



# BSC Aquatic & Wellness Center Pool Timing System Replacement

**Bismarck Parks and Recreation District**

Apex Project Number 25.184.0295

August 2026

Apex Engineering Group, Inc.  
600 South 2<sup>nd</sup> Street, Suite 145  
Bismarck, ND 58504

## CERTIFICATION

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



Signature

John M. Klein, PE

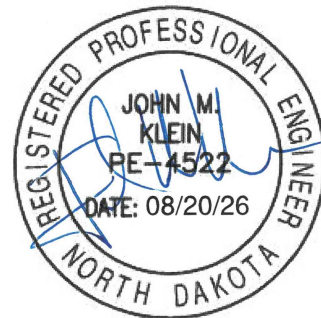
Typed or Printed Name

August 20, 2026

Date

PE-4522

License Number



**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

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## **ADVERTISEMENT FOR BIDS**

### **Bismarck State College Aquatic & Wellness Center – Pool Timing System Replacement**

Sealed bids for the construction of the Bismarck State College Aquatic & Wellness Center, Pool Timing System Replacement, according to the drawings and specifications on file in the office of the Engineer will be received by Executive Director of the Bismarck Parks and Recreation District at its office located at 400 E Front Ave, Bismarck, North Dakota until 10:00 am (central time) on September 10, 2026 and then publicly opened and read aloud. The Contract Documents may be examined at the following locations:

Apex Engineering Group, Inc. – 600 South 2nd Street – Suite 145, Bismarck, ND 58504  
Fargo-Moorhead Builder's Exchange – 1010 Page Drive, Fargo, ND 58103  
Bismarck-Mandan Builders Exchange – 4251 Morning Star Drive South, Mandan, ND  
Bismarck Builders Exchange – 723 Memorial Hwy, Suite 2 – Bismarck, ND  
Minot Builders Exchange – 2424 Burdick Expressway East – Minot, ND

The Contract Documents are available for download from the QuestCDN.com website for \$25.00 (QuestCDN Project #10327369)

Bids shall be based upon cash payment for the following general items:

The project shall consist of the replacement of the existing pool timing system and integration with the existing Daktronics Video Boards.

Bids will be received as a Lump Sum for Electrical Construction. The Owner intends to award the Bid based on the lowest Responsible Bidder. The Owner reserves the right to reject any and all Bids.

Each Bid shall be accompanied by a separate envelope containing the Bidder's Bond in a sum equal to five percent (5%) of the full amount of the Bid, executed by the Bidder as principal and by a surety company authorized to do business in this state, conditioned that if the principal's Bid is accepted and the contract awarded to the principal, the principal, within ten days after Notice of Award, shall execute and effect a contract in accordance with the terms of this Bid and a Contractor's Bond as required by law and the regulations and determinations of the governing body. The Bid Bond of the three lowest Bidders will be retained until the contract has been awarded and executed, but not longer than sixty (60) days. The Bid security is a guarantee that the Bidder will enter into contract for the work described in the Proposal. The bidder may submit a Bid Bond, certified check, or cashier's check payable to the Bismarck Parks and Recreation District.

A pre-bid walk-through is scheduled for 3:00 pm (central time) on August 25, 2026 at the project site (1601 Canary Avenue). All bidders are encouraged to attend.

All Bidders shall have a valid North Dakota Contractor's license of the appropriate Class for the work. Per North Dakota Century Code 43-07-12, bidder must hold the license for a period of 10-days prior to the bid opening. Bidders shall enclose a copy of the license or Certificate of Renewal in the same envelope as the Bidder's Bond. Failure to do so will render the Bid invalid.

No Bid will be read or considered unless it fully complies with the Bond and license requirements. Any deficient Bid will be resealed and returned to the Bidder immediately.

The successful Bidder shall be required to furnish both a Performance Bond and Payment Bond in the full amount of the Contract.

The Work under this Contract shall be Substantially Completed by April 16, 2027 and shall achieve Final Completion by April 30, 2027. Refer to Section 01015 Sequence and Constraints of Construction for additional work schedule requirements.

All questions regarding the contract documents shall be directed to the office of: Apex Engineering Group, Inc., John Klein, PE at 701-323-3961 or by email at [john.klein@apexenggroup.com](mailto:john.klein@apexenggroup.com). All questions must be received in writing or by email on or before seven (7) days prior to the bid opening. Responses to technical questions will be issued by addendum within five (5) days prior to the bid opening.

