections of the Project Manual; to include Invitation to Bid, Instructions to Bidders, Bid Form, and sample Contract Documents; including General and Additional Conditions, Architectural/Engineering Specifications, and Drawings as prepared Apex Engineering Group, Inc., Bismarck, North Dakota and their consultants and the Office of the Adjutant General, Directorate of Installations and Environment; and

Issued Addenda No.'s _____

hereby proposes to furnish all labor, materials, equipment and services required for Fire Alarm System Replacement, Armory Bldg. 4200, Raymond J. Bohn Armory Complex. Bismarck, North Dakota, in accordance with the following:

BID ITEM NO. 1: (FIRE ALARM SYSTEM REPLACEMENT):

_____ Dollars \$ _____

ALTERNATE BID ITEM NO. A-1: (PROVIDE NEW HAZARDOUS LOCATION HEAT DETECTORS AND MANUAL PULL STATION)

_____ Dollars \$ _____

The undersigned agrees to start and complete all work within the time limits set forth in Construction Schedule section of the specifications.

Accompanying and uploaded as an attachment to this bid, is a bidder's bond in a sum equal to five percent (5%) of the total bid, including all add alternates, which shall be forfeited to the Owner should the bidder fail to effect a contract and deliver Payment and Performance Bonds and other documents required by Instructions to Bidders within ten (10) days after receipt of notice to award.

TOTAL CONSTRUCTION
INVITATION NO: IFB 26-04 (con't)

In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids, and it is agreed that this bid may not be withdrawn for a period of thirty (30) days after the opening of bids.

In compliance with the laws of the State of North Dakota, the undersigned is a licensed contractor duly registered with the Secretary of State under License Number _____, Class _____, which license has been renewed or granted on the _____ day of _____ 20__.

The names of all persons interested in the foregoing bid as principals are:

(NOTE: If bidder or other interested person is a corporation, give legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of firm and names of all individual co-partners composing the firm; if bidder or other interested person is an individual, give first and last names in full.)

Respectfully submitted,

FIRM: _____

BY: _____
(e-signature)

TITLE: _____

Business Address: _____

Email Address: _____

Telephone No.: _____

Fax No.: _____

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

OFFICE OF THE ADJUTANT GENERAL
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511

BOND AMOUNT: \$**PROJECT:**

(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this day of ,

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR AS PRINCIPAL *(Signature)*

(Printed name and title)

(Witness)

SURETY *(Signature)*

(Printed name and title)

(Witness)



AIA[®] Document A101[®] – 2017

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

AGREEMENT No. made as of the day of in the year
(In words, indicate day, month and year.)

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

OFFICE OF THE ADJUTANT GENERAL
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511

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

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

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

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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.

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.

ELECTRONIC COPYING of any portion of this AIA[®] Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

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.

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.

Item	Price
------	-------

§ 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:

Item	Quantity/Unit	Price per Unit (\$0.00)
------	---------------	-------------------------

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

Scheduled completion date carries a liquidated damages clause which is referenced in Article 13.7 General Conditions of the Contract for Construction.

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

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:

The period covered by each Application for Payment shall be one calendar month. Email a draft copy of the Application for Payment to the Architect and the Construction Coordinator no later than the TENTH day of the following month, except the month of June.

§ 5.1.3 The Owner requires FORTY-FIVE days AFTER Owner's receipt of Certificate of Payment from the Architect/Engineer for processing and issuing of payment.

§ 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.)

10% of the Contractor's Total Completed and Stored to Date amount.

§ 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.)

The Owner may withhold retainage as stated in Section 5.1.7.1 from payments otherwise due when less than 50% of the Contract Sum to Date is complete and from the payment due when 50% completion of the Contract Sum to Date is first attained. On subsequent payments, the Owner may withhold retainage equal to 5% of the Contract Sum to Date.

§ 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.)

Up to 95% of the amount previously retained may be paid at the discretion of the Architect/Engineer.

§ 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 45 days AFTER THE OWNER’S RECEIPT of the Architect’s final Certificate of Payment.

§ 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.)

0 % per annum

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.)

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.

§ 7.2 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 a building information modeling exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with a building information modeling exhibit, 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:

None.

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 Building information modeling exhibit, dated as indicated below:

(Insert the date of the building information modeling exhibit incorporated into this Agreement.)

N/A

- .5 Drawings

Number

Title

Date

- .6 Specifications

Section

REFER TO EXHIBIT A FOR A SUMMARY LIST OF SPECIFICATIONS DESCRIBED IN THE PROJECT MANUAL.

.7 Addenda, if any:

Number	Date	Pages
--------	------	-------

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.)

AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages
-------	------	-------

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
AGND Document 418	Labor Provisions Standards	April 2024	1-2
AGND Document 419	Federal Provisions	March 2025	1-4

.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.)

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)

(THIS PAGE INTENTIONALLY LEFT BLANK)



AIA® Document A101® – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the ___ day of ___ in the year _____.
(In words, indicate day, month and year.)

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

THE OWNER:
(Name, legal status and address)

OFFICE OF THE ADJUTANT GENERAL
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511

THE CONTRACTOR:
(Name, legal status and address)

TABLE OF ARTICLES

- A.1 GENERAL**
- A.2 OWNER'S INSURANCE**
- A.3 CONTRACTOR'S INSURANCE AND BONDS**
- A.4 SPECIAL TERMS AND CONDITIONS**

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

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

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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.

This document is intended to be used in conjunction with AIA Document A201®–2017, General Conditions of the Contract for Construction. Article 11 of A201®–2017 contains additional insurance provisions.

§ A.2.3 Required Property Insurance

§ A.2.3.1 If required in Administrative Requirements, Section 01 3000 of the Specifications, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. This property insurance shall in no case be less than that specified in Exhibit A. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 of AIA Document 201 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph A.2.3.1 to be covered, whichever is later. The Owner (The Adjutant General, State of North Dakota) and all Contractors, Subcontractors and Sub-subcontractors in the Project shall be endorsed on this policy as additional insureds.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss	Sub-Limit
----------------	-----------

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit
----------	-----------

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Contractor shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. A property insurance deductible is allowed as identified in Exhibit A of the Contract for Construction. The Contractor purchasing and maintaining this insurance shall pay all costs not covered because of such deductible, except that each and every Contractor (prime, subcontractor, sub-subcontractor, etc.) who sustains a loss shall be responsible for said deductible as pertains to materials and/or equipment stored off the site or in transit. Once materials and/or equipment are on site or have been installed and are a permanent part of the building itself, all losses shall be the responsibility of the Contractor furnishing the property insurance.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1,

notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- § A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

- § A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

- § A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

- § A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

- § A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

- § A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

- § A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[] § **A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. *(Indicate applicable limits of coverage or other conditions in the fill point below.)*

[] § **A.2.5.2 Other Insurance**
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability, Automobile Liability, and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The insurance required by Subparagraph 11.1.1 of AIA Document 201 General Conditions of the Contract for Construction shall be written for not less than the limits of liability specified in Exhibit A or required by law, whichever coverage is greater. Neither the Owner nor the Architect shall be responsible in the event limits are insufficient. Coverages shall be written on an occurrence basis and shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. Products and completed operations coverage will be maintained for a period of one year after final payment unless longer warranty period is specified.

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than \$500,000.00 per person, \$2,000,000.00 each occurrence, \$2,000,000.00 general aggregate, and \$2,000,000.00 aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an

exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than \$500,000.00 per person, \$2,000,000.00 per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability or "stop gap" insurance of not less than \$2,000,000 as an endorsement on the workers compensation or commercial general liability insurance.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 Only if applicable, if the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than \$1,000,000.00 per claim and \$1,000,000.00 in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the

appropriate fill point.)

- § **A.3.3.2.1** Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this Section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:
(Where the Contractor’s obligation to provide property insurance differs from the Owner’s obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)
- § **A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for Work within fifty (50) feet of railroad property.
- § **A.3.3.2.3 Asbestos Abatement Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.
- § **A.3.3.2.4** Unless otherwise provided in the Contract Documents, this property insurance shall cover portions of the Work stored off the site and portions of the Work in transit in the limits specified in Exhibit A.
- § **A.3.3.2.5** Property insurance on an “all-risks” completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.
- § **A.3.3.2.6 Other Insurance**
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:
(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

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

THE OWNER:
(Name, legal status and address)

OFFICE OF THE ADJUTANT GENERAL
State of North Dakota
PO Box 5511
Bismarck, ND 58506-5511

THE ARCHITECT:
(Name, legal status and address)

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS

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.

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES



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User Notes:

(1431599734)

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.

§ 1.2.4 Omissions from the drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

§ 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

§ 1.4.1 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.

§ 1.4.2 In the event of conflicting provisions, the more specific provision will take precedence over the less specific; the more stringent will take precedence over the less stringent; the more expensive item will take precedence over the less expensive. On all drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk. In case of a conflict between the Contract Documents, if not reconciled by Addendum, the Architect/Engineer and the Owner will determine which document is the most specific and the Contractor shall do the Work accordingly, at no change in price.

§ 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.

(Paragraphs deleted)

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Information and Services Required of the Owner

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

§ 2.2.2 The term "Architect," throughout these Contract Documents, refers to the person or entity lawfully engaged in the practice of architecture or engineering and who is identified as the Architect or Engineer on page one of the Standard Form of Agreement Between Owner and Contractor (AIA® Document A101®).

§ 2.2.3 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.

§ 2.2.4 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.

(Paragraphs deleted)

§ 2.2.5 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.

§ 2.2.6 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.

§ 2.3 Owner's Right to Stop the Work

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

§ 2.4 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of 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,

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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.

§ 3.1.4 If the Contractor hereunder is comprised of more than one legal entity, each entity shall be jointly and severally liable hereunder.

§ 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 and geotechnical report, if any.

§ 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, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such construction means, methods, techniques, sequences or procedures. If the Contractor determines that such construction means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect, as approved by the Owner. If the Contractor is then instructed to proceed with the required construction means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures

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

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

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work 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.

§ 3.5.3 The Contractor shall furnish to the Architect, when requested, material certifications on manufactured items to be used on this project.

§ 3.5.4 Defects of any kind, due to faulty work or materials appearing during the above-mentioned period must be immediately made good by the Contractor at the Contractor's own expense to the entire satisfaction of the Owner and Architect. Such construction and repairs shall include the costs of all damages to the finish or furnishings of the building resulting from the original defect or repairs thereto. Where equipment is required to be replaced, the one-

year warranty shall be reinstated for that piece of equipment from date of replacement.

§ 3.5.5 The Contractor shall guarantee and maintain the stability of all work and materials and keep same in perfect repair and condition for the period of one (1) year from the date of final acceptance of the Work, but with respect to any part of the Work which the Owner takes possession of prior to final acceptance, such guarantee shall continue for a period of one year from the date the Owner takes possession.

§ 3.5.6 The guarantee shall not apply to injuries or damages occurring after final acceptance due to "acts of God," fire, violence, abuse or carelessness of other Contractors or agents of the Owner; however, the Owner reserves the right to make temporary repairs as necessary to keep equipment in operating condition without voiding the Contractor's guarantee nor relieving the Contractor of any responsibilities during the guarantee period.

§ 3.5.7 This guarantee shall be extended where other guarantees for different lengths of time are specifically called for in the Contract Documents or where manufacturer's standard warranties extend for a longer period.

§ 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. Where the Contract Documents require Work better than that required by statute, the Contract Documents shall govern.

§ 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. In the event the Contractor does not employ a superintendent, the Contractor must subcontract with another entity to ensure a competent superintendent meets the requirements of this section. 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 Contingent upon the Prime General Contractor's Work being timely scheduled and performed, the Contractor shall, within ten days after Contract award or another period of time determined by the Owner and Architect, prepare and submit to the Architect for approval, five copies of a practicable schedule showing by written description, the order in which the Contractor proposes to perform the Work, and the dates on which the Contractor contemplates starting and completing the several salient features of the Work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of Work scheduled for completion by any given date during the period.

§ 3.10.2 The schedule shall not exceed the time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project or by the Architect, shall be related to the entire Project to the extent required by the Contract Documents, shall provide for expeditious and practicable execution of the Work and shall allow the Architect reasonable time to review all required submittals.

§ 3.10.3 If the Contractor fails to submit or resubmit an approved schedule within the time prescribed, the Architect may withhold approval of progress payments until the Contractor submits the required schedule.

§ 3.10.4 Contingent upon the Prime General Contractor's Work being timely scheduled and timely performed, during construction, the Contractor shall enter the actual progress on the chart as directed by the Architect. If, in the opinion of the Architect, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve progress, including those that may be required by the Architect, without additional cost to the State. In this circumstance, the Architect may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or

schedules in chart form as the Architect deems necessary to demonstrate how the approved rate of progress will be regained.

§ 3.10.5 Failure of the Contractor to comply with the requirements of the Architect under this clause shall be grounds for a determination by the Owner and Architect that the Contractor is not prosecuting the Work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Owner may terminate the Contractor's right to proceed with the Work, or any separable part of it, in accordance with the termination for cause terms of this Contract.

§ 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. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

§ 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. If shop drawings, samples, or similar submittals are not resubmitted to the Architect after the Architect has made corrections thereto, it will be assumed the Contractor has checked and approved all corrections made.

§ 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.

§ 3.12.11 The Architect and Owner may duplicate, use and disclose, in any manner and for any purpose, shop drawings delivered under this Contract and all subcontracts hereunder at any tier.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations (including storage of materials) at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents as approved by the Architect and Owner, and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 The Contractor shall at all times so conduct the Work as to ensure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the Work, and to ensure the protection of persons and property. No road or street shall be closed to the public except with the permission of the proper authorities. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches, irrigation ditches, etc., which shall not be obstructed.

§ 3.13.3 The Contractor shall hold and save the Owner, its officers, employees, and agents, free and harmless from liability of any nature occasioned by Contractor's operations on the site.

§ 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 and authorized representatives of the State and Federal Governments with access to the Work in preparation and progress wherever located. The Contractor shall furnish without additional charges, all reasonable facilities necessary for safe and convenient inspections. The Contractor shall confine the Work, the storage of items, and parking within the building and the "Contract Limit Lines" shown on the Site Plan.

§ 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 Contractor agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies including Owner, officers, and employees (State), from claims resulting from the performance of the contractor or its agent, including all costs, expenses and attorneys' fees, which may in any manner result from or arise out of this agreement, except claims based upon the State's sole negligence or intentional misconduct. The legal defense provided by Contractor to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Any attorney appointed to represent the State must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. § 54-12-08. Contractor also agrees to reimburse the State for all costs, expenses and attorneys' fees incurred in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

§ 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, and from time to time during the one-year period for correction of Work as described in 12.2. 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 work and 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 any person or entity declared ineligible under Federal laws or regulations from participating in Federally assisted construction projects or to whom the Owner or the Architect has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom the Contractor has a reasonable objection.

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

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity previously selected and to whom the Owner and Architect have made no reasonable objection except with the written consent of the Owner and Architect.

§ 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.

§ 7.1.4 Neither the Owner nor the Architect is responsible to give notice of Change Orders, Construction Change Directives, and/or orders for minor changes in the Work to the surety (if any).

§ 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.

§ 7.2.2 The Contractor, in connection with any proposal for a Change Order, shall furnish a price breakdown, itemized as required in Subparagraph 7.2.3 below. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all materials, labor, equipment, subcontract, and overhead costs, as well as profit, and shall cover all work involved in the change proposal, whether such work was deleted, added, or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the change proposal includes a time extension, a justification therefor, shall also be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the Owner.

§ 7.2.3 Costs for proposals to perform changes in the Work consisting of additions, deletions, or other revisions shall be limited to the following:

- .1 Actual labor costs involved to include fringe benefits required by agreement or custom plus ten (10%) for all labor overhead factors which include job superintendent salary and subsistence.
- .2 Actual costs of materials, supplies, and equipment including all transportation costs and applicable taxes
- .3 Actual rental costs of machinery and equipment, exclusive of hand tools
- .4 Ten percent (10%) of direct labor, material, supplies, equipment, and rental gross amounts and ten percent (10%) of subcontracts for all overhead and profit factors, which includes all insurance costs.
- .5 One percent (1%) for all bond premium adjustments unless actual costs are greater as evidenced by invoices or other data.
- .6 Credits are to be calculated in a similar manner, but not including overhead and profit factors, except when both additions and credits covering related Work or substitutions are involved in a change proposal, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change proposal.

§ 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;
- .4 As provided in Section 7.3.4; or
- .5 By the method provided in subparagraph 7.2.3. This method will be utilized exclusively for all construction change directives unless other above listed methods are specifically authorized by Owner.

§ 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, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with such costs.

§ 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; 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. The following will not be considered justifications for extension of time unless due to one of the cause stated within this Article 8: (a) delay caused by subcontractors, sub-subcontractors, or suppliers, except if the supplier goes out of business and another supplier cannot be found in time to meet the schedule; (b) shortage of employees.

§ 8.3.2 Claims relating to time shall be subject to the same notice and timing requirements as any other claim.

§ 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.

§ 8.4 Notices to the Owner of Labor Disputes

§ 8.4.1 If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this Contract, the Contractor shall immediately give notice, including all relevant information, to the Owner.

§ 8.4.2 The Contractor agrees to insert the substance of this clause, including this paragraph 8.4.2, in any subcontract to which a labor dispute may delay the timely performance of this Contract, except that each subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify the next higher tier subcontractor or the prime Contractor, as the case may be, of all relevant information concerning the dispute.

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

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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 and which are accompanied by a Change Order indicating the parties' agreement with costs associated with such Work.

§ 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.

§ 9.3.1.3 Contractor shall submit Application for Payment to Architect, with signature, to include notarization of Contractor's signature. Said application for payment shall be written on AIA Document G702, Application and Certificate for Payment, templates of which shall be furnished by the Owner.

§ 9.3.1.4 If required by Architect, Contractor shall furnish with each Application for Payment lien waivers from specified subcontractors and suppliers for labor and materials approved for progress payment under previous application.

§ 9.3.1.5 Applications for payment made prior to Substantial Completion shall reflect a retainage equal to 10% of the Contractor's Total Completed and Stored to Date amount. The Owner may withhold retainage from payments otherwise due when less than 50% of the Contract Sum to Date is complete and from the payment due when 50% completion of the Contract Sum to Date is first attained. On subsequent payments, the Owner may withhold retainage equal to 5% of the Contract Sum to Date. Upon Substantial Completion of the Work, up to 95% of the amount previously retained may be paid at the discretion of the Architect. Final payment of all moneys due the Contractor shall be made immediately following completion and acceptance of the project as provided in paragraph 9.10.

§ 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 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.

(Paragraph deleted)

§ 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. The Owner shall have forty-five days AFTER receipt of Certificate for Payment from Architect for administrative processing and issuance of payment. No contractor payment shall become due and/or unpaid prior to the expiration of said forty-five day period.

§ 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 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.

§ 9.6.9 Retainage and payments of to the Contractor will be pursuant to N.D.C.C. § 48-01.2-13.

§ 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.

§ 9.10.6 Items specifically required by Owner to be submitted by Contractor prior to final payment as per Subparagraph 9.10.2 as a minimum, are enumerated as follows:

- .1 Contractor's Affidavit of Payment of Debts and Claims, conditioned that the Contractor has satisfied all obligations for all materials and equipment furnished and all work, labor, and services performed in connection with the performance of this Contract, and further, that the Contractor will indemnify the Owner against all liability for any and all claims, judgments, and costs brought or obtained by subcontractors, all suppliers of materials and equipment, and all performers of work, labor, or services arising in any manner out of the performance of the Contract.
- .2 Consent of Surety to Final Payment (if performance/payment bonds were required).
- .3 Contractor's Release or Waiver of Liens.
- .4 Current Statement of ND Tax Commissioner relating to income tax and sales tax clearance.
- .5 Current Certificate of Premium Payment to North Dakota Workforce Safety and Insurance.

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.

§ 10.1.1 When required by the Owner, the Contractor shall submit to the Owner a copy of the written safety program to be used as guidelines and direction for the Contractor's and subcontractors' activities. This program must meet all federal, state, and local laws, regulations, and other legal requirements and shall include the following minimum provisions:

- .1 a worksite safety policy and mission statement.
- .2 assigned responsibilities among management, supervisors, and employees.
- .3 a system for periodic self-inspections, including inspections of job sites, materials, work performance, and equipment.
- .4 a thorough accident and injury reporting and investigation process.
- .5 a safety orientation program including first aid, medical attention, emergency facilities, fire protection and

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prevention, housekeeping, illumination, sanitation, personal protective equipment, and occupational noise exposure.

.6 a safety training program including safety "toolbox" meetings and other systems for ongoing training and also including training for employees on the recognition, avoidance, and prevention of unsafe conditions.

§ 10.1.2 It will be a condition of this Contract and shall be made a condition of each subcontract entered into pursuant to this contract, that the Owner shall assume no liability relating to its receipt and review of the Contractor's safety plan or activities. Safety remains the responsibility of the Contractor. Furthermore, the right of the Owner to receive and review the safety plan or activities 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.

§ 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 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.

§ 10.3.4 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.

§ 10.3.5 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.

§ 10.3.6 No material, supplies, or equipment shall be furnished or installed by the Contractor for this Project which contains hazardous materials. A hazardous material is any material, because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or the environment if released into the workplace or the environment; or any material that is required to have a Safety Data Sheet.

§ 10.3.7 Exceptions to 10.3.6:

- .1 Lubricating oil is exempt if the total volume of each type of lubricating oil handled at that facility does not exceed 55 gallons, and the total volume of all types of lubricating oil handled at that facility does not exceed 275 gallons at any one time.
- .2 Hazardous material contained solely in a consumer product for direct distribution to, and use by, the general public (this exemption does NOT include the materials used to manufacture these products).
- .3 Any material that is in transit under active shipping papers and are on site for 30 days or less.
- .4 The on-premises use, storage, or both, of propane in the amount not to exceed 300 gallons used for the sole purpose of heating the employee work areas within the business.

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

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving the Contractor's indemnity obligations under Section 3.18, however such coverage shall not limit the Contractor's indemnity obligations.

§ 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.

§ 11.1.5 The liability insurance required by Section 11.1.1 shall be written for not less than \$2,000,000 per occurrence, \$2,000,000 aggregate limit for bodily injury, property damage, personal injury, contractual and completed operations/product liability, EXCEPT that these amounts may be higher if insurer furnishing the umbrella or excess coverage requires larger amounts.

§ 11.1.6 Failure to provide insurance as required in this Contract is a material breach of contract entitling the Owner to terminate this Contract immediately.

§ 11.1.7 **Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period for correction

of Work. The certificates shall show the Owner as an additional insured on the Contractor's commercial general liability and excess or umbrella liability policy or policies.

§ 11.1.8 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations.

§ 11.1.9 The insurance coverages listed above must meet the following additional requirements:

- 1) Any deductible or self-insured retention amount or other similar obligation under the policies shall be the sole responsibility of the Contractor. Optional Provision: The amount of any deductible or self-retention is subject to approval by the State.
- 2) This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form and must be placed with insurers rated "A-" or better by A.M. Best Company, Inc., provided any excess policy follows form for coverage. Less than an "A-" rating must be approved by the State. The policies shall be in form and terms approved by the State.
- 3) The State will be defended, indemnified, and held harmless to the full extent of any coverage actually secured by the Contractor in excess of the minimum requirements set forth above. The duty to indemnify the State under this agreement shall not be limited by the insurance required in this agreement.
- 4) The state of North Dakota and its agencies, officers, and employees (State) shall be endorsed on the commercial general liability policy on a primary and noncontributory basis, including any excess policies (to the extent applicable), as additional insured. The State shall have all the benefits, rights, and coverages of an additional insured under these policies that shall not be limited to the minimum limits of insurance required by this agreement or by the contractual indemnity obligations of the Contractor.
- 5) The insurance required in this agreement, through a policy or endorsement, shall include:
 - a) a "Waiver of Subrogation" waiving any right to recovery the insurance company may have against the State.
 - b) a provision that Contractor's insurance coverage shall be primary (i.e. pay first) as respects any insurance, self-insurance or self-retention maintained by the State and that any insurance, self-insurance or self-retention maintained by the State shall be in excess of the Contractor's insurance and shall not contribute with it.
 - c) cross liability/severability of interest for all policies and endorsements.
 - d) The legal defense provided to the State under the policy and any endorsements must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary.
 - e) The insolvency or bankruptcy of the insured Contractor shall not release the insurer from payment under the policy, even when such insolvency or bankruptcy prevents the insured Contractor from meeting the retention limit under the policy.
- 6) The Contractor shall furnish a certificate of insurance to the undersigned State representative prior to commencement of this agreement. All endorsements shall be provided as soon as practicable. The Contractor shall provide a certificate of insurance prior to commencement of this agreement and any required endorsements as soon as practicable electronically to:

OFFICE OF THE ADJUTANT GENERAL
ng.nd.ndarmg.list.g9-certified-payrolls@army.mil

- 7) Failure to provide insurance as required in this agreement is a material breach of contract entitling the State to terminate this agreement immediately.
- 8) Contractor shall provide at least 30-day notice of any cancellation or material change to the policies or endorsements. Contractor shall provide on an ongoing basis, current certificates of insurance during the term of the contract. A renewal certificate will be provided 10 days prior to coverage expiration.

§ 11.2 Waivers of Subrogation

§ 11.2.1 The Owner does not waive any rights against the Contractor (term "Contractor" includes any of Contractor's subcontractors, sub-subcontractors, agents and employees, each of the other) for losses caused by Contractor's negligence or intentional act or failure to act.

(Paragraphs deleted)

§ 11.3 Adjustment and Settlement of Insured Loss

§ 11.3.1 All references in above listed paragraphs that refer to Owner's duties/responsibilities, Owner's property insurance, Owner as "fiduciary", etc., shall be changed to mean Contractor's duties/responsibilities, Contractor's property insurance, Contractor as "fiduciary", etc. The Contractor referred to in these paragraphs is that Contractor responsible for purchasing and maintaining the property insurance.

(Paragraphs deleted)

§ 11.3.2 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. 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.

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. 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.

(Paragraph deleted)

§ 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.

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§ 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

This Contract is governed by the laws of the State of North Dakota. Any action to enforce this Contract must be brought in the State District Court of Burleigh County, North Dakota.

§ 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 within forty-five (45) days of the due date shall bear 0.00% interest per annum.

§ 13.6 Maintenance of Records by Contractor

The Contractor shall maintain all directly pertinent books, documents, papers, and other records involving transactions related to this Contract for three years after the Owner makes final payment and all other pending matters are closed.

§ 13.7 Liquidated Damages

§ 13.7.1 The parties agree that damages for non-performance by the Contractor would be difficult to estimate at the time of entering this contract. If the Contractor fails to complete the Work within the time specified in the Contract, or any extension, the Contractor shall pay to the Owner as liquidated damages the amount of \$100.00 for each day of delay, plus any costs incurred by the Owner for legal review and Contract modification.

§ 13.7.2 If the Owner terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Owner in completing the Work.

§ 13.7.3 If the Owner does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the Work is completed or accepted.

§ 13.8 Hiring Preference

Pursuant to N.D.C.C. § 43-07-20, the Contractor must give preference to the employment of bona fide North Dakota residents, as determined by N.D.C.C. § 54-01-26, with preference given first to honorably discharged disabled veterans and veterans of the armed forces of the United States, as defined in N.D.C.C. § 37-19.1-01, who are deemed to be qualified in the performance of that work. The preference shall not apply to Engineering, superintendence, management, or office or clerical work.

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

§ 14.1.3 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 14.1.2.

(Paragraph deleted)

§ 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 order the Contractor in writing to suspend, delay or interrupt the Work of this Contract for the period of time that the Owner determines appropriate for the convenience of the State.

§ 14.3.2 If the performance of all or any part of the Work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Owner in the administration of this Contract, or (2) by the Owner's failure to act within the time specified in this Contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this Contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the Contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this Contract.

§ 14.3.3 A claim under this clause shall not be allowed:

- .1 for any costs incurred more than 21 days before the Contractor shall have notified the Owner in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension

- order), and
- .2 unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner, by written notice, may terminate this Contract, in whole or in part, when it is in the best interest of the State. If this Contract is so terminated, the Owner shall be liable only for payment in accordance with the payment provisions of this Contract for Work executed prior to the effective date of termination, and costs incurred by reason of such termination.

§ 14.4.2

(Paragraphs deleted)

If this Contract is so terminated, the Owner shall be liable only for payment in accordance with the payment provisions of this Contract for Work executed prior to the effective date of termination, and costs incurred by reason of such termination.

(Paragraphs deleted)

§ 14.5 Termination by the Owner for Lack of Funding or Authority

§ 14.5.1 The Owner, by written notice, may terminate this Contract under any of the following conditions:

- .1 If funding from federal, state, or other sources is not available at levels sufficient to allow for the continuation of the Work.
- .2 If federal or state laws or rules are modified or interpreted in a way that the Work under this contract is no longer eligible for the funding proposed for payments authorized by this contract.
- .3 If any license, permit or certificate required by law or rule, or by the terms of this contract, is for any reason denied, revoked, suspended or not renewed.

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, 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.

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§ 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.

(Paragraphs deleted)

§ 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. The Owner does not agree to binding arbitration, mediation or any other form of mandatory Alternative Dispute Resolution. The parties may enforce the rights and remedies in judicial proceedings. The Owner does not waive any right to a jury trial.

§ 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 approve or reject Claims by written decision, which shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Initial Decision Maker shall be final and binding on the parties but subject to litigation.

§ 15.2.6 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.

(Paragraph deleted)

§ 15.2.7 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.

(Paragraph deleted)

§ 15.3 Alternative Dispute Resolution

The parties under this Contract shall have the option to resolve disputes by means of alternative dispute resolution. However, the Owner does not agree to any form of binding arbitration, mediation, or other forms of mandatory alternative dispute resolution, nor does the Owner waive any right to a jury trial. The parties shall retain their right to seek remedies in judicial proceedings.

(Paragraphs deleted)



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LABOR STANDARDS PROVISIONS

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (CWHSSA)

1.1 OVERTIME REQUIREMENTS

1.1.1 No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

1.2 VIOLATION - LIABILITY FOR UNPAID WAGES LIQUIDATED DAMAGES

1.2.1 In the event of any violation of the clause set forth in paragraph 1.1.1 the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1.1.1, in the sum of \$32 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1.1.1.

1.3 WITHHOLDING FOR UNPAID WAGES AND LIQUIDATED DAMAGES

1.3.1 **Withholding process.** The Contracting Officer may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section of the contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in [§ 5.2](#)). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the

same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

1.3.2 **Priority to withheld funds.** The Department has priority to funds withheld or to be withheld in accordance with paragraph 1.3.1 over claims to those funds by:

- .1 A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- .2 A contracting agency for its procurement costs;
- .3 A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- .4 A contractor's assignee(s);
- .5 A contractor's successor(s); or
- .6 A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901-3907](#).

1.4 SUBCONTRACTS

1.4.1 The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1.1 through 1.5 of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1.1 through 1.5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

1.5 ANTI-RETAILIATION

1.5.1 It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- .1 Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- .2 Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- .3 Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- .4 Informing any other person about their rights under CWHSSA or this part.

1.6 PAYROLL AND BASIC RECORDS

1.6.1 The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after the prime contract is complete. The records shall contain the name, last known address, telephone number, email address, social security number, correct classification(s) of work actually performed; hourly rates of wages paid, daily and weekly number of hours actually worked, deductions made, and actual wages paid.

1.6.2 The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph 1.4.1 of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

FEDERAL PROVISIONS

The following federal laws and regulations apply to this contract.

EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor

for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

NONDISCRIMINATION

The Contractor agrees that no person shall be subject to discrimination or denied benefits in connection with the Contractor's performance under this Contract. Accordingly, and to the extent applicable, the Contractor covenants and agrees to comply with the following national policies on discrimination:

(1) On the basis of race, color, or national origin, in Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.), as implemented by Department of Defense (DoD) regulations at 32 CFR part 195.

(2) On the basis of gender, blindness, or visual impairment, in Title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), as implemented by DoD regulations at 32 CFR part 196.

(3) On the basis of age, in the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), as implemented by Department of Health and Human Services regulations at 45 CFR part 90.

(4) On the basis of disability, in the Rehabilitation Act of 1973 (29 U.S.C. 794), as implemented by Department of Justice regulations at 28 CFR part 41 and DoD regulations at 32 CFR part 56.

(5) On the basis of disability in the Architectural Barriers Act of 1968 (42 U.S.C. 4151 et seq.) related to physically handicapped persons' ready access to, and use of, buildings and

facilities for which federal funds are used in design, construction, or alteration.

LOBBYING

(1) The contractor covenants and agrees to comply with the restrictions on lobbying in 31 U.S.C. 1352, as implemented by DoD at 32 CFR part 28, and submit all disclosures required by that statute and regulation.

(2) The contractor covenants and agrees to comply with the prohibition in 18 U.S.C. 1913 on the use of federal funds, absent express Congressional authorization, to pay directly or indirectly for any service, advertisement or other written matter, telephone communication, or other device intended to influence at any time a Member of Congress or official of any government concerning any legislation, law, policy, appropriation, or ratification.

(3) If the contractor is a nonprofit organization described in section 501(c)(4) of title 26, United States Code (the Internal Revenue Code of 1968), you may not engage in lobbying activities as defined in the Lobbying Disclosure Act of 1995 (2 U.S.C., chapter 26). If we determine that you have engaged in lobbying activities, we will cease all payments to you under this and other contracts and terminate the contracts unilaterally for material failure to comply with the contract terms and conditions.

OFFICIALS NOT TO BENEFIT

The contractor covenants and agrees to comply with the requirements that no member of Congress shall be admitted to any share or part of this contract, or to any benefit arising from it, in accordance with 41 U.S.C. 6306.

HATCH ACT

The contractor agrees to comply with the provisions of the Hatch Act (5 U.S.C. 1501-1508) concerning political activities of certain state and local government employees, as implemented by the Office of Personnel Management at 5 CFR part 151, which limits political activity of employees or officers of state or local governments whose employment is connected to an activity financed in whole or part with federal funds.

DRUG-FREE WORKPLACE

The Contractor covenants and agrees to comply with the requirements regarding drug-free workplace requirements in Subpart B of 2 CFR part 182.

ENVIRONMENTAL PROTECTION

The Contractor covenants and agrees to comply with all following applicable federal environmental laws and regulations. The laws and regulations identified in this section are not intended to be a complete list.

(1) Comply with applicable provisions of the Clean Air Act (42 U.S.C. 7401, et seq.), Federal Water Pollution Control Act (33 U.S.C. 1251-1387, Clean Water Act (33 U.S.C. 1251, et seq.), and standards, orders, or regulations issued under those acts.

(2) Report any violations of the Acts, standards, orders or

regulations to both the award administration office and the appropriate regional office of the EPA.

(3) Comply with applicable provisions of the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846), as implemented by the Department of Housing and Urban Development at 24 CFR part 35. The requirements concern lead-based paint in buildings owned by the Federal Government or housing receiving federal assistance.

(4) Immediately identify to us, any potential impact that you find this contract may have on:

a. The quality of the "human environment", as defined in 40 CFR 1508.14, including wetlands; and provide any help we may need to comply with the National Environmental Policy Act (NEPA, at 42 U.S.C. 4321 et seq.), the regulations at 40 CFR 1500-1508, and Executive Order 12114, if applicable; and assist us to prepare Environmental Impact Statements or other environmental documentation. In such cases, you may take no action that will have an environmental impact (e.g., physical disturbance of a site such as breaking of ground) or limit the choice of reasonable alternatives to the proposed action until we provide written notification of federal compliance with NEPA or Executive Order 12114.

b. Flood-prone areas and provide any help we may need to comply with the National Flood Insurance Act of 1968, as amended by the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001 et seq.), which require flood insurance, when available, for federally assisted construction or acquisition in flood-prone areas.

c. A land or water use or natural resource of a coastal zone that is part of a federally approved state coastal zone management plan and provide any help we may need to comply with the Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.) including preparation of a Federal agency Coastal Consistency Determination.

d. Coastal barriers along the Atlantic and Gulf coasts and Great Lakes' shores and provide help we may need to comply with the Coastal Barrier Resources Act (16 U.S.C. 3501 et seq.), concerning preservation of barrier resources.

e. Any existing or proposed component of the National Wild and Scenic Rivers system and provide any help we may need to comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.).

f. Underground sources of drinking water in areas that have an aquifer that is the sole or principal drinking water source and in wellhead protection areas and provide any help we may need to comply with the Safe Drinking Water Act (42 U.S.C. 300f et seq.).

(5) Comply fully with the Endangered Species Act of 1973, as amended (ESA, at 16 U.S.C. 1531 et seq.) and implementing regulations of the Departments of the Interior (50 CFR parts 10-24) and Commerce (50 CFR parts 217-227). You also must provide any help we may need in complying with the consultation requirements of ESA section 7 (16 U.S.C. 1536) applicable to federal agencies or any regulatory authorization we may need resulting from performance under this contract. This is not in lieu of responsibilities you have to comply with provisions of the Act that apply directly to you as a U.S. entity, independent of receiving this contract.

(6) Comply with the Marine Mammal Protection Act of 1972, as amended (MMPA, at 16 U.S.C. 1361 et seq.) and provide any assistance we may need in obtaining any required MMPA

permit resulting from performance under this contract.

PURCHASE OF RECOVERED MATERIALS

The Contractor agrees to comply with applicable requirements in EPA regulations (40 CFR part 247, Subpart B) which implement section 6002 of the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6962).

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION

The Contractor agrees to comply with the requirements of 43 CFR part 10, the Department of the Interior implementation of the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C., chapter 32), if applicable.

USE OF UNITED STATES FLAG CARRIERS

The Contractor covenants and agrees that travel supported by U. S. Government funds under this agreement shall:

(1) Comply with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118, also known as the "Fly America" Act), as implemented at 41 CFR 301-10.131 through 301-10.143. The law and regulations provide that U.S. Government-financed international air travel of passengers and transportation of personal effects or property must use a U.S. Flag air carrier or be performed under a cost-sharing arrangement with a U.S. carrier, if such service is available.

(2) Include the requirements of the Fly America Act in all subcontracts that might involve international air transportation.

(3) Comply with the following requirements of the Department of Transportation at 46 CFR 381.7, in regulations implementing the Cargo Preference Act of 1954:

a. Pursuant to Public Law 83-664 (46 U.S.C. 55305), at least 50 percent of any equipment, materials or commodities procured, contracted for, or otherwise obtained with funds under this contract, and which may be transported by ocean vessel, must be transported on privately owned United States flag commercial vessels, if available.

b. Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in section 8.a of this section must be furnished to both our award administrator (through you in the case of your contractor's bill-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

NONPROCUREMENT SUSPENSION AND DEBARMENT

The Contractor is subject to the nonprocurement debarment and suspension regulations. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for

participation in Federal assistance programs or activities. The Contractor agrees to comply with the DOD implementation of 2 CFR Part 180 (at 2 CFR Part 1125) by checking the Excluded Parties List System (EPLS) at www.sam.gov to verify contractor eligibility to receive contracts and subcontracts resulting from this Agreement. The Contractor shall not solicit offers from, nor award contracts or subcontracts to contractors listed in EPLS. This verification shall be documented in the contractor's contract files and shall be subject to audit by the Federal/State audit agencies.

HISTORIC PRESERVATION

The Contractor agrees to identify to us any:

(1) Property listed or eligible for listing on the National Register of Historic Places that will be affected by this contract, and provide any help we may need, to comply with section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306108), as implemented by the Advisory Council on Historic Preservation regulations at 36 CFR part 800 and Executive Order 11593, "Identification and Protection of Historic Properties," [3 CFR, 1971- 1975 Comp., p. 559]. Impacts to historical properties are included in the definition of "human environment" that require impact assessment under NEPA.

(2) Potential for irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, and provide any help needed, to comply with the Archaeological and Historic Preservation Act of 1974 (54 U.S.C. chapter 3125).