Dated this 20<sup>th</sup> day of August 2026



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Mr. Dave Leker  
Executive Director  
Bismarck Parks and Recreation District  
Bismarck, ND

Published August 20 and 27, September 3, 2026

**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

## **Section 00100 - INSTRUCTIONS TO BIDDERS**

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### **ARTICLE 1 – DEFINED TERMS**

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
  - B. *Successful Bidder* – The lowest, responsible, and responsive Bidder to whom Owner (on the basis of Owner’s evaluation) makes an award.
  - C. Other terms used in the Bidding documents and not defined elsewhere have the following meanings, which are applicable to both the singular and plural thereof:
    - 1. *Base Bid* – The sum stated in the Bid for which Bidder offers to perform work that is described in the Bidding Documents as Base, to which work may be added or from which work may be deleted for sums stated in the Alternate Bid.
    - 2. *Alternate Bid* – The amount stated in the Bid to be added to or deducted from the amount of the Base Bid, if accepted.
    - 3. *Furnished* – Shall mean to turn over to the Contractor at the job site for installation by the Contractor
    - 4. *Provide* – Shall mean furnished and installed in place by the Contractor.

### **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and for the deposited sum and in the format stated in the advertisement or invitation to bid. The deposit will not be refunded.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

### **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

- 3.01 To demonstrate Bidder’s qualifications to perform the Work, after submitting its Bid and within five (5) days of Owner’s request, Bidder shall submit written evidence establishing its qualifications such as financial data, previous experience, present commitments, and the following additional information:

- A. Each Bid must contain evidence of Bidder's qualification to do business in the State where the Project is located.
  - B. Each Bid must contain a copy of the Contractor's License or Certificate of Renewal issued by the Secretary of State enclosed in the Bid Bond envelope. No Contract shall be awarded to any Contractor without a Contractor's License of the appropriate Class. The Contractor must be a holder of said License a minimum of ten (10) days prior to the date set for receiving Bids. No Bid will be considered without this information and will be returned immediately to the Bidder.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

**ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
  - 1. The Supplementary Conditions identify:
    - a. those reports known to Owner of explorations and tests of conditions at or adjacent to the Site.
    - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
    - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
    - d. Technical Data contained in such reports and drawings.
  - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
- B. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or

unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

#### **4.03    *Site Visit and Testing by Bidders***

- A. Bidder shall conduct the required Site visit during normal working hours and shall not disturb any ongoing operations at the Site.
- B. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- C. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- D. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

#### **4.04    *Owner's Safety Program***

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

#### **4.05    *Other Work at the Site***

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

### **ARTICLE 5 – BIDDER'S REPRESENTATIONS**

#### **5.01    It is the responsibility of each Bidder before submitting a Bid to:**

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;

- D. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- E. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- F. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- G. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- H. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- I. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

## **ARTICLE 6 – PRE-BID CONFERENCE**

- 6.01 Pre-bid walk-thru meeting will be held August 25, 2026 at 3:00 pm at the project site. Pre-bid meeting is not mandatory, but attendance is strongly encouraged.

## **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

## **ARTICLE 8 – BID SECURITY**

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the

required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

## **ARTICLE 9 – CONTRACT TIMES**

- 9.01 The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Agreement. Refer to Section 01015 – Sequence and Constraints of Construction for additional work schedule requirements.

## **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01 NOT USED

## **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract. The procedure for submission of any such application by the Contractor and consideration by the Engineer is set forth in the General Conditions and may be supplemented in Division 01.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder's sole risk.

## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.

- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the Work.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

#### **ARTICLE 13 – PREPARATION OF BID**

- 13.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

- 13.04 A Bid by an individual shall show the Bidder's name and official address.

- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

- 13.06 All names shall be printed in ink below the signatures.

- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

- 13.09 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and

qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

#### **ARTICLE 14 – BASIS OF BID**

##### **14.01 Lump Sum**

A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

##### **14.02 Unit Price**

A. NOT USED

##### **14.03 Allowances**

A. NOT USED

#### **ARTICLE 15 – SUBMITTAL OF BID**

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.