WHISTLEBLOWER PROTECTIONS

Contractor agrees to comply with 10 U.S.C. 2409, including the:

(1) Prohibition on reprisals against employees disclosing certain types of information to specified persons or bodies.

(2) Requirement to notify your employees in writing, in the predominant native language of the workforce, of their rights and protections under that statute.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019 (Public Law 115-232):

(1) Prohibits the head of an executive agency from obligating or expending loan or grant funds to procure or obtain, extend, or renew a contract to procure or obtain, or enter into a contract (or extend or renew a contract) to procure or obtain the equipment, services, or systems prohibited systems as identified in section 889 of the NDAA for FY 2019.

(2) In accordance with 2 CFR 200.216 and 200.471, all awards that are issued on or after August 13, 2020, recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

a. Procure or obtain;

b. Extend or renew a contract to procure or obtain; or

c. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered

telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

i. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

ii. Telecommunications or video surveillance services provided by such entities or using such equipment.

iii. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(3) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), section (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(4) See Public Law 115-232, section 889 for additional information.

(5) Covered Foreign Country means the People's Republic of China.

(6) Telecommunications Cost means the cost of using communication and telephony technologies such as mobile phones, land lines, and internet.

(7) Do Not Contract with the Enemy (2 CFR 183).

TRAFFICKING IN PERSONS

The Contractor agrees to comply with requirements concerning trafficking in persons specified in the award term at 2 CFR 175.15(b), as applicable.

ADDITIONAL REQUIREMENTS

(1) Prohibition on Using Funds under Grants and Cooperative Agreements with Entities that Require Certain Internal Confidentiality Agreements.

(2) You may not require your employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting them from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

(3) You must notify your employees, contractors, and subrecipients that the prohibitions and restrictions of any internal confidentiality agreements inconsistent with this contract, inclusive of these general terms and conditions are no longer in effect.

(4) The prohibition in paragraph 1.a. of this section does not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a federal department or agency governing the nondisclosure of classified information.

(5) If the Federal Government determines that you are not in compliance with these provisions, it:

a. Will prohibit your use of funds under this contract, in accordance with section 743 of Division E of the Consolidated and Further Continuing Resolution Appropriations Act, 2015, (Public Law 113-235) or any successor provision of law.

b. May pursue other remedies available for your material failure to comply with award terms and conditions.

THE INFRASTRUCTURE INVESTMENT AND JOBS ACT

The Contractor covenants and agrees that it will comply with Pub. L. No. 117-58, which includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§ 70901-52. The Act strengthens Made in America Laws and will bolster America's industrial base, protect national security, and support high-paying jobs. The Act requires that the head of each Federal agency shall ensure that "none of the funds made available for a Federal financial assistance program for infrastructure may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States."

UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT

The Contractor covenants and agrees that it will comply with 49 CFR part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. Section 4601 et seq.) and provides for fair and equitable treatment of persons displaced by federally assisted programs or persons whose property is acquired as a result of such programs.

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The Contractor covenants and agrees that it will comply with the Contract Work Hours and Safety Standards Act (40 CFR, Subtitle II, Part A, Chapter 37), as implemented by the Department of Labor regulations (29 CFR Part 5). See AGND Document 418, Labor Standards Provisions.

SPECIFICATIONS
FOR

FIRE ALARM SYSTEM REPLACEMENT
Armory Bldg. 4200
RJB Complex
Bismarck, North Dakota

I hereby certify that these plans and specifications were prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of North Dakota.



WESLEY GULLICKS, P.E.
North Dakota Registration No. PE-6068

Date: 20 January 2026

APEX ENGINEERING GROUP
600 South 2nd Street, Suite 145
Bismarck, ND 58504
Telephone: (701) 323-3950

.01 SECTION INCLUDES

- a. Project Description.
- b. Construction Schedule.
- c. Scope of Work.
- d. Site Layout and Measurements.
- e. Location of Utilities.
- f. Contractor Coordination.
- g. Public Convenience.
- h. Environmental Management System.

.02 PROJECT DESCRIPTION

- a. Project Name: FIRE ALARM SYSTEM REPLACEMENT, Armory Bldg. 4200, Raymond J. Bohn Armory Complx, Bismarck, North Dakota
- b. Owner Name: The Adjutant General, State of North Dakota
- c. Architect's Name: Apex Engineering Group, Inc., Bismarck, North Dakota.
- d. The Project scope is: Upgrading the existing fire alarm systems in Armory Building 4200, to current standards for Fire Detection and Mass Notification Systems. Scope will also include miscellaneous mechanical, controls, communications, and electrical items associated with this work.

.03 CONSTRUCTION SCHEDULE:

- a. All material shall be ordered immediately upon award of contract.
- b. The Owner will occupy the building during the project. Close coordination will be required with occupants of the area. Construction work shall start commensurate with material delivery schedule and shall be diligently pursued to the end that all construction is totally completed on or before **December 11, 2026**. The time stated for completion shall include final cleanup of the premises.
- c. The foregoing completion date is based on the assumption that the successful bidder will receive the notice to proceed by **February 26, 2026**. The State will not extend the completion date based on when the Contractor receives the notice to proceed. Also, the completion date will not be

extended due to failure of the Contractor to execute the contract and give the required performance and payment bonds and other data required for contract award within the time specified in the bid.

d. NOTE: Contractor must consider that once project construction is initiated after receipt of notice to proceed, all general requirement responsibilities (i.e., project superintendence, contractor coordination, scheduling, utilities, temporary field office facilities/controls, etc.) will continue for the duration of the entire construction period.

e. Scheduled completion date carries a liquidated damages clause (see Article 13 of General Conditions of the Contract for Construction - AIA Document A201). Contractor and subcontractors shall recognize the importance of their responsibilities in completing their work on or ahead of schedule and in strict cooperation with each other.

f. The Contractor shall furnish not less than forty-eight (48) hours notice prior to starting work. Notice shall be furnished to the G9 Director of Installations and Environment – COL Cody J. Volk, Fraine Barracks, Bismarck, ND – email: cody.j.volk.mil@army.mil; Telephone: (701) 333-2075 and to Mr. Wesley Gullicks, P.E., Apex Engineering Group, 600 South 2nd Street, Suite # 145, Bismarck, ND – email: wes.gullicks@apexenggroup.com, Telephone: (701) 323-3950.

g. In order to complete the work in the stipulated time, the Contractor may elect to work longer than eight (8) hours in any one day, or forty (40) hours in any one (1) week. However, he must notify the Office of the Adjutant General's field representative of his intentions to do so not less than twenty-four (24) hours before the scheduled overtime. The Contractor's Project Superintendent/Foreman MUST BE on the job site supervising ALL scheduled overtime work

.04 SCOPE OF WORK:

a. Extent of drawings and specifications defining all work to be performed under this contract are listed on cover sheet of specification book. It is the bidding Contractor's sole responsibility to verify that he has received all sheets of plans and specifications as no claim for extra cost will be allowed due to the lack of complete information at the time of bid.

b. Equipment or work indicated on plans to be "By Owner" or "N.I.C." is not to be included in bid proposal or construction contract.

.05 SITE LAYOUT AND MEASUREMENTS:

a. The Contractor shall be responsible for setting reference points, site layout, construction verification, and establishing building lines, elevations, and utilities.

b. The Contractor shall, upon entering project site for purposes of beginning work, locate all general reference points and take such action as is necessary to prevent their destruction; lay out his own work and be responsible for all lines, elevations, and measurements and other work executed by him under contract. The Contractor must exercise proper precaution to verify figures shown on drawings before layout work as he will be held responsible for any error resulting from failure to exercise such precaution.

c. Figured dimensions shall be followed in preference to measurements by scale; large scale drawings shall take precedence over those of a small scale. Figures on all drawings, as detail drawings themselves are, in every case, subject to measurements of adjacent or incorporated completed work. All such necessary measurements shall be taken before undertaking any work dependent upon such data. Report any discrepancies to Architect for clarification before proceeding with work.

d. Where, on any drawings, a portion of work is drawn out and remainder is indicated in outline, parts drawn out or indicated by symbols or instructions by word description shall apply also to all other like portions of the work.

e. Where existing work is added to or modified, the Contractor shall be responsible to verify existing dimensions and conditions. Any existing condition which affects a Contractor's new work should be verified for accuracy. This includes, but is not limited to, such items as clearances, dimensions, existing equipment, existing services, working conditions, etc.

f. Where a clear understanding of the work is prevented, due to discrepancies, contradictions, or omissions on contract documents or subsequently issued instructions (regardless of source), Contractor shall not proceed with work and Architect should be consulted for clarification of the uncertainty. Should any mistake result due to pursuit of work without this clarification, Contractor must make necessary corrections at his expense and as directed by Architect.

.06 LOCATION OF UTILITIES:

a. It shall be the Contractor's responsibility to familiarize himself with location of all existing interior gas mains, storm sewer lines, sewer lines and vents, telephone cables, cable TV, power lines & conduits, and all of their associated service lines, and appurtenances such as poles, guy wires, supports, pads, valve boxes, stop boxes, manholes, and clean-outs pertaining to utility service. The Contractor shall be responsible for notifying North Dakota One-Call at 1-800-795-0555 at least 48 hours before beginning any excavation, excluding Saturdays, Sundays, and holidays, and shall comply with all requirements of Section 49-23 of the North Dakota Century Code. The Contractor shall hire a qualified technician to locate those utility lines that are not covered by the North Dakota One-Call system. All costs associated with locating all utilities shall be the responsibility of the Contractor.

b. The Contractor for the project will be held responsible for damage to any underground or overhead piping, wiring, or other utility property, occurring during any construction by the respective Contractor or his subcontractors.

.07 CONTRACTOR COORDINATION:

a. The Contractor shall employ a full-time, on site Project Superintendent who will be responsible for continuous coordination with all phases of the work. He shall be the Contractor's liaison with Architect, and Owner's representative. Project Superintendent shall have a minimum of five (5) years' experience in the field, and be approved by the Architect and Owner before onset of work. He shall be maintained by the Contractor throughout the project and not be replaced without approval of the Architect and Owner.

b. The Contractor's Project Superintendent(s) responsibilities shall include, but not be limited to:

- (1) Consult the contract drawings and specifications of all trades to verify and coordinate the location of the various building components and items to be installed. Review the daily work schedules of Subcontractors for a minimum of interferences to the work of other subcontractors.
- (2) Consult and cooperate with all subcontractors/installers for all work to determine space requirements and adequate clearances with respect to other equipment on the roof.
- (3) Inspect, report to the Architect and coordinate the removal, relocation and reconnection of any installed work which interferes with the work. All work, as directed, shall be at the expense of the Contractor.
- (4) Hold specific daily coordination meetings for each element of the work, maintain written documentation of events, report to Architect at regular project meetings.
- (5) Keep the Architect and Owner's Representative fully informed of the progress of the work and endeavor to safeguard the Owner against any defects and deficiencies in all the Work.

c. Contractor shall furnish and properly install all lintels, bucks, openings, sleeves, conduit hanging devices, backing for hanging devices, recesses required for installation of all work, and etc., unless specified to the contrary. Failure on part of the Contractor to properly work with Subcontractors in providing and placing of openings, recesses, etc., for their work as outlined above will not relieve them of the expense of putting these openings, recesses, etc. in later and repairing such cut construction to the satisfaction of the Architect.

d. Contractor and subcontractors shall:

- (1) Be mutually responsible, one to another, to prevent any delays in construction schedule. No one shall erect any portion of his work where it is necessary that work of others shall be erected first or carried on simultaneously without having first given other superintendents reasonable notice of his intentions.
- (2) 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.
- (3) Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various contractors, subcontractors, installers and/or suppliers having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

- (4) Coordinate space requirements and installation of electrical work which is indicated diagrammatically on drawings. Follow routing shown for pipes and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
 - (5) In finished areas (except as otherwise indicated), conceal pipes and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- e. Limitations on site usage as well as specific requirements that impact site utilization are indicated on the drawings and by other contract documents. Contractor shall administer allocation of available space equally among entities needing both access and space so as to produce the best overall efficiency in performance of the total work of the project. Contractor shall schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site. Architect/Engineer shall be sole judge as to allocation of available space in case of dispute.

.08 PUBLIC CONVENIENCE:

- a. The Contractor shall, at all times, so conduct his work as to insure the least possible obstruction to traffic and inconvenience to National Guard operational activities, the general public and the residents in the vicinity of the work, and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the proper authorities. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times.
- b. The Contractor shall cooperate and coordinate with the Owner in scheduling the work to accommodate adequate alarm monitoring, coordination with AHJ, and minimize impact to National Guard operations.

.09 ENVIRONMENTAL MANAGEMENT SYSTEM:

- a. The North Dakota National Guard (NDNG) has implemented an environmental Management System (eMS) per guidance published by the Department of Defense. As part of the NDNG's eMS, it shall be the Contractor's responsibility to be informed that some activities associated with certain construction projects may have a significant impact on the environment. Those activities include but are not limited to:
 - Fueling Operations
 - Dust Control Measures
 - Ozone Depleting Chemicals
 - Operational Noise
- b. It shall be the Contractor's responsibility to familiarize himself with the requirements of the NDNG's plans for the project location.
- c. It shall be the Contractor's responsibility to report spills, releases or other environmental issues to the Office of the Adjutant General's field representative upon discovery within a reasonable

amount of time (same day/24 hour period). Spills or releases which leave NDNG property must be reported immediately upon discovery.

d. The Contractor will be held responsible for damage to the environment resulting from a spill, release or other environmental violation to include environmental cleanup activities, disposal costs and fines or penalties levied by environmental regulatory agencies.

END OF SECTION 01 1100

.01 SECTION INCLUDES

- a. Procedures for preparation and submittal of bids.
- b. General Information.
- c. Bid Items and Alternates.

.02 GENERAL INFORMATION:

- a. The determination of lowest and best Bidder and respective single contract amount for all work required for each type of bid will be the sum of selected Bid Item(s), and respective Alternates (if any) as determined by the Owner.
- b. Bidders must bid on all Bid Item(s) and Alternates (if any) specified within the type bid being submitted. Bidder may state his refusal to accept award of less than the combination of Bid Item(s) and Alternates (if any) he so stipulates. The Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.
- c. In preparing his bid, Bidder is instructed to thoroughly familiarize himself with requirements herein so that his bid will be properly assembled and presented for Owner consideration.
- d. Refer to "Invitation to Bid"; Article 4 of AIA Document A701 regarding procedures for submission of bids.
- e. Prior to the award of the Contract, to enable the Owner to separate costs for funding purposes and as a condition of contract approval, the low bidder(s) may be required to clearly identify cost breakouts of specific items as required by the Owner

.03 BID ITEM:

BID ITEM NO. 1:
(Fire Alarm System
Replacement)

State the total cost for all work in connection with the complete Construction of the **Fire Alarm System Replacement, Armory 4200, RJB Complex**, as shown on the drawings, and as herein specified (Specification Divisions 26 and 28): including all work associated with demolition, fire alarm, panels, sensors, appliances, speakers, controls, annunciators, devices, detectors, miscellaneous, and all other work required by the contract documents. ALL costs associated with general requirements (Specification Division 01000) shall be included in this bid item.

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**ALTERNATE BID
ITEM NO. A-1:**
(Provide New Hazardous
Location Heat Detectors
and Manual Pull Station)

The following is NOT part of Bid Item No. 1. Under this alternate, state the amount ADDED TO BID ITEM NO. 1 for all work in connection with the complete Construction to **Provide New Hazardous Location Heat Detectors and Manual Pull Station**, as shown on the drawing sheet E1.3, and as herein specified (Specification Divisions 26 and 28): including all work associated with demolition, input module, boundary seal as required, detectors, pull station, miscellaneous, and all other work required by the contract documents. ALL costs associated with general requirements (Specification Division 01000) shall be included in this bid item.

END OF SECTION 01 2000

.01 SECTION INCLUDES

- a. Preconstruction meeting.
- b. Construction Progress Schedule.
- c. Progress Meetings.
- d. ASTM Designations.
- e. Terminology.
- f. Submittals Overview.
- g. Identification of Submittals.
- h. Coordination of Submittals.
- i. Timing of Submittals.
- j. Number of Copies of Submittals.
- k. Shop Drawings.
- l. Building Permit.

.02 PRE-CONSTRUCTION MEETING:

After date of notice to proceed, and upon coordination with all parties, the Architect/Engineer/Owner shall call a pre-construction meeting. Required in attendance shall be Architect/Engineer, Owner's representative(s), Contractor, and the Superintendent/Foremen together with the major subcontractors and suppliers. The general purpose of meeting will be to: review contract documents; review Owner procedures, documentation requirements, and general project overview agenda; procedures for processing of subcontractors approval, product approval, schedule of values and progress schedule; designation of personnel representing the Architect/Engineer, Owner, and Contractor; procedures for processing field decisions, submittals, applications for payment, proposal requests and change orders; coordinate temporary facilities and controls; and discuss any other items of concern which relate to the Work.

.03 CONSTRUCTION PROGRESS SCHEDULE.

- a. The Contractor shall, upon conferring with the any subcontractors, prepare and submit to the Architect, within ten (10) days of contract award, five (5) copies of the proposed construction progress schedule for approval, all in accordance with Para. 3.10, Article 3 of General Conditions of the Contract for Construction (AIA Document A201). Upon written approval of the proposed schedule by all parties concerned the Contractor shall furnish one (1) copy each to its subcontractors.

This shall serve as advance notice for the scheduling of materials, deliveries and installations to conform with the overall construction network plan.

- (1) The construction schedule shall consist of a bar chart showing the order and interdependence of activities and the sequence in which the work is to be accomplished as agreed to by Contractor. The project completion date (December 11, 2026) WILL BE shown on the chart as the latest completion date of ALL activities.
- (2) The bar chart shall be scaled using units of approximately one-half inch equals one week or other suitable scale approved by Architect. Weekends and holidays shall be indicated. The chart shall show the principal categories of work corresponding with those used in the breakdown on which the progress payments are based.
- (3) The chart shall indicate ALL key building phases (i.e., completion dates of owner construction sequence items, sitework, building completely enclosed, delivery and installation of key items of equipment, etc.) to include other phases and sequences as required by Architect and Owner.

.04 PROGRESS MEETINGS

a. The Contractor's Project Superintendent shall coordinate all arrangements for project progress meetings which shall be held at maximum weekly. Attendance shall include Architect, Owner's Representative(s), Contractor and their Superintendents/Foremen. All subcontractors and suppliers involved in current major phases of work shall also be in attendance.

- (1) The Contractor's Project Superintendent shall, after consultation with Architect, Owner's Representative, and subcontractors, prepare and furnish agenda with copies for participants.
- (2) The Architect shall preside at the meetings, record minutes and distribute copies within two (2) working days to Owner, Contractor, and Project Superintendent. It shall be the Contractor's responsibility to immediately distribute copies to respective subcontractors, suppliers and installers who were participants and/or affected by the decisions made.
- (3) The general purpose of the progress meeting shall be to: review previous meeting minutes; review work progress as it relates to each entities present and future needs including interface requirements; identify problems which are or may impede planned progress; review submittal schedules, delivery schedules, site access and utilization, temporary facilities and controls and progress cleaning requirements; review of progress schedule and determination of corrective measures to regain projected schedule to include firm commitments from responsible entities; review and coordinate planned progress for succeeding work period; review and coordinate change orders; update progress schedule as required; and conduct any other business relating to the Work.

- (4) Immediately following the progress meeting, the Project Superintendent shall review and coordinate all items listed in the minutes.
- (5) When revisions to project schedule have been made, to include all necessary approvals, the Contractor shall reissue revised schedules in accordance with previous paragraph .03a.

.05 ASTM DESIGNATIONS:

Shall be latest edition for all sections of specifications. Materials specified to comply to a certain standard (ASTM or other) shall be delivered to job properly labeled and identified. If material is not labeled, Contractor shall furnish a certificate of compliance from manufacturer.

.06 TERMINOLOGY:

- a. Requirements of all Specification Sections A through J and Division 01 extend and apply to all work required of Contractors, subcontractors, material suppliers, etc., set forth in other divisions of the specifications.
- b. Where the term “include” is used under Scope of Work paragraphs of subsequent specification sections, this shall be interpreted to mean items of work therein listed may be a part, but not necessarily the total limit, of the work required by such section. Contractor shall examine drawings and specification documents.
- c. Where specifications are abbreviated type, they indicate complete sentences in the same manner as when a note occurs in the Drawings. Omissions of words such as “the Contractor shall” or “as shown on Drawings” is intentional. The words “shall” or “shall be” are to be supplied by inference. The term “provide” shall mean “furnish and install in place”.
- d. Where a number is listed in the specifications (as for gauges, weights, temperatures, amount of time, etc.), the number shall be interpreted as that or better.

.07 SUBMITTALS OVERVIEW:

- a. Wherever possible throughout the contract documents, the minimum acceptable quality of workmanship and material has been defined by manufacturer’s name and catalog number or by reference to recognized industry standards.
- b. To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for its review and approval or rejection by the Architect/Engineer.
- c. Related Work Described Elsewhere:
 - (1) Contractual requirements for submittals: General Conditions of the Contract for Construction (AIA Document A201).

- (2) Individual submittals required: Pertinent sections of these specifications.

.08 IDENTIFICATION OF SUBMITTALS:

Completely identify each submittal and resubmittal by showing at least the following information:

- a. Name and address of submitter, plus name and telephone number of the individual who may be contacted for further information.
- b. Name of project as it appears on each page of these Specifications.
- c. Pertinent drawing sheet and detail number(s), and specification section number, as appropriate, to which the submittal applies.
- d. Whether this is an original submittal or resubmittal.

.09 COORDINATION OF SUBMITTALS:

- a. General: Prior to submittal for Architect/Engineer's review, use all means necessary to fully coordinate all materials, including the following procedures:
 - (1) Determine and verify all field dimensions and conditions, materials, catalog number and similar data.
 - (2) Coordinate, as required, with all trades and with all public agencies involved. Secure all necessary approvals from public agencies and others and signify by stamp, or other means, that they have been secured.
 - (3) Clearly indicate all deviations from the Contract Documents.
- b. Grouping of Submittals: Unless otherwise specifically permitted by the Architect/Engineer, make all submittals in groups containing all associated items; the Architect/Engineer may reject partial submittals as not complying with the provisions of the Contract Documents.
- c. Prior to submittal, Contractor shall apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- d. Provide space for Contractor, Architect/Engineer and Owner review stamps.
- e. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- f. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

.10 TIMING OF SUBMITTALS:

a. General:

- (1) Make all submittals far enough in advance of scheduled dates of installation to provide all required time for review, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.
- (2) In scheduling, allow at least ten (10) full working days for the Architect/Engineer's review following his receipt of the submittal.

b. Delays: Costs of delays occasioned by tardiness of submittals may be back charged to the Contractor and shall not be borne by the Owner.

.11 NUMBER OF COPIES OF SUBMITTALS:

a. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

b. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.

(1) After review, produce duplicates.

(2) Retained samples will not be returned to Contractor unless specifically so stated.

.12 SHOP DRAWINGS:

a. Unless otherwise specifically directed by the Architect/Engineer, submit newly prepared information drawn accurately to 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 a shop drawing. Contractor shall indicate on the shop drawing submittal that they have reviewed and approved it prior to forwarding it to the Architect/Engineer for review.

b. Shop drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

- (1) Dimensions.
- (2) Identification of products and materials included by sheet and detail number.
- (3) Compliance with specified standards.
- (4) Notation of coordination requirements.

- (5) Notation of dimensions established by field measurement.
- c. Type of Prints Required: Unless otherwise specifically directed by the Architect/Engineer, submit all shop drawings in electronic PDF format.
- d. Distribution: After review and approval by Architect/Engineer, Contractor shall provide and distribute all copies required for this purpose and as required by subcontractors, suppliers, manufacturers, installers, etc.

.13 BUILDING PERMIT:

- a. If a building permit is required, the Contractor shall arrange and pay any costs associated with the actual building permit itself for the total project after the issuance of Notice to Proceed. All other fees, permits, licenses, bonds, etc., are the also the responsibility of the Contractor in accordance with other pertinent sections of these specifications and all fees should be included in their bid.
- b. This facility is subject to inspection by state building code officials. Any costs that will be incurred by the contractor for inspections by state building code officials shall be included in the contractor's bid.

END OF SECTION 01 3000

.01 SECTION INCLUDES

- a. Scope of Work.
- b. Job Conditions.
- c. Temporary Utilities.
- d. Field Office and Storage.
- e. Temporary Sanitary Facilities.
- f. Enclosures.
- g. Access Roads and Parking Areas.
- h. Waste Removal.
- i. Maintenance and Removal.
- j. Land and Rights-of-Way.

.02 SCOPE OF WORK:

- a. Work Included: Temporary facilities and controls required for this Work include, but are not necessarily limited to:
 - (1) Temporary utilities such as heat, water, lighting and power and telephone.
 - (2) Field office and storage sheds.
 - (3) Sanitary facilities.
 - (4) Enclosures such as tarpaulins, barricades and canopies.
 - (5) Access roads and parking areas.
- b. Except that all equipment furnished by subcontractors shall comply with all requirements of pertinent safety regulations, the ladders, planks, hoists, and similar items normally furnished by the individual trades in execution of their own portions of the Work are not part of this section.
- c. Permanent installation and hook-up of the various utility lines are described in the pertinent other sections of these specifications.
- d. Use all means necessary to maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

.03 JOB CONDITIONS:

Make all required connections to existing utility systems with minimum disruption to the existing utility systems. When disruption of the existing service is required, do not proceed without the Architect's or Owner's authorized representative's approval and, when required, provide alternate temporary service(s) at no additional cost to the Owner.

.04 TEMPORARY UTILITIES:

a. General:

- (1) All temporary facilities shall be subject to the Owner Representative's approval and shall be confined to areas authorized or approved by Owner Representative or Owner. The Contractor shall hold and save the Owner, its officers, and agents, free and harmless from liability of any nature occasioned by his temporary facilities.
- (2) The Owner shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies unless otherwise specified herein. Electrical power SHALL NOT be used for heating. The Contractor shall carefully conserve any utilities furnished. Any utility requirements in excess of those available from Owners existing utilities shall be supplied by the Contractor needing same at his cost.

b. Telephone: The Contractor shall provide a temporary telephone (cellular is acceptable) for the entire construction period.

.05 FIELD OFFICE AND STORAGE:

a. Temporary field office trailers/buildings are not a requirement for this project, however the Owner has no objection to Contractors providing and maintaining such offices on the building site. Expenses for all utilities, services, equipment and furnishings for each temporary field office shall be the responsibility of the Contractor.

b. The Contractor shall provide storage buildings as required for storage of materials requiring protection from elements. Remove same when work is complete.

c. Subcontractors shall provide storage buildings for their own use on job, or shall arrange, at their expense, with the Contractor to provide such space for them. Such storage structures shall be removed when construction is complete.

.06 TEMPORARY SANITARY FACILITIES:

The Contractor may use toilet facilities within Armory Bldg. 4200. Failure to maintain the facilities in a neat and clean manner will be grounds for disallowing continued use of said facilities.

.07 ENCLOSURES:

Furnish, install and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, safety nets and all other temporary construction or devices necessary for proper completion of the Work in compliance with all safety and other regulations.

.08 ACCESS ROADS AND PARKING AREAS:

Contractors shall utilize the access roads and parking areas designated by the Owner. Site usage and traffic shall be in strict accordance with all regulations governing the Contractor's use of the site.

.09 WASTE REMOVAL

Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

.10 MAINTENANCE AND REMOVAL:

Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the Work. Remove all such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Architect/Engineer. Restore permanent facilities used during construction to specified condition.

.11 LAND AND RIGHTS-OF-WAY:

The Owner shall furnish all land and rights-of-way required for completion of all construction under this Contract. The Contractor shall not enter onto private property during the completion of this Contract. If the Contractor requires additional area over and above the rights-of-way and easements as shown on the plans, he shall make these arrangements at his own expense. If such additional areas are acquired by the Contractor for his use, the Owner will in no way be responsible for any accidents or claims arising out of such arrangement.

END OF SECTION 01 5000

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.01 SECTION INCLUDES

- a. Scope of Work.
- b. Product Handling.
- c. Substitutions.
- d. Samples.
- e. Colors.
- f. Maintenance Materials, Including Extra Materials, Spare Parts, Tools, and Software.
- g. Product Warranties.

.02 SCOPE OF WORK:

- a. Wherever possible throughout the contract documents, the minimum acceptable quality of workmanship and material has been defined by manufacturer's name and catalog number or by reference to recognized industry standards.
- b. To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for its review and approval or rejection by the Architect/Engineer.
- c. Related Work Described Elsewhere:
 - (1) Contractual requirements for submittals: General Conditions of the Contract for Construction (AIA Document A201).
 - (2) Individual submittals required: Pertinent sections of these specifications.

.03 PRODUCT HANDLING:

Make all submittals of Shop Drawings, samples, requests for substitutions, and other items in strict accordance with the provisions of this section of these specifications.

.04 SUBSTITUTIONS:

- a. Prior Approval Required:
 - (1) The Contract is based on the material, equipment, and methods described in the Contract Documents. The material, products and equipment described in the bidding documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

- (2) No substitution will be considered unless written request for approval has been received by the Architect/Engineer at least **ten (10) days** prior to the date of receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the work including changes in the work of other contracts that incorporation of the proposed substitution would require shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect/Engineer's decision of approval or disapproval of a proposed substitution shall be final.
 - (3) Those requesting Architect/Engineer consideration of their products "equals" shall make such request in electronic PDF format providing space for Architect/Engineer approval and/or comments on each item requested. An electronic PDF copy of the request form, Architect/Engineer action on same, will be returned to the proposer.
 - (4) If the Architect/Engineer approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
 - (5) No substitutions will be considered after the Contract award unless specifically provided in the Contract Documents. Under no condition shall Bids be submitted on work or materials not approved by the Architect/Engineer for this specific project, even though approval might have been given on other projects previously.
- b. Or Equal:
- (1) Where the phrase "or equal" or "or approved equal" or "or equal as approved by the Architect/Engineer" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the Architect/Engineer unless the item has been specifically approved for this work by the Architect/Engineer in electronic PDF format prior to receipt of Bids by Addendum, all in accordance with procedure outlined in above paragraph .04a "Prior Approval Required".
 - (2) The decision of the Architect/Engineer shall be final.
- c. Availability of Specified Items:
- (1) Verify, prior to bidding, that all specified items will be available in time for installation during orderly and timely progress of the work.
 - (2) In the event specified item or items will not be available, so notify the Architect/Engineer prior to receipt of bids.
 - (3) Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back charged as necessary and shall not be borne by the Owner.

.05 SAMPLES:

- a. Accuracy of Sample: Unless otherwise specifically directed by the Architect/Engineer, all samples shall be of the precise article proposed to be furnished and shall illustrate the functional and aesthetic characteristics of the product.
- b. Number of Samples Required: Submit all samples in the quantity which is required to be returned plus three (3) which will be retained by the Architect/Engineer.

.06 COLORS:

- a. General: Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts from the full range of manufacturer's standards to the Architect/Engineer for his review and selection.
- b. Comparative Analysis: Unless all available colors and patterns have identical costs and identical wearing capabilities, and are identically suited for the installation, completely describe the relative costs and capabilities of each.

.07 MAINTENANCE MATERIALS

- a. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- b. Deliver to Project site; obtain receipt prior to final payment.

.08 PRODUCT WARRANTIES:

- a. The date of Substantial Completion of the project is also date of commencement of applicable warranties required by contract documents.
- b. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.
- c. Submit warranty information. See Specification Section 01 7800.

END OF SECTION 01 6000

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.01 SECTION INCLUDES

- a. Scope of Work.
- b. Cutting and Patching.
- c. Protection of Installed Work.
- d. Workmanship.
- e. Starting of Systems and Equipment
- f. General Operating and Maintenance Instruction.
- g. Cleaning Materials and Equipment.
- h. Progress Cleaning and Protection.
- i. Final Cleaning and Protection.
- j. Closeout Description.
- k. Closeout Procedures.
- l. Final Payment

.02 SCOPE OF WORK:

- a. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.
- b. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other sections of these specifications.
- c. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- d. Prior to requesting inspection by the Architect/Engineer, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested inspection.

.03 CUTTING AND PATCHING:

- a. Contractor shall be responsible to Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

- b. Whenever possible, execute the work by methods that avoid cutting or patching.
- c. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.
- d. Perform whatever cutting and patching is necessary to:
 - (1) Complete the work.
 - (2) Fit products together to integrate with other work.
 - (3) Provide openings for penetration of electrical and other services.
 - (4) Match work that has been cut to adjacent work.
 - (5) Repair areas adjacent to cuts to required condition.
 - (6) Repair new work damaged by subsequent work.
 - (7) Remove samples of installed work for testing when requested.
 - (8) Remove and replace defective and non-complying work.
- e. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- f. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- g. Restore work with new products in accordance with requirements of Contract Documents.
- h. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- i. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to full thickness of the penetrated element.
- j. Patching:
 - (1) Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
 - (2) Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

- (3) Match color, texture, and appearance.
- (4) Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

.04 PROTECTION OF INSTALLED WORK:

- a. Contractor shall be responsible to Protect installed work from damage by construction operations.
 - (1) Provide special protection where specified in individual specification sections.
 - (2) Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
 - (3) Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
 - (4) Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
 - (5) Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
 - (6) Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

.05 WORKMANSHIP:

- a. Manufacturer's printed instructions covering details of installation shall be followed where not in conflict with these specifications. If there is a conflict, notify the Architect and obtain his approval before proceeding.
- b. Completed work shall be left plumb, level, true to line or plane, anchored securely in place, and free from damage.
- c. Unless otherwise called for, all pieces of material shall be as large a stock size as is in conformity with standard good practice of the trade.
- d. Except where in conflict with these specifications, current manufacturers' printed specifications of herein specified proprietary products are made part of these specifications.

.06 STARTING OF SYSTEMS AND EQUIPMENT

- a. Coordinate schedule for start-up of various equipment and systems.
- b. Verify that each piece of equipment or system has been checked for proper lubrication, drive

rotation, belt tension, control sequence, and for conditions that may cause damage.

- c. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- d. Verify that wiring and support components for equipment are complete and tested.
- e. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- f. Submit a written report that equipment or system has been properly installed and is functioning correctly.

.07 GENERAL OPERATING AND MAINTENANCE INSTRUCTION:

- a. Contractor shall arrange for each installer of operating equipment and other work that requires operational instruction and/or regular or continuing maintenance, to meet at the site with the Owner's personnel to provide necessary basic instruction in the proper operation and maintenance of the entire work. Such arrangements must be coordinated well in advance with the Owner, Architect, and respective Engineer.
- b. Where installers are not experienced in the required procedures, include instructions by manufacturer's representatives.
- c. As part of this instruction, provide a detailed review of the following items:
 - (1) Maintenance manuals.
 - (2) Record documents.
 - (3) Tools.
 - (4) Spare parts and materials.
 - (5) Lubricants.
 - (6) Fuels.
 - (7) Identification systems.
 - (8) Control sequences.
 - (9) Hazards.
 - (10) Cleaning.
 - (11) Warranties, bonds, maintenance agreements and similar continuing commitments.

d. As part of this instruction for operating equipment, demonstrate the following procedures:

- (1) Start-up.
- (2) Shut-down.
- (3) Emergency operations.
- (4) Noise and vibration adjustments.
- (5) Safety procedures.
- (6) Economy and efficiency adjustments.
- (7) Effective energy utilization.

e. Contractor shall also comply with specific requirements as discussed in other sections of these specifications.

.08 CLEANING MATERIALS AND EQUIPMENT:

- a. Provide required personnel, equipment and material needed to maintain the specified standard of cleanliness.
- b. Use only the cleaning materials and equipment which are compatible with the surface being cleaned as recommended by the manufacturer of the material.

.09 PROGRESS CLEANING AND PROTECTION:

- a. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- b. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.
- c. General:
 - (1) Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage and providing required protection of material.
 - (2) Do not allow accumulation of scrap, debris, waste material and other items not required for construction of this Work.
 - (3) At least once each week, and more often if necessary, completely remove all scrap, debris and waste material from the job site.

- (4) Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

d. Buildings:

- (1) Daily, and more often if necessary, inspect the structure and pick up all scrap, debris and waste material. Remove such items to the place designated for their storage.
- (2) Weekly, and more often if necessary, sweep interior spaces clean. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and hand-held broom.
- (3) As required, preparatory to installation of succeeding material, clean the structure or pertinent portions to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and material required to achieve the necessary cleanliness.
- (4) Remove debris and rubbish from pipe chases, plenums, crawl spaces, and other closed and remote spaces prior to enclosing the space.
- (5) Clean the floor daily (and more often if necessary) at all times while work is being performed in the space in which installed. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Architect/Engineer, may be injurious to the floor material.

e. Architect/Engineer shall be sole judge as to cleaning responsibility in case of dispute.

.10 FINAL CLEANING AND PROTECTION:

a. The Contractor shall have overall responsibility for all final cleaning requirements unless otherwise specifically indicated.

b. "Clean", for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and material. Comply with all manufacturer's instructions/recommendations regarding cleaning operations.

c. Prior to completion of the Work, Contractor shall remove from the job site all tools, surplus material, equipment, scrap, debris and waste; and conduct final progress cleaning as described in paragraph .09 above.

d. Buildings:

(1) Interior:

- (a) Visually inspect interior surfaces and remove all traces of soil, waste material, smudges and other foreign matter.

- (b) Remove all traces of splashed material from adjacent surfaces.
 - (c) Remove spots, stains, films, dust, dirt and similar noticeable distracting substances from finished surfaces.
 - (d) Restore reflective surfaces to original reflective condition.
 - (e) Leave carpet floors vacuum clean and concrete floors broom clean.
 - (f) Remove labels which are not required as permanent labels.
- (2) Painted and Decorated Work: Remove all foreign marks, stains, fingerprints, scuffs and other soil or dirt. If paint surface appearance is altered by cleaning process, refinish spot or area as required to match with overall adjacent surface. Vacuum or wipe down all surfaces to remove dust just prior to Owner occupancy.
 - (3) Mechanical and Electrical Equipment: Contractor shall wipe surfaces of mechanical and electrical equipment clean, including all accessible interior spaces. Remove excess lubrication and other substances.
 - (4) Special Areas: Where any portion of completed building was used for shop, storage, material preparation, etc., the Contractor must restore all material to original condition
- e. Schedule final cleaning as approved by the Architect/Engineer to enable the Owner to accept a completely clean Work.
- f. Architect/Engineer shall be sole judge as to final cleaning responsibilities in case of dispute.

.11 CLOSEOUT DESCRIPTION:

Closeout is hereby defined to include general requirements of Contractor near end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the Work. Specific requirements for individual units of work are specified in relative sections of these specifications. Time of closeout is directly related to "Substantial Completion" and, therefore, may be either a single time period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation shall be applicable to other provisions of this section.

.12 CLOSEOUT PROCEDURES:

- a. Substantial Completion:
- (1) Contractor will submit a written request to the Architect/Engineer along with a list of ALL items to be completed and/or corrected.
 - (2) Within a reasonable time after receipt of the list, the Architect/Engineer will either proceed with inspection or advise Contractor of prerequisites not fulfilled.

- (3) Following the initial inspection, should the Architect/Engineer determine that the Work is not substantially complete:
 - (a) The Architect/Engineer will promptly notify the Contractor, in writing, giving the reasons therefore.
 - (b) The Contractor will remedy the deficiencies and notify the Architect/Engineer when ready for reinspection.
 - (c) The Architect/Engineer will reinspect the Work when assured that the work has been substantially completed.
 - (4) When the Architect/Engineer concurs that the Work is substantially complete:
 - (a) The Owner will prepare a "Certificate of Substantial Completion" on AIA Document G704, accompanied by the Architect/Engineer's final inspection report and submit to all parties concerned for their written acceptance of the responsibilities assigned to them in the Certificate.
 - (5) Certificate of Substantial Completion will identify initial "punchlist" for final acceptance.
 - (6) Deliver tools, spare parts, extra stocks of materials and similar physical items to Owner.
 - (7) Make final change-over of locks and transmit keys to Owner and advise Owner's Representative of change-over in security provisions.
 - (8) Complete start-up testing of systems and instructions of Owner's operating/maintenance personnel.
 - (9) Complete final cleaning-up requirements, including touch-up, repair and/or restoration of marred surfaces. See Paragraph .10.
 - (10) Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools and facilities and similar elements.
- b. Contractor shall also comply with specific requirements as discussed in other sections of these specifications.
- c. Final Completion:
- (1) Prior to requesting Architect/Engineer's final re-inspection for certification of final acceptance, assure that all items on Architect/Engineer's final "punchlist" have been completed, corrected, or otherwise resolved for acceptance.