**Items A and B Listed Below are Required in Separate Bid Security Envelope (Bid Envelope will not be opened without these documents):**

A. Required Bid security (5%)

B. North Dakota Contractor's License valid 10 days before bid opening

**Receipt of all Addenda issued during bidding shall be acknowledged by the Bidder on the outside of the Bid Envelope. Failure to acknowledge any Addenda issued during bidding shall render the Bid invalid.**

15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED."

15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

#### **ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID**

16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.

- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

#### **ARTICLE 17 – OPENING OF BIDS**

- 17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

#### **ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

#### **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Base Bid. Any Alternates shall be evaluated independently of the Base Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

#### **ARTICLE 20 – BONDS AND INSURANCE**

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

## **ARTICLE 21 – SIGNING OF AGREEMENT**

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

**END OF SECTION**

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**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00300 - BID FORM**

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**ARTICLE 1 – BID RECIPIENT**

1.01 This Bid is submitted to:

**Bismarck Parks and Recreation District – 400 E Front Ave – Bismarck, ND 58504**

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents and to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER'S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.

Addendum Date

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data."

- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

| Description of Item                                                                                                                                                                                                                       | Bid Amount (Fill in US Dollars or No Bid) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>A. Base Bid</b><br>The removal of existing pool timing system, installation of new pool timing system, integration with existing Daktronics video boards, additional circuitry, and system programming and commissioning installation. | \$ _____                                  |
| <b>B. Alternate Bid #1</b><br>Provide on-site training/support during the first swim meet after the system is commissioned.                                                                                                               | \$ _____                                  |
| <b>C. Alternate Bid #2</b><br>Provide an additional Control Console as specified under section 27 5500 – Pool Timing System.                                                                                                              | \$ _____                                  |
| <b>Total Bid Amount</b>                                                                                                                                                                                                                   | \$ _____                                  |
| <i>Total Lump Sum Amount in Words:</i><br>_____                                                                                                                                                                                           |                                           |

All specified cash allowances are included in the price(s) set forth above and have been computed in accordance with Paragraph 11.02 of the General Conditions.

#### ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete on or before April 16, 2027 and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before April 30, 2027.

#### ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:

**Items A and B Listed Below are Required in Separate Bid Security Envelope (Bid Envelope will not be opened without these documents):**

- A. Required Bid security (5%)
- B. North Dakota Contractor's License valid 10 days before bid opening

**Acknowledgement of Addenda on outside of Bid Envelope**

## ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## ARTICLE 9 - BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

### An Individual

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_  
(Individual's signature)

Doing business as: \_\_\_\_\_

### A Partnership

Partnership Name: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

### A Corporation

Corporation Name: \_\_\_\_\_ (SEAL)

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_  
(Signature -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_  
(CORPORATE SEAL)

Attest \_\_\_\_\_

Date of Qualification to do business in [State where Project is located] is  
\_\_\_\_/\_\_\_\_/\_\_\_\_.

A Joint Venture

Name of Joint Venture: \_\_\_\_\_

First Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_

Second Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address \_\_\_\_\_  
\_\_\_\_\_

Phone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

E-mail \_\_\_\_\_

SUBMITTED on \_\_\_\_\_, 20\_\_\_\_.

State Contractor License No. \_\_\_\_\_. *[If applicable]*

**END OF SECTION**

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**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00430 – BIDDER'S BOND**

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See attached document.

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## BID BOND (PENAL SUM FORM)

|                                                                                                                                                                                                               |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>Bidder</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                      | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> : |
| <b>Owner</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                       | <b>Bid</b><br>Project <i>(name and location)</i> :<br><br>Bid Due Date:  |
| <b>Bond</b><br>Penal Sum:<br>Date of Bond:                                                                                                                                                                    |                                                                          |
| Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative. |                                                                          |
| Bidder                                                                                                                                                                                                        | Surety                                                                   |
| _____<br><i>(Full formal name of Bidder)</i>                                                                                                                                                                  | _____<br><i>(Full formal name of Surety) (corporate seal)</i>            |
| By: _____<br><i>(Signature)</i>                                                                                                                                                                               | By: _____<br><i>(Signature) (Attach Power of Attorney)</i>               |
| Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                                      | Name: _____<br><i>(Printed or typed)</i>                                 |
| Title: _____                                                                                                                                                                                                  | Title: _____                                                             |
| Attest: _____<br><i>(Signature)</i>                                                                                                                                                                           | Attest: _____<br><i>(Signature)</i>                                      |
| Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                                      | Name: _____<br><i>(Printed or typed)</i>                                 |
| Title: _____                                                                                                                                                                                                  | Title: _____                                                             |
| <i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>                                      |                                                                          |

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
  - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2. All Bids are rejected by Owner, or
  - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00520 – AGREEMENT**

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See attached document.