- (2) Submit copy of Architect/Engineer's final punchlist of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
- (3) Certify that:
 - (a) Contract Documents have been reviewed.
 - (b) Work has been inspected for compliance with the Contract Documents.
 - (c) Work has been completed in accordance with the Contract Documents.
 - (d) Work is completed and ready for final inspection.
- (4) The Architect/Engineer will make an inspection to verify status of completion.
- (5) Should the Architect/Engineer determine that the Work is incomplete or defective:
 - (a) The Architect/Engineer will promptly notify the Contractor, in writing, listing the incomplete or defective work.
 - (b) The Contractor shall remedy the deficiencies promptly, and notify the Architect/Engineer when ready for inspection.
- (6) When the Architect/Engineer determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

.13 FINAL PAYMENT:

Neither the final payment nor the remaining retained percentage shall become due until Contractor completes all the above requirements of this specification section.

END OF SECTION 01 7000

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.01 SECTION INCLUDES

- a. Scope of Work.
- b. Manuals.
- c. Project Record Documents.
- c. Operation and Maintenance Data.
- d. Warranties.

.02 SCOPE OF WORK:

- a. Closeout Submittals and Actions: Closeout submittals and actions include, but are not necessarily limited to:
 - (1) All items specifically required under Paragraph 9.10.6 of the General Conditions of the Contract for Construction (AIA Document A201).
 - (2) Evidence of final, continuing insurance coverage complying with insurance requirements. Include certificate of insurance for products and completed operations where required. Advise Owner of pending insurance change-over requirements.
 - (3) Final liquidated damages settlement statement (if any), acceptable to Owner.
 - (4) Specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
 - (5) Evidence of compliance with requirements of governmental agencies having jurisdiction for Certificates of Inspection. Obtain and submit release enabling Owner's full and unrestricted use of the work and access to services and utilities.
 - (6) Submit maintenance manuals and similar final record information. See Specification Section 01 7000.
- b. Contractor shall also comply with specific requirements as discussed in other sections of these specifications.

.03 MANUALS:

- a. General: Unless otherwise specifically directed by the Architect/Engineer elsewhere in the specifications, prepare all required manuals covering items included in this work in accordance with the following:
 - (1) Operation and maintenance data shall be submitted electronically in PDF format on Read/Write (R/W) Compact Disks (CDs) formatted to allow the data to be read and

copied to and from the CD. Each CD and its case shall be professionally labeled with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of CD.

- (a) Provide a file folder containing a master index at beginning of each CD's electronic manual file structure showing items included. The CD shall be subdivided with file folders and subfolders logically organized and labeled to allow ease of access to the data.
 - (b) First section of the Contractors CD shall consist of directory listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.
 - (c) Provide file folders/subfolders for each type of equipment arranged in order similar to the specifications. All sections shall be clearly labeled on the CD. At beginning of each section provide suppliers name, address and phone numbers.
- (2) Descriptive Literature:
- (a) Include descriptive literature (manufacturer's catalog and data) of each manufactured item. Literature shall show capacities and size of equipment used and be marked indicating each specific item with applicable data underlined.
 - (b) Copy of the approved Shop Drawing(s) with all data concerning changes made during construction.
- (3) Operating instructions shall include step by step procedure to follow in putting each piece of equipment into operation.
- (4) Maintenance instructions shall include:
- (a) Manufacturer's maintenance instructions for each piece of equipment installed in project. Instructions shall include installation instructions, parts numbers and lists, operation instructions of equipment, name of vendor, and maintenance and lubrication instructions.
 - (b) Summary list of equipment requiring lubrication showing name of equipment, location, and type and frequency of lubrication.
 - (c) List of equipment used indicating name, model, serial number, and nameplate of each item together with number and name associated with each system item.
 - (d) Test run reports if applicable/required.

- b. Extraneous Data: Where contents of the electronic manuals include manufacturer's catalog pages, clearly indicate the precise items included in this installation and delete, or otherwise clearly indicate, all manufacturer's data with which this installation is not concerned.
- c. Safety Data Sheets: Any materials installed that have an associated Safety Data Sheet (SDS) shall be included in the maintenance manuals under a separate tab.
- d. Number of Copies Required: The Contractor shall provide one copy of their electronic maintenance manual to the Architect/Engineer for review. Unless otherwise specifically directed by the Architect/Engineer, the Contractor shall deliver three (3) approved CDs to the Architect/Engineer before final inspection.

.04 PROJECT RECORD DOCUMENTS:

- a. General:
- (1) Specific requirements for record documents are indicated in individual sections of these specifications. Other requirements are indicated in the General Conditions. General submittal requirements are indicated in the various "submittals" sections.
 - (2) Maintain on site, one set of the following record documents and record actual revisions to the Work:
 - (a) Contract Drawings.
 - (b) Specifications.
 - (c) Addenda.
 - (d) Change Orders and other Modifications to the Contract.
 - (e) Reviewed shop drawings, product data, and samples.
 - (3) 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/Engineer's reference during normal working hours.
- b. Record Drawings: The Contractor shall maintain a record set of blue line white-prints of contract drawings and shop drawings in clean, undamaged condition. All subcontractors shall record work variations on the Contractor's record set. Mark-up the set of record documents to show the actual installation where the installed work varies from the work as originally shown. Mark whichever drawings are most capable of showing the actual "field" condition fully and accurately; however, where shop drawings are used for mark-up, record a cross reference at corresponding locations on the working drawings. Give particular attention to concealed work that would be difficult to measure and record at a later date.

- (1) Mark record set with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work. Mark-up new information which is known to be important to the Owner but, for some reason, was not shown on either contract drawings or shop drawings.
 - (2) The Contractor shall, during the progress of the work, keep accurate data on locations and elevations of underground/concealed work so that he may prepare a survey containing the final exact elevations and locations of all such work, especially that work for which an elevation or dimensional location is indicated and/or specified within the plans and/or specifications.
 - (a) Measured depths of foundations in relation to finish main floor datum.
 - (b) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - (c) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - (d) Field changes of dimension and detail.
 - (e) Details not on original Contract Drawings.
 - (3) Note related change order numbers where applicable.
 - (4) Organize record 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. Submit to Architect/Engineer.
- c. Record Specifications:
- (1) Legibly mark and record at each Product section description of actual Products installed, including the following:
 - (a) Manufacturer's name and product model and number.
 - (b) Product substitutions or alternates utilized.
 - (c) Changes made by Addenda and Modifications.
 - (2) Upon completion of mark-up, submit a complete record specification to Architect/Engineer for Owner's records.
- d. Record Product Data:
- (1) Maintain one copy of each product data submittal. Mark these documents to show variations in the actual work performed in comparison with the submitted information.

Include both variations in the products as delivered to the site, and variations from manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the work which cannot otherwise be readily discerned at a later date by direct observation. Note related change orders and mark-up of record drawings and specifications.

- (2) Upon completion of mark-up, submit complete set of record product data to the Architect/Engineer for the Owner's records.
- e. Miscellaneous Record Submittals: Refer to other sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with the 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/Engineer for the Owner's records.

.05 WARRANTIES:

- a. The date of Substantial Completion of the project is also date of commencement of applicable warranties required by contract documents.
- b. Provide duplicate notarized copies.
- c. Execute and assemble documents from subcontractors, suppliers, and manufacturers.
- d. Provide Table of Contents and assemble in three (3) ring binder with durable plastic cover.
- e. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.

END OF SECTION 01 7800

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SECTION 26 0000
DESCRIPTION OF ALTERNATES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates. Coordination of Section 01-General Requirements, including but not limited to Work Scopes is paramount.

1.03 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.04 PROCEDURES

- A. The Owner reserves the right to accept or reject alternates in any numerical orders listed.
- B. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- C. Notification: Following award of the Contract, the Owner/Owner's Representative shall notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration.
- D. Execute accepted alternates under the same conditions as other work of the Contract.
- E. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (NOT USED)

EXECUTION

3.01 ALTERNATE NO. 1:

- A. State the amount to be ADDED to the BASE BID for all labor, material and equipment costs associated with the electrical construction to replace the existing existing hazardous location fire alarm heat detectors and manual pull station in the chemical storage room. Refer to Drawing Sheet E1.3 for additional information.
- B. BASE BID: Existing hazardous location devices to remain and be monitored by new fire alarm system control panel.

END OF SECTION

SECTION 26 0500
BASIC ELECTRICAL REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Basic Electrical Requirements specifically applicable to Division 26, 27, and 28 Sections, in addition to Division 01 - General Requirements.

1.02 DEFINITIONS

- A. The meaning and intent of the word "provide" as used in these specifications is the same as the words "The Electrical Contractor (and/or Bidder) shall provide."
- B. The word "provide" shall carry the same meaning as "furnish and install."
- C. The word "Contractor" shall mean the "Electrical Contractor."

1.03 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.04 SUBMITTALS

- A. Submit under provisions of Section 01 3000.
- B. Submit Schedule of Values within 15 days for the Notice to Proceed. Payment to the Contractor will not be made without an approved copy of the Notice to Proceed.
- C. Submit Shop Drawings and product data grouped to include complete submittals of related systems, products, and accessories.
- D. Mark dimensions and values in units to match those specified.
- E. Contractor shall submit Shop Drawings in PDF Format via disk, flash drive, or email. Shop drawings shall be in a searchable PDF format, scanned copies of documentation shall not be accepted and will be returned to the Contractor.
- F. Shop drawings shall be review and commented on by the Electrical Contractor prior to submittal to Engineer. Contractor shall affix a stamp to the shop drawings that confirms the Contractor's review. Failure to include this review will result in shop drawings being returned and will require resubmittal.

1.05 TESTING

- A. Testing of systems is to be coordinated with the Owner at least two days in advance.

- B. Noise producing tests are to be completed during other than normal working hours.

1.06 REGULATORY REQUIREMENTS

- A. Conform to all applicable Building Codes, ordinances, laws and regulations.
- B. Electrical: Conform to NFPA 70 - National Electrical Code.
- C. Furnish products listed and classified by Underwriters, Inc., as suitable for purpose specified and shown.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. If the drawings and/or specifications conflict with any regulatory requirement, the regulatory requirement shall be followed. This does not relieve the Contractor from complying with items in the drawings and/or specifications in excess of the regulatory requirements.

1.07 PROJECT/SITE CONDITIONS

- A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding.

1.08 DRAWINGS

- A. The drawings indicate the general arrangement and extent of electrical work. Do not scale off the electrical drawings. All data shall be field verified with actual field conditions.
- B. The drawings and specifications are complementary each to the other. What is called for by one shall be as binding as if called for by both.
- C. Omissions or discrepancies between different drawings or between drawings and specifications or between contract documents and regulations and/or codes shall be brought to the attention of the Engineer for a decision in writing. Interpretation before the bid shall be by addendum only. If an interpretation is not given by addendum, bid the greater quantity or better quality.

1.09 PERMITS AND LICENSES

- A. Obtain and pay for required licenses and permits. Pay for fees and charges for connection to outside services. Pay for use of property other than the site of the work for storage of materials or other purposes.
- B. Installation shall be performed by persons licensed and skilled in the trade.

1.10 PROGRESS OF WORK

- A. Organize electrical work such that the progress of the work will conform to the progress of other trades, and complete the entire installation as soon as the conditions of the building will permit. Any cost resulting from defective or ill-timed work performed under this section shall be born by this Contractor.
- B. Portions of work will be required to be accomplished during other than normal working hours.

1.11 CORRELATION OF WORK

- A. Organize work so that it will not interfere with the work of other trades. Consult the drawings and specifications for work of other trades to correlate information, and consult the architectural and structural drawings for details and dimensions. Verify the location of all outlets. If interference develops, bring it to the attention of the Engineer for a decision. No additional compensation will be allowed for the moving of misplaced outlets, wiring or equipment.
- B. Before roughing-in for electrical equipment furnished by others, verify the voltage and current characteristics and control connections of this equipment, and provide the proper feeders and connections as recommended by the manufacturer of the equipment.

1.12 CUTTING AND PATCHING

- A. Lay out all work in advance and where removal of door frames, portions of walls, ceilings or floors are required, and cutting, channeling, chasing, or drilling of building surfaces is necessary for the proper installation of electrical equipment, carefully perform this work in a manner which does not weaken floors and walls. Damaged surfaces shall be repaired at no cost to the Owner.
- B. Concrete shall be cut only with rotary type drilling tools. Electrical equipment shall not be cut with torches, and shall be joined only by bolting (i.e., do not weld wireways to panels).
- C. Patching, when required, shall be finished to match adjoining surfaces and is subject to approval by the Architect/Engineer.

1.13 EXAMINATION OF SITE

- A. Before submitting a bid, each bidder shall examine the site, check the means of installing electrical equipment within the building, making connections to services, and shall be familiar with the existing conditions and limitations. No extras will be allowed because of the Contractor's misunderstanding of the amount of work involved or lack of knowledge of any site conditions which may affect the work. Any apparent variance of the drawings or specifications from the existing conditions at the site shall be called to the attention of the Architect/Engineer before submitting a bid.

1.14 OPERATION AND MAINTENANCE DATA

- A. Format:
 - 1. Prepare data in the form of an instructional manual.
 - 2. Electronic data that is formatted to be printed on a standard 8-1/2" x 11" paper.
- B. Arrange contents by section numbers and sequence of Table of Contents by this Project Manual.
- C. Provide tabbed indexed file sections for each separate product and system, with typed description of product and major component parts of equipment.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text. Fold larger drawings to size of text pages.
- E. Contents of Each Volume:
 - 1. Table of Contents: Provide title of Project; names, addresses and telephone numbers of Engineer and Contractor and listing of products and systems indexed to tabbed flyleaves.
 - 2. Updated Subcontractor, Supplier and Manufacturer List: Indicate any changes made after original submission at start of Project.
 - 3. Include description as to type and quantity of maintenance materials turned over to Owner in accordance with individual sections.
 - 4. Warranties and Bonds: Include all.
 - 5. Shop Drawings and Product Data: Include only those so required by individual sections.
 - 6. Operation and Maintenance Data for Equipment and Systems: Where required by individual sections, provide manufacturer's recommended operation procedures and maintenance requirements including guide for troubleshooting, disassembly, repair and assembly instructions and alignment, adjusting, balancing and checking instructions.
 - 7. Include a copy of ANSI/NFPA 70B Electrical Equipment Maintenance.
- F. Submittals:
 - 1. Submit one copy of completed volumes in final form 15 days prior to final inspection. Copy will be returned after final inspection, with Engineer's comments. Revise contents of documents as required prior to final submittal.
 - 2. Submit three copies of revised volumes of data in final form to Engineer within ten days after final inspection.

3. Provide an electronic PDF copy of all documents as noted on a CD or DVD, a USB drive is **not** acceptable.

1.15 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, protect and handle Products to site under provisions of Section 01600.

1.16 PROJECT RECORD DOCUMENTS

- A. Include all changes and deviations from contract documents. Clearly mark in colored pencil.
Include all addendum items and approved change orders.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 26 0505
SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical demolition.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Demolition drawings are based on casual field observation, the Owner's assistance and existing record documents.
- C. Report discrepancies to Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

- A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
- B. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- C. Existing Fire Alarm System: Maintain existing system in service until new system is accepted. Disable system only to make switchovers and connections. Minimize outage duration.
 - 1. Notify Owner before partially or completely disabling system.
 - 2. Make notifications at least 24 hours in advance.
 - 3. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Perform work for removal and disposal of equipment and materials containing toxic substances regulated under the Federal Toxic Substances Control Act (TSCA) in accordance with applicable federal, state, and local regulations.
- B. Remove abandoned above ground wiring to source of supply.
- C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- D. Disconnect abandoned fire alarm system devices and remove devices and circuitry. Provide blank cover for abandoned outlets that are not removed.
- E. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- F. Repair adjacent construction and finishes damaged during demolition and extension work.
- G. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
- H. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.04 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment that remain or that are to be reused.

END OF SECTION

SECTION 26 0519
ELECTRICAL WIRE AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single conductor wire.
- B. Wiring connectors.
- C. Electrical tape.
- D. Heat shrink tubing.
- E. Cable ties.

1.02 RELATED REQUIREMENTS

- A. Section 26 0505 - Selective Demolition for Electrical: Disconnection, removal, and/or extension of existing electrical conductors and cables.
- B. Section 26 0526 - Grounding and Bonding: Additional requirements for grounding conductors and grounding connectors.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire.
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes.
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation.
- E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape.
- F. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes.
- G. NECA 1 - Standard for Good Workmanship in Electrical Construction.

- H. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.
- I. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems.
- J. NFPA 70 - National Electrical Code.
- K. UL 44 - Thermoset-Insulated Wires and Cables.
- L. UL 83 - Thermoplastic-Insulated Wires and Cables.
- M. UL 486A-486B - Wire Connectors.
- N. UL 486C - Splicing Wire Connectors.
- O. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape.

1.04 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 Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 QUALITY ASSURANCE

- A. Comply with 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.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 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 wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Nonmetallic-sheathed cable is not permitted.
- D. Armored cable is not permitted.
- E. Metal-clad cable is not permitted.

2.02 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. Conductors for Grounding and Bonding: Also comply with Section 26 0526.
- H. Conductors and Cables Installed Exposed in Spaces Used for Environmental Air (only where specifically permitted): Plenum rated, listed and labeled as suitable for use in return air plenums.
- I. 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.
- J. Minimum Conductor Size:

1. Branch Circuits: 12 AWG.
 - a. Exceptions:
 - 1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
 - 2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
 - 3) 20 A, 277 V circuits longer than 150 feet: 10 AWG, for voltage drop.
2. Control Circuits: 14 AWG.

K. 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.
 - a. Conductors size #8 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
 - a. 480Y/277 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
 - 4) Neutral/Grounded: White with phase matching stripe.
 - b. 208Y/120 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - 4) Neutral/Grounded: White with phase matching stripe.
 - c. Equipment Ground, All Systems: Green.

2.03 SINGLE CONDUCTOR BUILDING WIRE

A. Manufacturers:

1. Copper Building Wire:
 - a. Cerro Wire LLC: www.cerrowire.com.
 - b. Encore Wire Corporation: www.encorewire.com.
 - c. General Cable Technologies Corporation: www.generalcable.com.
 - d. Southwire Company: www.southwire.com.
 - e. Or equal.
- B. Description: Single conductor insulated wire.
- C. Conductor Stranding:
 1. Feeders and Branch Circuits:
 - a. Size 12 AWG and Smaller: Solid.
 - b. Size 10 AWG and Larger: Stranded.
 2. Control Circuits: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation:
 1. Copper Wire: Type THHN/THWN or THHN/THWN-2.
 - a. Size 4 AWG and Larger: Type THHN/THWN or THHN/THWN-2.

2.04 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 6 AWG and Larger: Use insulated mechanical connectors or compression connectors. All connectors shall be listed for direct burial on this project.
- C. Wiring Connectors for Terminations:
 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.

2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
- D. Insulated Mechanical Connectors: Provide bolted type or set-screw type with protective cover.
1. Manufacturers:
 - a. Burndy: www.burndy.com.
 - b. IlSCO: www.ilsco.com.
 - c. Thomas & Betts Corporation: www.tnb.com.
 - d. Or equal.
- E. Compression Connectors: Provide circumferential type or hex type crimp configuration.
1. Manufacturers:
 - a. Burndy: www.burndy.com.
 - b. IlSCO: www.ilsco.com.
 - c. Thomas & Betts Corporation: www.tnb.com.
 - d. Or equal.

2.05 ACCESSORIES

- A. Electrical Tape:
1. Manufacturers:
 - a. 3M: www.3m.com.
 - b. Or equal.
 2. 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.
 3. 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.

4. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
5. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.03 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.
 4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
 5. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
 6. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.

- a. Provide no more than six current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
 - b. Increase size of conductors as required to account for ampacity derating.
 - c. Size raceways, boxes, etc. to accommodate conductors.
- 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. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from structure.
- G. Install conductors with a minimum of 12 inches of slack at each outlet.
- H. Where conductors are installed in enclosures for future termination by others, provide a minimum of 5 feet of slack.
- I. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- J. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- K. 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.
- L. 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.
- M. Insulate ends of spare conductors using vinyl insulating electrical tape.
- N. 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.
- O. 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.

3.04 FIELD QUALITY CONTROL

- A. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

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SECTION 26 0526
GROUNDING AND BONDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.

1.02 RELATED REQUIREMENTS

- A. Section 26 0519 - Electrical Wire and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- B. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems.
- C. NFPA 70 - National Electrical Code.
- D. UL 467 - Grounding and Bonding Equipment.

1.04 QUALITY ASSURANCE

- A. Comply with 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.

PART 2 PRODUCTS

2.01 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. 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.

2.02 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 0526:
 - 1. Use insulated copper conductors unless otherwise indicated.
- 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.

2.03 CONNECTORS AND ACCESSORIES

- A. Mechanical Connectors: Bronze.
 1. Equal to Burndy: www.burndy.com
- B. Exothermic Connections:
 1. Equal to Cadwell, a Division of Erico: www.erico.com
- C. Wire: Stranded copper.
- D. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.
- E. Equipment Grounding Conductor: Size to meet NFPA 70 requirements. Green Insulation.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.
- D. Verify existing conditions prior to beginning work.
- E. Verify that final backfill and compaction has been completed before driving rod electrodes.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. 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. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 4. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- D. Identify grounding and bonding system components in accordance with Section 26 0553.
- E. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

3.03 FIELD QUALITY CONTROL

- A. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

END OF SECTION

SECTION 26 0529
HANGERS AND SUPPORTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 RELATED REQUIREMENTS

- A. Section 26 0534 - Conduit: Additional support and attachment requirements for conduits.
- B. Section 26 0537 - Boxes: Additional support and attachment requirements for boxes.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- C. MFMA-4 - Metal Framing Standards Publication.
- D. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; 2009.
- E. ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements; 2006
- F. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements; 2010
- G. ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; 2009.
- H. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- I. NFPA 70 - National Electrical Code.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
 - 2. Coordinate work to provide additional framing and materials required for installation.

3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.
5. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 QUALITY ASSURANCE

- A. Comply with National Electrical Code.
- B. Comply with applicable building code.
- C. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
 1. Comply with the following. Where requirements differ, comply with most stringent.
 - a. NFPA 70.
 - b. Requirements of authorities having jurisdiction.
 2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
 3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
 4. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported with a minimum safety factor of 1.25. Include consideration for vibration, equipment operation, and shock loads where applicable.
 5. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 6. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
 - a. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel unless otherwise indicated.

- b. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.
 1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 2. Conduit Clamps: Bolted type unless otherwise indicated.
 3. Manufacturers:
 - a. Cooper Crouse-Hinds, a division of Eaton Corporation: www.cooperindustries.com/.
 - b. Erico International Corporation: www.erico.com/.
 - c. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/.
 - d. Thomas & Betts Corporation: www.tnb.com/.
- C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.
 1. Manufacturers:
 - a. Cooper Crouse-Hinds, a division of Eaton Corporation: www.cooperindustries.com/.
 - b. Erico International Corporation: www.erico.com/.
 - c. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/.
 - d. Thomas & Betts Corporation: www.tnb.com/.
- D. Metal Channel/Strut Framing Systems:
 1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
 2. Comply with MFMA-4.
 3. Channel Material:
 - a. Indoor Dry Locations: Use galvanized steel.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.
 4. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch.
 5. Minimum Channel Dimensions: 1-5/8 inch wide by 13/16 inch high.
 6. Manufacturers:

- a. Cooper B-Line, a division of Eaton Corporation: www.cooperindustries.com/.
 - b. Thomas & Betts Corporation: www.tnb.com/.
 - c. Unistrut, a brand of Atkore International Inc: www.unistrut.com/.
- E. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
 2. Concrete: Use preset concrete inserts, expansion anchors, or screw anchors.
 3. Hollow Masonry: Use toggle bolts.
 4. Hollow Stud Walls: Use toggle bolts.
 5. Steel: Use beam clamps, machine bolts, or welded threaded studs.
 6. Sheet Metal: Use sheet metal screws.
 7. Wood: Use wood screws.
 8. Powder-actuated fasteners are not permitted.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install hangers and supports in accordance with NECA 1.
- C. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- D. Unless specifically indicated or approved by Engineer, do not provide support from suspended ceiling support system or ceiling grid.
- E. Unless specifically indicated or approved by Engineer, do not provide support from roof deck.

- F. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- G. Equipment Support and Attachment:
 - 1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
 - 2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
 - 3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
 - 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- H. Secure fasteners in accordance with manufacturer's recommended torque settings.
- I. Remove temporary supports.

3.03 FIELD QUALITY CONTROL

- A. Inspect support and attachment components for damage and defects.
- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

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SECTION 26 0534
CONDUIT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Flexible metal conduit (FMC).
- C. Liquidtight flexible metal conduit (LFMC).
- D. Galvanized steel electrical metallic tubing (EMT).
- E. Conduit fittings.
- F. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 26 0519 - Electrical Wire and Cables.
- B. Section 26 0526 - Grounding and Bonding.
- C. Section 26 0529 - Hangers and Supports.
- D. Section 26 0537 - Boxes.
- E. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC).
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S).
- C. ANSI C80.5 - American National Standard for Electrical Rigid Metal Conduit -- Aluminum (ERMC-A).
- D. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- E. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT).
- F. NECA 102 - Standard for Installing Aluminum Rigid Metal Conduit.
- G. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.

- H. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit.
- I. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
- J. NFPA 70 - National Electrical Code.
- K. UL 1 - Flexible Metal Conduit.
- L. UL 6 - Electrical Rigid Metal Conduit-Steel.
- M. UL 360 - Liquid-Tight Flexible Metal Conduit.
- N. UL 514B - Conduit, Tubing, and Cable Fittings.
- O. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings.
- P. UL 797 - Electrical Metallic Tubing-Steel.
- Q. UL 1203 - Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
 - 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
 - 4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
 - 5. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.05 QUALITY ASSURANCE

- A. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.
- B. Accept conduit on site. Inspect for damage.
- C. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, 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. Concealed Within Hollow Stud Walls: Use electrical metallic tubing (EMT).
 - 1. Fire Alarm System: Color to be Red.
- D. Concealed Above Accessible Ceilings: Use electrical metallic tubing (EMT).
 - 1. Fire Alarm System: Color to be Red.
- E. Interior, Damp or Wet Locations: Use galvanized steel electrical metallic tubing (EMT).
- F. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel electrical metallic tubing (EMT).
 - 1. Fire Alarm System: Red conduit is not to be utilized. Paint to match ceiling color only where noted on plans.
- G. Exposed, Interior, Subject to Physical Damage: Use galvanized steel electrical metallic tubing (EMT).
 - 1. Fire Alarm System: Red conduit is not to be utilized.
- H. Exposed, Exterior, Not Subject to Severe Physical Damage: Use galvanized steel electrical metallic tubing (EMT).
- I. Hazardous/Classified Locations: Use galvanized steel rigid metal conduit (RMC).

- J. Flexible Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit (FMC).
- K. Fished in Existing Walls, Where Necessary: Use flexible metal conduit (FMC).

2.02 CONDUIT - GENERAL REQUIREMENTS

- A. Comply with NFPA 70.
- B. Existing Work: Where existing conduits are indicated to be reused, they may be reused only where they comply with specified requirements, are free from corrosion, and integrity is verified by pulling mandrel through them.
- C. Electrical Service Conduits: See Section 26 2100 for additional requirements.
- D. Provide conduit, fittings, supports, and accessories required for complete raceway system.
- E. Provide products listed, classified, and labeled as suitable for purpose intended.
- F. Minimum Conduit Size, Unless Otherwise Indicated:
 - 1. Branch Circuits: 1/2-inch trade size.
 - 2. Branch Circuit Homeruns: 3/4-inch trade size.
 - 3. Control Circuits: 1/2-inch trade size.
 - 4. Flexible Connections to Luminaires: 3/8-inch trade size.
- G. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Manufacturers:
 - 1. Allied Tube & Conduit: www.alliedeg.com/.
 - 2. Republic Conduit: www.republic-conduit.com/.
 - 3. Wheatland Tube, a Division of Zekelman Industries: www.wheatland.com/.
- 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. ABB; T&B: www.electrification.us.abb.com.
 - b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us.
 - c. Bridgeport Fittings Inc: www.bptfittings.com/.
 - d. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/.
 - e. Thomas & Betts Corporation: www.tnb.com/.
2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
 3. Hazardous/Classified Locations: Use fittings listed and labeled as complying with UL 1203 for classification of installed location.
 4. Material: Use steel or malleable iron.
 5. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 FLEXIBLE METAL CONDUIT (FMC)

A. Manufacturers:

1. AFC Cable Systems, Inc: www.afcweb.com.
2. Electri-Flex Company: www.electriflex.com.
3. International Metal Hose: www.metalhose.com.

B. Description: NFPA 70, Type FMC standard-wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems.

C. Fittings:

1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
2. Material: Use steel with insulated throats.

D. Description: Interlocked steel construction.

2.05 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

A. Manufacturers:

1. AFC Cable Systems, Inc: www.afcweb.com.

2. Electri-Flex Company: www.electriflex.com.
 3. International Metal Hose: www.metalhose.com.
- B. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- C. Fittings:
1. Manufacturers:
 - a. Bridgeport Fittings Inc: www.bptfittings.com/.
 - b. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/.
 - c. Thomas & Betts Corporation: www.tnb.com/.
 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 3. Material: Use steel with insulated throats.

2.06 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

- A. Manufacturers:
1. Allied Tube & Conduit: www.alliedeg.com.
 2. Republic Conduit: www.republic-conduit.com/.
 3. Wheatland Tube Company: www.wheatland.com.
- B. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- C. Fittings:
1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel with insulated throats.
 3. Connectors and Couplings: Use compression/gland or set-screw type.
 - a. Do not use indenter type connectors and couplings.
 4. Damp or Wet Locations, Where Permitted: Use fittings listed for use in wet locations.

2.07 ACCESSORIES

- A. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.
- B. Sealing Compound for Hazardous/Classified Location Sealing Fittings: Listed for use with particular fittings to be installed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.
- D. Verify routing and termination locations of conduit prior to rough-in.
- E. Conduit routing is shown on drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install conduit in accordance with NECA 1.
- C. Conduit Routing:
 - 1. Unless dimensioned, conduit routing indicated is diagrammatic.
 - 2. When conduit destination is indicated without specific routing, determine exact routing required.
 - 3. Conceal conduits unless specifically indicated to be exposed.
 - 4. Conduits in the following areas may be exposed, unless otherwise indicated:
 - a. Electrical rooms.
 - b. Mechanical equipment rooms.
 - c. Within joists in areas with no ceiling.
 - 5. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.

6. Arrange conduit to maintain adequate headroom, clearances, and access.
7. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
8. Route conduits above water and drain piping where possible.
9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
10. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
11. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
 - a. Flues.
12. Group parallel conduits in same area on common rack.

D. Conduit Support:

1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 26 0529.
2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.

E. 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. Where spare conduits stub up through concrete floors and are not terminated in box or enclosure, provide threaded couplings equipped with threaded plugs set flush with finished floor.
7. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
8. Secure joints and connections to provide mechanical strength and electrical continuity.

F. Penetrations:

1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
6. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
7. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.

G. 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 cross structural joints intended for expansion, contraction, or deflection.
2. Where conduits are subject to earth movement by settlement or frost.

H. Conduit Sealing:

1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
 - a. Where conduits enter building from outside.

- b. Where service conduits enter building from underground distribution system.
 - c. Where conduits enter building from underground.
 - d. Where conduits may transport moisture to contact live parts.
2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
- a. Where conduits pass from outdoors into conditioned interior spaces.
 - b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
- I. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
- 1. Where conduits pass from outdoors into conditioned interior spaces.
 - 2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
- J. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.
- K. Provide grounding and bonding; see Section 26 0526.
- L. Identify conduits; see Section 26 0553.

3.03 FIELD QUALITY CONTROL

- A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- B. Correct deficiencies and replace damaged or defective conduits.

3.04 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.05 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.

- B. Install conduit securely, in a neat and workmanlike manner, as specified in NECA 1.

END OF SECTION

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SECTION 26 0535
SURFACE RACEWAY SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface metal raceways.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 - Grounding and Bonding.
- B. Section 26 0529 - Hangers and Supports.
- C. Section 26 0534 - Conduit.
- D. Section 26 0537 - Boxes.
- E. Section 26 2726 - Wiring Devices
- F. Section 28 4600 - Fire Detection and Mass Notification

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- B. NFPA 70 - National Electrical Code.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the placement of raceways with millwork, furniture, equipment, etc. installed under other sections or by others.
 - 2. Coordinate rough-in locations of outlet boxes provided under Section 26 0537 and conduit provided under Section 26 0534 as required for installation of raceways provided under this section.
 - 3. Verify minimum sizes of raceways with the actual conductors and components to be installed.
 - 4. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not install raceways until final surface finishes and painting are complete.

2. Do not begin installation of conductors and cables until installation of raceways is complete between outlet, junction and splicing points.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including dimensions, knockout sizes and locations, materials, fabrication details, finishes, service condition requirements, and accessories.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.06 QUALITY ASSURANCE

- A. Comply with 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.

PART 2 PRODUCTS

2.01 RACEWAY REQUIREMENTS

- A. Provide all components, fittings, supports, and accessories required for a complete raceway system.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Do not use raceways for applications other than as permitted by NFPA 70 and product listing.

2.02 MANUFACTURERS

- A. Equal to Wiremold Company: www.wiremold.com.
- B. Substitutions: See Section 01 6000 - Product Requirements.

2.03 SURFACE RACEWAYS

- A. Surface Metal Raceway: Sheet metal channel with fitted cover, suitable for use as surface metal raceway.
 1. Equal to Wiremold 700 Series.
 2. Minimum Size: 21/32 inch by 3/4 inch .

3. Finish: Ivory or White as selected during shop drawing submittals..
4. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes and conduit terminations are installed in proper locations and are properly sized in accordance with NFPA 70 to accommodate raceways.
- C. Verify that mounting surfaces are ready to receive raceways and that final surface finishes are complete, including painting.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install raceways plumb and level.
- D. Secure and support raceways in accordance with Section 26 0529 at intervals complying with NFPA 70 and manufacturer's requirements.
- E. Use suitable insulating bushings and inserts at connections to outlets and corner fittings.
- F. Close unused raceway openings.
- G. Provide grounding and bonding in accordance with Section 26 0526.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. See Section 01 6000 - Product Requirements, for additional requirements.
- C. Inspect raceways for damage and defects.
- D. Correct wiring deficiencies and replace damaged or defective raceways.

END OF SECTION

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SECTION 26 0537

BOXES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.
- B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches.
- C. Pull and junction boxes.

1.02 RELATED REQUIREMENTS

- A. Section 26 0529 - Hangers and Supports.
- B. Section 26 0534 - Conduit:
 - 1. Conduit bodies and other fittings.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- D. Section 26 2726 - Wiring Devices:
 - 1. Wall plates.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- B. NECA 130 - Standard for Installing and Maintaining Wiring Devices.
- C. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- D. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- E. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- F. NFPA 70 - National Electrical Code.
- G. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations.
- H. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations.
- I. UL 514A - Metallic Outlet Boxes.

1.04 QUALITY ASSURANCE

- A. Comply with 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.

PART 2 PRODUCTS

2.01 BOXES

- A. General Requirements:
1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 2. Use cast iron boxes, cast aluminum boxes, or NEMA 3R Listed for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 3. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
 4. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
1. Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 2. NEMA EN 10250 Environment Type, Unless Otherwise Indicated:
 3. Junction and Pull Boxes Larger Than 100 cubic inches:
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive boxes.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.
- E. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.
- F. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.
- G. Box Locations:
 - 1. Unless dimensioned, box locations indicated are approximate.
- H. Box Supports:
 - 1. Secure and support boxes in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
 - 2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.
- I. Install boxes plumb and level.
- J. Install boxes as required to preserve insulation integrity.
- K. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

- L. Close unused box openings.
- M. Provide grounding and bonding in accordance with Section 26 0526.
- N. Electrical boxes are shown on Drawings in approximate locations unless dimensioned.
 - 1. Adjust box locations up to if required to accommodate intended purpose.
- O. Locate outlet boxes so that wall plates do not span different building finishes.
- P. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- Q. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- R. Use adjustable steel channel fasteners for hung ceiling outlet box.
- S. Do not fasten boxes to ceiling support wires.
- T. Support boxes independently of conduit, except cast box that is connected to two rigid metal conduits both supported within 12 inches of box.
- U. Use cast outlet box in exterior locations exposed to the weather and wet locations.

3.03 ADJUSTING

- A. Adjust flush-mounting outlets to make front flush with finished wall material.
- B. Install knockout closures in unused box openings.

3.04 CLEANING

- A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

END OF SECTION

SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical identification requirements.
- B. Identification nameplates and labels.

1.02 RELATED REQUIREMENTS

- A. Section 09 9113 - Exterior Painting.
- B. Section 09 9123 - Interior Painting.
- C. Section 26 0519 - Electrical Wire and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

1.03 REFERENCE STANDARDS

- A. NFPA 70 - National Electrical Code.

1.04 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 conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
 - 2. Do not install identification products until final surface finishes and painting are complete.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.

1.06 FIELD CONDITIONS

- A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

- A. Existing Work: Unless specifically excluded, identify existing elements to remain that are not already identified in accordance with specified requirements.
- B. Identification for Equipment:
 - 1. Use identification nameplate to identify fire alarm system main control panel and remote power supplies..
 - a. Fire Alarm Control and Power Supply Panels:
 - 1) Equipment identification.
 - 2) Identify power source and circuit number. Include location.
 - 2. Use identification label to identify overcurrent protective devices for branch circuits serving fire alarm circuits. Identify with text "FIRE ALARM CIRCUIT".
- C. Identification for Conductors and Cables:
 - 1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
 - 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.
- D. Identification for Raceways:
 - 1. Use color coded conduit to identify systems other than normal power system for all conduits.
 - a. Color Code:
 - 1) Fire Alarm System: Red for concealed locations and above accessible ceilings only.
 - 2. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify spare conduits at each end. Identify purpose and termination location.
- E. Identification for Boxes:
 - 1. Use color coded boxes to identify systems other than normal power system.
 - a. Color-Coded Boxes: Field-painted per the same color code used for raceways.
 - 1) Fire Alarm System: Red.

F. Identification for Devices:

1. Use identification label to identify fire alarm system devices.
 - a. For devices concealed above suspended ceilings, provide additional identification on ceiling tile below device location.

2.02 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:

1. Manufacturers:
 - a. Brimar Industries, Inc: www.brimar.com.
 - b. Kolbi Pipe Marker Co: www.kolbipipemarkers.com.
 - c. Seton Identification Products: www.seton.com.
2. Materials:
 - a. Indoor Clean, Dry Locations: Use plastic nameplates.
3. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/8 inch; engraved text.
4. 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.
 - a. Use only for indoor locations.
2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.02 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. Exterior Mounted Equipment: Inside of equipment door.
 - 2. Conduits: Legible from the floor.
 - 3. Boxes: Outside face of cover.
 - 4. Conductors and Cables: Legible from the point of access.
 - 5. Devices: Outside face of cover.
- 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 epoxy cement.
- E. Mark all handwritten text, where permitted, to be neat and legible.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 6000 - Product Requirements, for additional requirements.
- B. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION

SECTION 26 2420
ELEVATOR FUSED DISCONNECT SWITCHES

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish and install shunt-trip fused disconnect switch and accessories for elevator circuits as shown on the drawings and specified.

1.02 RELATED SECTIONS

- A. Section 26 2813 - Fuses
- B. Sections with regards to elevator installation and shunt-tripping of main-line power

1.03 REFERENCES

- A. Fused Power Module Switch shall comply with:
 - 1. UL 98
 - 2. UL 248
 - 3. NEMA KS 1
 - 4. NEMA FU 1
 - 5. ANSI/ASME 17.1 - Section 102.2(4)
 - 6. NFPA 70 - Section 620.51(A-C), 620.62, and 620.91(C)
 - 7. NFPA 72 - Section 3-9.2.1 and 3-9.4.4

1.04 SUBMITTALS

- A. Drawings:
 - 1. Submit detailed dimensional outline and conduit entry/exit locations.
 - 2. Control circuit and accessory wiring diagram
- B. Product Data: Submit manufacturer's product data sheets including:
 - 1. Assembly (including shunt-trip switch, control wiring and accessories) ratings (voltage, current, horsepower, and short-circuit current rating)
 - 2. Conductor termination ratings

3. Fuse ratings and type

- C. Submit in accordance with section 26 0500 and Division 01 requirements.

1.05 CLOSEOUT SUBMITTALS

- A. Final as-built drawings and product data information per Division 01.
B. Operation and maintenance manuals including replacement parts list.

1.06 QUALIFICATIONS

- A. The equipment manufacturer shall have a minimum five years experience in producing UL 98 listed shunt-trip fused disconnect switches with integral control wiring for elevator circuits.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Equipment shall be handled and stored in a manner that avoids damage.
B. Equipment shall be inspected prior to installation for damage. Do not install damaged equipment.

1.08 MAINTENANCE MATERIALS

- A. Furnish two sets of fuse pullers.

1.09 ADDITIONAL MATERIALS

- A. Furnish three sets of each rating and type of fuse installed and spare fuse cabinet where not already provided.

PART 2 PRODUCTS

2.01 GENERAL

- A. Manufacturer:
1. Cooper Bussmann, Inc. Model - Power Module Switch - PS
 2. Eaton Corporation; Cutler-Hammer Products[<>]: www.eaton.com.
 3. Approved Equal.
- B. Feeders for multiple elevator installations shall be selective coordinated and fed from a Cooper Bussmann LPJ, LPN-RK/LPS-RK, or KRP-C fuse sized at a minimum of 2:1(compared to the largest branch circuit fuse in the elevator shunt-trip fused disconnect switch) in accordance with NEC 620.62.

2.02 CONSTRUCTION

- A. Provide shunt-trip fused disconnect switch with all necessary relay(s), control transformer and other options, as shown on drawings and listed below:
 1. Provide 60 amp rated switch which is based on upon the existing elevator nameplate:
 - a. Voltage: 480V , 3-Phase, 60 Hz
 - b. Horsepower: 20HP
 - c. Amperage: 29 Amps
 2. Short-circuit current rating of 200,000A with Cooper Bussmann LPJ fuses.
 3. Interlocks to prevent the opening of the cover when the switch is in the ON position. Interlock shall be defeatable for testing purposes.
 4. Handle lockable in OFF position.
 5. 100VA control power transformer with primary and secondary fuses. The primary voltage rating shall be 480 volts with a 120V secondary.
 6. Isolation relay (3PDT, 10amp, 120V). The coil of the isolation relay shall be 120 Volts AC. A normally open dry contact shall be provided by the Fire Alarm Safety System to energize the isolation relay and activate the shunt trip solenoid (140VA inrush at 120V). (Note: if 24V DC coil is selected, a separate 24V DC source and contact must be provided by the Fire Alarm Safety System.)
 7. Provide additional options as indicated on drawings or below:
 - a. Key to Test Switch
 - b. "On" Pilot Light (Green, Red or White)
 - c. Isolated Full Capacity Neutral Lug
 - d. 1P NC Mechanical Interlock (required for hydraulic elevators with automatic recall).
 - e. Fire Alarm Voltage Monitoring Relay (Comply with NFPA 72)
 - f. NEMA 1 Enclosure
 8. Entire assembly (including shunt-trip switch, control wiring and accessories) shall have a short-circuit rating of 200,000A.

2.03 BACKBOARDS

- A. Provide plywood backboard for mounting equipment, plywood shall be $\frac{3}{4}$ inch thick AC grade painted gray on both sides.
- B. Backboards shall extend a minimum of 6 inches past all sides of equipment being supported.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Equipment shall be installed and handled in accordance with the manufacturer's recommendations.
- B. Equipment shall have a nameplate installed and mounted to the front cover and indicate: switch type, ampere rating, voltage rating, short-circuit rating, and load served.
- C. Install fuses in accordance with Section 2.02. Refer to Section 26 2813 for product requirements. Install labeling in accordance with Section 26 0553 to identify the disconnect and that identifies replacement fuse type/class and rating.

END OF SECTION

SECTION 26 2813

FUSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fuses.

1.02 RELATED REQUIREMENTS

- A. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- B. Section 26 2420 - Elevator Fused Disconnect Switches

1.03 REFERENCE STANDARDS

- A. NEMA FU 1 - Low Voltage Cartridge Fuses.
- B. UL 248-1 - Low-Voltage Fuses - Part 1: General Requirements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate fuse clips furnished in equipment provided under other sections for compatibility with indicated fuses.
 - a. Elevator Fused Disconnect Switches: See Section 26 2420
 - 2. Coordinate fuse requirements according to manufacturer's recommendations and nameplate data for actual equipment to be installed.
 - 3. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard data sheets including voltage and current ratings, interrupting ratings, time-current curves, and current limitation curves.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Bussmann, a division of Eaton Corporation: www.cooperindustries.com/#sle.

- B. Mersen (formerly Ferraz Shawmut): ferrazshawmut.mersen.com.
- C. Littelfuse, Inc: www.littelfuse.com/#sle.

2.02 APPLICATIONS

- A. Feeders:
 - 1. Fusible Switches up to 600 Amperes: Class RK1, time-delay.
- B. General Purpose Branch Circuits: Class RK1, time-delay.
- C. Individual Motor Branch Circuits: Class RK1, time-delay.

2.03 FUSES

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.
- C. Provide fuses of the same type, rating, and manufacturer within the same switch.
- D. Comply with UL 248-1.
- E. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.
- F. Voltage Rating: Suitable for circuit voltage.
- G. Selectivity: Where the requirement for selectivity is indicated, furnish products as required to achieve selective coordination.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that fuse ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.
- B. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Do not install fuses until circuits are ready to be energized.
- B. Install fuses with label oriented such that manufacturer, type, and size are easily read.

END OF SECTION

SECTION 28 4600
FIRE DETECTION AND MASS NOTIFICATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire alarm system design and installation, including all components, wiring, and conduit.
- B. Emergency voice/alarm communications system for fire alarm and mass notification.
- C. Transmitters for communication with supervising station.
- D. Circuits from protected premises to supervising station, including conduit.
- E. Monitoring of existing remote fire panels located within other buildings at the complex.
- F. Replacement and removal of existing fire alarm system components, wiring, and conduit indicated.
- G. Maintenance of fire alarm system under contract for specified warranty period.

1.02 REFERENCE STANDARDS

- A. UFC 3-600-01 - Unified Facilities Criteria(UFC) Fire Protection Engineering for Facilities
- B. UFC 4-021-01 - Unified Facilities Criteria(UFC) Design and O&M: Mass Notification Systems
- C. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- D. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- E. IEEE C62.41.2 - IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits.
- F. NFPA 70 - National Electrical Code.
- G. NFPA 72 - National Fire Alarm and Signaling Code.
- H. NFPA 101 - Life Safety Code.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Proposal Documents: Submit the following with cost/time proposal:
 - 1. NFPA 72 "Record of Completion", filled out to the extent known at the time.

2. Manufacturer's detailed data sheet for each control unit, initiating device, and notification appliance.
- C. Layout Drawings must be prepared using AutoCAD Release 2018 or newer and include:
1. Floorplan with device locations shown and routing of new circuitry. Provide legend to indicate the number and types of conductors required.
 2. Device installation details.
 3. Voltage drop calculations.
 4. Battery calculations.
- D. Fire alarm replacement plan that documents steps on how the existing system is to be removed and converted over to the new system.
1. Provide schedule that includes sequencing of phasing throughout the different areas of the building.
 2. Document required to be submitted with project shop drawings and prior to the pre-construction meeting.
- E. Fire Alarm Permit: Complete all application requirements and pay all fees to obtain the fire alarm system permit as required by the authority having jurisdiction North Dakota Insurance Department - Office of the State Fire Marshal.
1. Contact Information:
 - a. Jordan VanBerkum - Deputy Fire Marshal
 - b. Phone: (701)220-5063
 - c. Email: Jvanberkum@nd.gov
 - d. Web: firemarshal.nd.gov
- F. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
1. Copy (if any) of list of data required by authority having jurisdiction.
 2. NFPA 72 "Record of Completion", filled out to the extent known at the time.
 3. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7-5-2.2(9), and complete listing of software required.

4. Location of all components, circuits, and raceways; mark components with identifiers used in control unit programming.
 5. Circuit layouts; number, size, and type of raceways and conductors; conduit fill calculations; spare capacity calculations; notification appliance circuit voltage drop calculations.
 6. List of all devices on each signaling line circuit, with spare capacity indicated.
 7. Manufacturer's detailed data sheet for each component, including wiring diagrams, installation instructions, and circuit length limitations.
 8. Description of power supplies; if secondary power is by battery include calculations demonstrating adequate battery power.
 9. Certification by either the manufacturer of the control unit or by the manufacturer of each other component that the components are compatible with the control unit.
 10. Certification by the manufacturer of the control unit that the system design complies with Contract Documents.
 11. Certification by Contractor that the system design complies with Contract Documents.
 12. Do not show existing components to be removed.
- G. Evidence of installer qualifications.
- H. Evidence of instructor qualifications; training lesson plan outline.
- I. Inspection and Test Reports:
1. Submit inspection and test plan prior to closeout demonstration.
 2. Submit documentation of satisfactory inspections and tests.
 3. Submit NFPA 72 "Inspection and Test Form," filled out.
- J. Operating and Maintenance Data: Revise and resubmit until acceptable; have one set available during closeout demonstration:
1. Complete set of specified design documents, as approved by authority having jurisdiction.
 2. Additional printed set of project record documents and closeout documents, bound or filed in same manuals.
 3. Contact information for firm that will be providing contract maintenance and trouble call-back service.
 4. List of recommended spare parts, tools, and instruments for testing.

5. Replacement parts list with current prices, and source of supply.
 6. Detailed troubleshooting guide and large scale input/output matrix.
 7. Preventive maintenance, inspection, and testing schedule complying with NFPA 72; provide printed copy and computer format acceptable to Owner.
 8. Detailed but easy to read explanation of procedures to be taken by non-technical administrative personnel in the event of system trouble, when routine testing is being conducted, for fire drills, and when entering into contracts for remodeling.
- K. Project Record Documents: Have one set available during closeout demonstration:
1. Complete set of floor plans showing actual installed locations of components, conduit, and zones.
 2. "As installed" wiring and schematic diagrams, with final terminal identifications.
 3. "As programmed" operating sequences, including control events by device, updated input/output chart, and voice messages by event.
- L. Closeout Documents:
1. Certification by manufacturer that the system has been installed in compliance with manufacturer's installation requirements, is complete, and is in satisfactory operating condition.
 2. NFPA 72 "Record of Completion", filled out completely and signed by installer and authorized representative of authority having jurisdiction.
- M. Maintenance Materials, Tools, and Software: Furnish the following for Owner's use in maintenance of project.
1. Furnish spare parts of same manufacturer and model as those installed; deliver in original packaging, labeled in same manner as in operating and maintenance data and place in spare parts cabinet.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Firm with minimum 3 years documented experience installing fire alarm systems of the specified type and providing contract maintenance service as a regular part of their business.
1. Authorized representative of control unit manufacturer; submit manufacturer's certification that installer is authorized; include name and title of manufacturer's representative making certification.

2. Installer Personnel: At least 2 years of experience installing fire alarm systems.
 3. Supervisor: NICET level III or IV (3 or 4) certified fire alarm technician; furnish name and address.
 4. Contract maintenance office located within 50 miles of project site.
- B. Instructor Qualifications: Experienced in technical instruction, understanding fire alarm theory, and able to provide the required training; trained by fire alarm control unit manufacturer.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.05 WARRANTY

- A. Provide control panel manufacturer's warranty that system components other than wire and conduit are free from defects and will remain so for 1 year after date of Substantial Completion.
- B. Provide installer's warranty that the installation is free from defects and will remain so for 1 year after date of Substantial Completion.

PART 2 PRODUCTS

2.01 CONDUIT

- A. Provide RED 3/4" EMT conduit for all new circuitry where installed and concealed above accessible ceilings.
- B. In areas where there is painted exposed structure, conduit shall be painted to match the structure color in public areas as noted on the plans. Otherwise use *non-painted* conduit.
- C. The entire fire alarm system shall be installed in a metallic raceway system.

2.02 MANUFACTURERS

- A. Fire Alarm System - Basis of Design: JCI/Simplex 4100ES
- B. The following products have been reviewed and meet or exceed the performance requirements for this project and are acceptable contingent that the cost of all additional work required to install new control panel in existing location and provide temporary monitoring of the system is included in the bid amount - refer to Drawings for additional notes:
 1. Autocall - New Vision Security Systems
- C. Provide all fire alarm system components supplied/manufactured by the same manufacturer.
- D. Initiating Devices and Notification Appliances:

1. Same manufacturer as control units.
 2. Provide initiating devices and notification appliances made by the same manufacturer, where possible.
- E. Substitutions: See Section 01 6000 - Product Requirements.
1. For substitution of products by manufacturers not listed, submit product data showing features and certification by Contractor that the design will comply with Contract Documents.
 2. Provide a list of three similar installations, date of installation, and contact information for the Owner's representative involve with the project.
 3. Provide location nearest service center location and location of certified technicians.

2.03 FIRE ALARM SYSTEM

- A. Fire Alarm System: Provide a new automatic fire detection and alarm system
1. Provide all components necessary, regardless of whether shown in Contract Documents or not.
 2. Protected Premises: Entire building shown on drawings.
 3. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
 - a. ADA Standards.
 - b. The requirements of North Dakota State Fire Marshal and City of Bismarck Fire Marshal.
 - 1) The ND State Fire Marshal is the *local authority having jurisdiction* and is the responsible party for plan review and inspections.
 - 2) City of Bismarck Fire Department is the *responding agency* and shall be informed of the fire system replacement process and progress.
 - c. The requirements of the local authority having jurisdiction .
 - d. Applicable local codes.
 - e. Contract Documents (drawings and specifications).
 - f. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.

4. Evacuation Alarm: Single smoke zone; general evacuation of entire premises.
 5. Voice Notification: Provide emergency voice/alarm communications with multichannel capability; digital.
 6. Program notification zones and voice messages as directed by Owner.
 7. Hearing Impaired Occupants: Provide visible notification devices in all public areas.
 8. Master Control Unit (Panel): New, located as shown on the drawings. Refer to Drawings for specific installation requirements for both the Basis of Design and other approved manufacturers and include all costs in the bid amount.
 9. Combined Systems: Do not combine fire alarm system with other non-fire systems.
- B. Supervising Stations and Fire Department Connections:
1. Public Fire Department Notification: By remote supervising station.
 2. Remote Supervising Station: UL-listed central station under contract to facility.
 - a. Owner reserves the right to select the remote monitoring service provider and enter into a monitoring contract of their choosing. The Owner shall not be bound to a monitoring contract with the fire alarm system equipment supplier.
 3. Means of Transmission to Remote Supervising Station: Digital alarm communicator transmitter (DACT), 2 telephone lines.
 - a. Control panel includes monitoring of three other buildings on the complex via zone modules. This fire panel shall transmit building specific alarm and trouble signals to the supervisory station from the three other buildings via the DACT.
 - 1) Building 4200 RJB Armory Building: Main control panel shall monitor the following other building fire alarm panels located within the complex.
 - (a) 4100 Warehouse - Existing Simplex 4007ES
 - (b) 4150 Recruiting - Existing Siemens SXL-EX
 - (c) 4300 FMS #4 - Existing Simplex 4007ES
 - b. Transmission means shall be either analog or IP and shall be coordinated with the Owner's IT Staff during shop drawing submittals.
- C. Circuits:
1. Initiating Device Circuits (IDC): Class B, Style B, T-tapping shall be allowed.

2. Signaling Line Circuits (SLC): Class B, Style 4.
3. Notification Appliance Circuits (NAC): Class B, Style Y.

D. Spare Capacity:

1. Initiating Device Circuits: Minimum 25 percent spare capacity.
2. Notification Appliance Circuits: Minimum 25 percent spare capacity.
3. Speaker Amplifiers: Minimum 25 percent spare capacity.
4. Fire Alarm Control Units: Capable of handling all circuits utilized to capacity without requiring additional components other than plug-in control modules.

E. Power Sources:

1. Primary: Dedicated branch circuits of the facility power distribution system.
2. Secondary: Storage batteries.
3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.

2.04 EXISTING COMPONENTS

- A. Existing Fire Alarm System: Remove existing system completely after new system is fully operational and tested. Removal of existing system will be required to be phased to one zone at a time to minimize duration that the entire facility is without fire alarm coverage.
 1. During periods when existing system is disabled for change over to the new system, contractor shall be responsible to coordinate with the Owner's staff to ensure that they are able to provide a fire watch when the building is occupied. During periods when building is un-occupied, fire watch is not required. Notification of occupants during these times shall be accomplished with the existing building paging system.
- B. Clearly label components that are "Not In Service."
- C. Remove unused existing components and materials from site and dispose of properly.
- D. All existing conductors shall be removed and replaced with new circuitry per fire alarm system requirements.
- E. Existing raceway system may be modified and extended as required by new system layout.

2.05 FIRE SAFETY SYSTEMS INTERFACES

- A. Supervision: The system shall report a TROUBLE condition when any supervised circuit becomes disarranged, disconnected, or is manually disabled or overridden. Provide supervisory signals in accordance with NFPA 72 for the following:
 - 1. Fire suppression system water control valves.
 - 2. HVAC System duct detectors.
 - 3. Carbon monoxide detectors.
 - 4. Communications links between remote power supplies, amplifiers, annunciators.
- B. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following:
 - 1. Fire suppression system water flow - multiple zones.
 - 2. Kitchen hood suppression activation; also disconnect fuel source from cooking equipment.
 - 3. Elevator lobby, elevator hoistway, and elevator machine room smoke detectors.
 - 4. Manual Stations
- C. Elevators:
 - 1. Elevator lobby, hoistway, and machine room smoke detectors: Elevator recall for fire fighters' service.
 - 2. Elevator Machine Room and elevator shaft heat detector: Shut down elevator power prior to hoistway sprinkler activation.
- D. Mass Notification:
 - 1. Provide interface with Owner's phone system for initiation of remote mass notification messaging.
- E. HVAC:
 - 1. Duct Smoke Detectors: Close dampers indicated; shut down air handlers indicated.
- F. Doors:
 - 1. Smoke Barrier Door Magnetic Holders: Release upon activation of smoke detectors in smoke zone on either side of door, upon alarm from manual pull station on same floor, and upon sprinkler activation on same floor. Refer to Section 08 7100.

2.06 COMPONENTS

- A. General:

1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.
 2. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.
- B. Fire Alarm Control Units, Initiating Devices, and Notification Appliances: Analog, addressable type; listed, classified, and labeled as suitable for the purpose intended.
- C. Master Control Unit: ◇.
1. Control Panel shall comply with UL 864.
 2. Power Limited base panel with black cabinet and door, 120 VAC input power
 3. Minimum addressable point capacity inclusive of inputs and outputs in any combination for the number of devices shown on the plans plus 25 percent spare.
 4. Three (3) Class B or A Notification Appliance Circuits (NAC; rated 3A@24VDC, resistive).
 5. Alphanumeric Display and System Controls: Panel shall include an 80 character LCD display to indicate alarm, supervisory, and component status messages and shall include a keypad for use in entering and executing control commands
 6. Cabinet: Lockable steel enclosure. Arrange unit so all operations required for testing or for normal care and maintenance of the system are performed from the front of the enclosure. If more than a single unit is required to form a complete control unit, provide exactly matching modular unit enclosures.
 7. Digital Emergency Voice Alarm/Communication System/Mass Notification
 - a. Provide two channels of emergency voice communication messaging.
 - b. Voice Module
 - 1) Integral dynamic microphone with push-to-talk switch and local speaker with volume control for monitoring audio signals.
 - 2) Pre-announce LED that the signal is active in the selected zones. The preannounce signal can be programmed for a duration of 0 to 10 seconds.
 - 3) Eight programmable switches with indicating LEDs for manual voice and generic functions.
 - c. Digital Audio Message Module.

- 1) Minimum of eight(8) unique custom messages with customizable messages from a pre-recorded digital library of words, phrases and tones.
 - (a) Fire Alarm Default Message:
 - (1) (Temporal 3 Alert Tone) "May I have your attention please. May I have your attention please. A fire emergency has been reported in the building. Please leave the building by the nearest exit or exit stairway. Do not use the elevators". "May I have your attention please..." (repeat the message).
 - (b) Carbon Monoxide Alarm Default Message:
 - (1) The alert signal portion of the voice alarm message for carbon monoxide detection must be a 520 Hz temporal 4 (T-4) signal. The alert signal must repeat twice before the voice announcement.
 - (2) (Temporal 4 Alert Tone) "Attention....Attention....Carbon monoxide has been detected in the building. Please leave the building by the nearest exit." (Temporal 4 Alert Tone)
 - (c) Additional audio message content to be verified with Owner and Engineer prior to commissioning. Content may include messaging for items such as:
 - (1) Shelter in Place.
 - (2) Weather Emergency.
 - (3) Evacuate.
 - (4) All Clear.
 - 2) Selectable message priorities and message repeat counts.
 - 3) Messaging shall be programmed via a Windows operating system using software provided by the system supplier. Copy of software and any passwords shall be turned over to the owner.
 - 4) Module shall support MPS and WAV file formats for phrases not contained in the on-board phrase library.
 - 5) Include selectable tones: Slow Whoop, Temporal Code 3, Temporal Code 4, 900Hz, 520HzChime, Wail, and Horn.
- d. Zone Amplifier Module.
- 1) Provide amplifier rating to match speaker zone requirements.

- 2) Configurable to either 25VRMS or 70VRMS.
- 3) Two channel applications.
- e. Audio Input
 - 1) Provide external isolated analog inputs for integration of live voice messaging from any of the Owners phone system.
8. External Audio Input
 - a. Provide for external isolated analog inputs for integration of live voice messaging via the Owner's phone system located within the facility.
 - b. Provide additional cabling as required for interconnection. Coordinate with Owner's IT Staff.
9. Emergency Power Supply:
 - a. Components include battery, charger, and an automatic transfer switch.
 - b. Battery Charger: Dual rate, temperature compensated UL listed for charging batteries up to 110 Ah batteries. Monitor includes charger status and battery conditions.
 - c. Battery: Sealed lead-acid or nickel cadmium type. Provide sufficient capacity to operate the complete alarm system in normal or supervisory (non-alarm) mode for a period of 24 hours. Following this period of operation on battery power, the battery shall have sufficient capacity to operate all components of the system, including all alarm indicating devices in alarm or supervisory mode for a period of 15 minutes.
- D. Remote Annunciators: <>.
 1. The Remote LCD Annunciator shall use the same Primary Acknowledge, Silence, and Reset Keys, Status LEDs and LCD Display as the FACP.
 2. Annunciator shall have LCD display with two lines of 40 characters each. Annunciator shall be provided with four (4) programmable control switches and associated LEDs.
 3. Operator keys shall be key switch enabled to prevent unauthorized use. The key shall only be removable in the disabled position.
 4. Annunciator shall also be provided with a mass notification microphone handset and eight pre-programmed message activation buttons.
 5. Annunciator shall be black surface mounted.
- E. Mass Notification Local Operator Console:

1. Mass notification microphone handset for live announcements and eight pre-programmed message activation buttons.
2. Provide in black surface mounted enclosure.

F. Notification Appliance Extender Power Panel(NAC):

1. A stand-alone panel capable of powering a minimum of three signaling line circuits. Each channel shall be rated for 3 amps.
2. The internal power supply & battery charger shall be capable of maintaining batteries to allow for 24 hours of supervisory stand by operation followed by 15 minutes of alarm.
3. Addressable communication with the FACP to allow remote monitoring of panel.
4. Three(3) potential NAC panel locations are indicated on the plans. System supplier shall verify quantity and location of panels required for the system configuration. If any additional locations are required, this information shall be conveyed to the electrical contractor during the bid process so that the contractor includes 120 volt power connections to these panels in their bid amount. Additional locations are required to be approved by the Engineer prior to installation.

G. Initiating Devices:

1. Addressable Systems:
 - a. Addressable Devices: Individually identifiable by addressable fire alarm control unit.
 - b. Provide suitable addressable interface modules as indicated or as required for connection to conventional (non-addressable) devices and other components that provide a dry closure output.
2. Manual Pull Stations: \diamond .
 - a. Addressable single action type manual station red housing and "FIRE" in raised white lettering. Station will mechanically latch upon operation and remain so until manually reset utilizing a key.
 - b. Provide one(1) extra spare.
3. Hazardous Location Manual Pull Station: [\diamond].
 - a. Hazardous Classification Rating: Class 1, Division 2 Groups C & D.
 - b. Conventional non-addressable type pull station with output contacts. Detector to be monitored by the addressable fire alarm system utilizing addressable input modules.

4. Smoke Detectors: <>.
 - a. UL 268 Listed device. UL listed for 30 foot spacing.
 - b. Smoke detectors shall be of the photoelectric type.
 - c. Photoelectric LED or infrared type with adjustable sensitivity. Self restoring. Photoelectric sensor and electronics in a single piece construction which shall twist-lock onto a mounting base that attaches to a standard electrical box. 24VDC operation.
 - d. In alarm condition, the sensor base LED shall be on steady.
 - e. Each unit shall have a communication transmitter and receiver having a unique identification and capability for status reporting to the FACP.
 - f. The electronics shall be immune from false alarms caused by EMI and RFI.
 - g. Provide relay output, sounder and isolator bases as shown on the drawings.
 - h. Provide three(3) extra spare.
5. Combination Smoke/Carbon Monoxide Detector:
 - a. UL 268 and UL 2075 Listed device. UL listed for 30 foot spacing.
 - b. Smoke detectors shall be of the photoelectric type with CO sensing module.
 - c. Photoelectric LED or infrared type with adjustable sensitivity. Self restoring. Photoelectric sensor and electronics in a single piece construction which shall twist-lock onto a mounting base that attaches to a standard electrical box. 24VDC operation.
 - d. In alarm condition, the sensor base LED shall be on steady.
 - e. Each unit shall have a communication transmitter and receiver having a unique identification and capability for status reporting to the FACP.
 - f. The electronics shall be immune from false alarms caused by EMI and RFI.
 - g. Provide two(2) extra spare.
6. Duct Smoke Detectors: <>.
 - a. Photoelectric type, with sampling tube of design and dimensions as recommended by the manufacturer for the specific duct size and installation conditions where applied. Sensor includes relay as required for fan shutdown.

- b. Environmental compensation, programmable sensitivity settings, status testing, and monitoring of sensor dirt accumulation for the duct sensor shall be provided by the FACP.
 - c. Remote indicating alarm LED and test switch.
 - d. Provide one(1) extra spare.
7. Heat Detectors: <>.
- a. Combination fixed-temperature and rate-of-rise unit with plug-in base and alarm indication lamp; 135-deg F fixed-temperature setting and rate-of-rise detection shall be 15-deg F per minute.
 - b. Heat Detector shall be of the epoxy encapsulated electronic design. It shall be thermistor-based, rate-compensated, self-restoring and shall not be affected by thermal lag.
 - c. Provide fixed temperature detectors for elevator equipment locations with fire suppression system installed. Alarm temperature shall be less than fire suppression system activation temperature.
 - d. Provide three (3) extra spare.
8. Combination Heat/Carbon Monoxide Detectors: <>.
- a. Combination fixed-temperature and rate-of-rise unit with plug-in base and alarm indication lamp; 135-deg F fixed-temperature setting and rate-of-rise detection shall be 15-deg F per minute with CO sensing module.
 - b. UL 2075 Listed Device
 - c. Heat Detector shall be of the epoxy encapsulated electronic design. It shall be thermistor-based, rate-compensated, self-restoring and shall not be affected by thermal lag.
 - d. Provide one (1) extra spare.
9. Hazardous Location Heat Detectors: [<>].
- a. Hazardous Classification Rating: Class 1, Division 2 Groups C & D.
 - b. Conventional non-addressable type detector with output contacts. Detector to be monitored by the addressable fire alarm system utilizing addressable input modules.
 - c. Combination fixed-temperature and rate-of-rise unit with plug-in base and alarm indication lamp; 135-deg F fixed-temperature setting and rate-of-rise detection shall be 15-deg F per minute.

10. Individually Addressible Monitor Module: <>.

- a. This module shall provide location specific addressability for devices by monitoring normally closed or normally open dry contact devices.
- b. The module shall communicate four zone status conditions (open, normal, abnormal, and short).
- c. Integral LED to provide indication that module is powered and communicating with FACP.
- d. Devicies installed in junction boxes shall be supplied with manufacturer's faceplate to allow observation of LED.
- e. Provide three(3) extra spare.

11. Individually Addressable Relay Module:

- a. This module shall provide location specific addressability for devices by monitoring and controlling of a Form "C" contact.
- b. Provide seperate isolation relay listed to UL 864 and circuitry as required by device controlled.
- c. Integral LED to provide indication that module is powered and communicating with FACP.
- d. Devicies installed in junction boxes shall be supplied with manufacturer's faceplate to allow observation of LED.
- e. Provide one (1) extra spare.

H. Notification Appliances:

1. Alarm Speakers: <>

- a. Speakers shall be of the high-fidelity type and listed to UL 1480. Speaker appliances shall have a field selectable taps of 0.25, 0.5, 1, and 2 watts. The speaker shall mount directly to a standard single gang, double gang or 4" square, 2-1/8" or 3-1/2" deep electrical box, without the use of special adapter or trim rings. Enclosure shall be white with '**ALERT**' in red letters.
- b. Speaker output Rating at 25 or 70.7 Vrms @10ft (3m): 0.5 watt tap - 83 dBA
- c. Provide wall or ceiling mount devices as shown on the plans.
- d. Provide two(2) extra spare ceiling mounted device.

- e. Provide one(1) extra spare wall mounted device
2. Alarm Strobes: <>
 - a. Strobe shall be listed to UL 1971. The strobe shall consist of a xenon flash tube and associated lens/reflector system. The strobe enclosure mount directly to standard single gang, double gang or 4" square electrical box, without the use of special adapters or trim rings. Strobe appliances shall be provided with different minimum flash intensities of 15cd, 30cd, 75cd and 110cd. Provide a label inside the strobe lens to indicate the listed candela rating. All strobes shall be designed for synchronized flash operation. The strobe shall have a clear lens and enclosure shall be white with '**ALERT**' in red letters.
 - b. Strobe shall be synchronized.
 - c. Provide wall and ceiling mount devices as indicated on the drawings.
 - d. Provide wire guards where located in gymnasium areas.
 - e. Provide two (2) extra spare ceiling mounted devices of each type.
 - f. Provide one (2) extra spare wall mounted devices of each type.
 3. Alarm Speaker/Strobes: <>
 - a. Factory-integrated alarm speaker and strobe in a single mounted assembly that complies with both UL 464 and UL 1971.
 - b. Housing shall be white with '**ALERT**' in red letters.
 - c. Provide wall and ceiling mount devices as indicated on the drawings.
 - d. Provide wire guards where located in gymnasium areas.
 - e. Provide four(4) extra spare ceiling mount.
 - f. Provide two(2) extra spare wall mount.
 4. Text Messaging Display (FATMD)
 - a. High visibility, multi-color LED text message board to provide visible textual alarm notification. LED's are to be multi-color (red/yellow/green) to emphasize message content.
 - b. Minimum Text Size:
 - 1) Dual Line: 2.3" for typical viewing distance of up to 100 feet.
 - 2) Single Line: 4.7" for typical viewing distance of up to 200 feet.

- c. Up to thirty-two(32) available messages with ten(10) factory pre-programmed standard messages.
 - 1) Message content shall be verified with the Owner and Engineer prior to system commissioning.
 - d. Messages options to include static, flashing, or scrolling.
 - e. Provide ceiling suspension, surface mounting box and wall mounting adjustable brackets to allow rotation downward. Mounting location and type to be field verified with the Engineer.
 - f. UL listed to Standard 1638, Textual Visible Appliance and ULC Listed to S527
- I. Magnetic Door Holder:
- 1. All existing devices shall be removed and replaced with new devices.
 - 2. Units shall be listed to UL 228. Units are equipped for wall or floor mounting as indicated and are complete with matching door plate. Unit shall operate from a 120VAC, 24VAC or 24VDC source, and develops a minimum of 25 lbs. holding force.
 - 3. Finish as selected by Engineer.
 - 4. Provide adjustable extension arm for locations where door does not swing open enough to engage holder. The use of threaded rod is not acceptable.
- J. Circuit Conductors:
- 1. Initiating Device Circuits: 18-2 Twisted Shielded or as required by system supplier.
 - 2. Notification Circuit (Speaker): 18-2 Shielded or as required by system supplier.
 - 3. Notification Circuit (Strobe): 14-2 THHN or as required by system supplier.
- K. Conduit:
- 1. Provide minimum 3/4" EMT conduit for all new circuitry unless otherwise noted.
 - 2. Provide red conduit where installed only above lay-in ceilings.
 - 3. Paint conduit to match exposed ceiling structure in areas indicated on plans. In areas not noted to be painted, provide standard un-painted conduit.
- L. Surge Protection: In accordance with IEEE C62.41.2 category B combination waveform and NFPA 70; except for optical fiber conductors.

1. Equipment Connected to Alternating Current Circuits: Maximum let through voltage of 350 V(ac), line-to-neutral, and 350 V(ac), line-to-line; do not use fuses.
 2. Initiating Device Circuits, Notification Appliance Circuits, and Communications Circuits: Provide surge protection at each point where circuit exits or enters a building; rated to protect applicable equipment; for 24 V(dc) maximum dc clamping voltage of 36 V(dc), line-to-ground, and 72 V(dc), line-to-line.
 3. Signaling Line Circuits: Provide surge protection at each point where circuit exits or enters a building, rated to protect applicable equipment.
- M. Locks and Keys: Deliver keys to Owner.
1. Provide the same standard lock and key for each key operated switch and lockable panel and cabinet; provide 5 keys of each type
- N. Instruction Charts: Printed instruction chart for operators, showing steps to be taken when a signal is received (normal, alarm, supervisory, and trouble); easily readable from normal operator's station.
1. Frame: Stainless steel or aluminum with polycarbonate or glass cover.
 2. Provide one for each control unit where operations are to be performed.
 3. Obtain approval of Owner prior to mounting; mount in location acceptable to Owner.
 4. Provide extra copy with operation and maintenance data submittal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and Contract Documents.
- B. Modify existing and install new conduit system continuous for the entire Fire Alarm System.
- C. Conceal all conduit, boxes, and supports where installed in finished areas.
- D. Device Identification:
 1. Each intelligent device must be uniquely identified by an address code entered on each device at time of installation.
 2. Provide machine printed label with device address installed at a discrete location on the device. Label shall have black lettering with clear background.
- E. System Messaging:

1. System Supplier shall verify all message programming content with Owner's Representative during the initial system configuration, start-up and commissioning.
 - a. Audio Messages.
 - b. Text Display Messages.
- F. System Supplier is required to include multiple visits to the site for their project technician and or representative. These visits shall include the following:
 1. Attendance at the pre-construction meeting in order to discuss project schedule and sequencing of work in order to minimize system outages.
 2. All required site visits during the project to provide system programming and testing as each zone is changed over from the existing system/devices to the new addressable system/devices to ensure system is operational at all times.
 3. System commissioning, testing and final acceptance walk-thru with the AHJ.
 4. All required Owner training.
- G. Existing and/or new fire detection and alarm system shall remain operational at all times and be disabled only for system changeovers. Provide additional panel components, wiring and programming as required to maintain the system coverage at all times. Monitor existing zones with new or existing zone modules and transition system over to new system one zone at a time to minimize system disruption.
- H. Complete installation of all new raceways and circuitry for new devices prior to disabling any zone.
- I. Coordinate interface with existing elevator equipment and supplier.
- J. Refer to the Drawings for the extent of work required with replacing the existing fire system control panel based on either the basis of design system or alternate system. Include all costs associated with the panel replacement, repair, and painting of existing wall surface.
- K. Coordinate with Owner and their selected monitoring company to ensure system is fully functional and transmits supervisory/trouble and alarm signals. Provide all required communications equipment as required.
- L. Conceal all conduit, boxes, and supports where installed in finished areas.
- M. Install instruction cards and labels.

3.02 INSPECTION AND TESTING FOR COMPLETION

- A. Notify Owner 7 days prior to beginning completion inspections and tests.

- B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
- C. Provide the services of the installer's supervisor or person with equivalent qualifications to supervise inspection and testing, correction, and adjustments.
- D. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.
- E. Provide all tools, software, and supplies required to accomplish inspection and testing.
- F. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
- G. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.
- H. Diagnostic Period: After successful completion of inspections and tests, Operate system in normal mode for at least 14 days without any system or equipment malfunctions.
 - 1. Record all system operations and malfunctions.
 - 2. If a malfunction occurs, start diagnostic period over after correction of malfunction.
 - 3. Owner will provide attendant operator personnel during diagnostic period; schedule training to allow Owner personnel to perform normal duties.
 - 4. At end of successful diagnostic period, fill out and submit NFPA 72 "Inspection and Testing Form."

3.03 OWNER PERSONNEL INSTRUCTION

- A. Provide the following instruction to designated Owner personnel:
 - 1. Hands-On Instruction: On-site, using operational system.
 - 2. Training shall include operation, maintenance, and troubleshooting of system.
- B. Administrative: One-hour session(s) covering issues necessary for non-technical administrative staff:
 - 1. Initial Training: 1 session pre-closeout.
- C. Basic Operation: One-hour sessions for attendant personnel, security officers, and engineering staff; combination of classroom and hands-on:
 - 1. Initial Training: 1 session pre-closeout.

2. Refresher Training: 1 session post-occupancy within the first year of service.

D. Furnish the services of instructors and teaching aids; have copies of operation and maintenance data available during instruction.

3.04 CLOSEOUT

A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.

1. Be prepared to conduct any of the required tests.

2. Have at least one copy of operation and maintenance data, preliminary copy of project record drawings, input/output matrix, and operator instruction chart(s) available during demonstration.

3. Have authorized technical representative of control unit manufacturer present during demonstration.

4. Demonstration may be combined with inspection and testing required by authority having jurisdiction; notify authority having jurisdiction in time to schedule demonstration.

5. Repeat demonstration until successful.

B. Substantial Completion of the project cannot be achieved until inspection and testing is successful and:

1. Specified diagnostic period without malfunction has been completed.

2. Approved operating and maintenance data has been delivered.

3. Spare parts, extra materials, and tools have been delivered.

4. All aspects of operation have been demonstrated to Owner.

5. The completed and pre-tested smoke management system shall be fully tested in accordance with NFPA-72 by the contractor in the presence of the A/E representative, Owner's representative and the local Fire Marshal.

6. Final acceptance of the fire alarm system has been given by authorities having jurisdiction.

7. Specified pre-closeout instruction is complete.

C. Provide checklist to the office of the Engineer of the spare devices that are required to be turned over to the Owner and signed by the Owner's representative.

D. Perform post-occupancy instruction within 3 months after Substantial Completion.

END OF SECTION