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# AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **Bismarck Parks and Recreation District – 400 East Front Avenue, Bismarck, ND 58504** (“Owner”) and \_\_\_\_\_ (“Contractor”).

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

## ARTICLE 1—WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **BSC Aquatic & Wellness Center – Pool Timing System Replacement**

## ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Removal and replacement of existing Pool Timing System, associated components, operating software, and integration with the existing Daktronics video board.**

## ARTICLE 3—ENGINEER

- 3.01 The Owner has retained **Apex Engineering Group, Inc.** (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by the Engineer.

## ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Dates*
- A. The Work will be substantially complete on or before **April 16, 2027**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **April 30, 2027**.
- 4.03 *Liquidated Damages*
- A. Not Applicable.
- 4.04 *Special Damages*
- A. Not Applicable.

## ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work other than Unit Price Work, a lump sum of \$\_\_\_\_\_

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

## ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **25th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. **Ninety (90)** percent of the value of the Work completed (with the balance being retainage).

1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. **Ninety (90)** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **One Hundred (100)** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **Two Hundred (200)** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the maximum rate of **Eighteen (18)** percent per annum.

**ARTICLE 7—CONTRACT DOCUMENTS**

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
  - 1. This Agreement (pages \_\_ to \_\_, inclusive).
  - 2. Bonds:
    - a. Performance bond (pages \_\_ to \_\_, inclusive).
    - b. Payment bond (pages \_\_ to \_\_, inclusive).
  - 3. General Conditions (pages \_\_ to \_\_, inclusive).
  - 4. Supplementary Conditions (pages \_\_ to \_\_, inclusive).
  - 5. Specifications as listed in the table of contents of the Project Manual.
  - 6. Drawings (not attached but incorporated by reference) consisting of \_\_\_\_\_ sheets with each sheet bearing the following general title: **BSC Aquatic & Wellness Center – Pool Timing System Replacement.**
  - 7. Addenda (numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive).
  - 9. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid (pages \_\_ to \_\_, inclusive).
  - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - a. Notice to Proceed.
    - b. Work Change Directives.
    - c. Change Orders.
    - d. Field Orders.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.

- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

## **ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**

### **8.01 Contractor's Representations**

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
  2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
  4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
  5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
  6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
  7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
  8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
  9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

#### 8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
  1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
  2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
  4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### 8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

### **ARTICLE 9— MISCELLANEOUS**

#### 9.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

#### 9.02 *Assignment Of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and

unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.03 *Successors And Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

Owner:

Bismarck Parks and Recreation District

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name: Dave Leker

(typed or printed)

Title: Executive Director

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

400 East Front Avenue

Bismarck, North Dakota 58504

Designated Representative:

Name: Dave Leker

(typed or printed)

Title: Executive Director

(typed or printed)

Address:

400 East Front Avenue

Bismarck, North Dakota 58504

Phone: 701-221-6837

Email: DLeker@bisparks.org

(If \_\_\_\_\_ is a corporation, attach evidence of authority to sign. If \_\_\_\_\_ is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

(If \_\_\_\_\_ is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

License No.:

(where applicable)

State:

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**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00610 – PERFORMANCE BOND**

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See attached document.

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## PERFORMANCE BOND

|                                                                                                                                                                                                                                        |                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Contractor</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                           | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> :                                          |
| <b>Owner</b><br>Name:<br>Mailing address <i>(principal place of business)</i> :                                                                                                                                                        | <b>Contract</b><br>Description <i>(name and location)</i> :<br><br>Contract Price:<br>Effective Date of Contract: |
| <b>Bond</b><br>Bond Amount:<br>Date of Bond:<br><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i><br>Modifications to this Bond form:<br><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16 |                                                                                                                   |
| Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.      |                                                                                                                   |
| Contractor as Principal                                                                                                                                                                                                                | Surety                                                                                                            |
| <i>(Full formal name of Contractor)</i>                                                                                                                                                                                                | <i>(Full formal name of Surety) (corporate seal)</i>                                                              |
| By: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                 | By: _____<br><div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>                  |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                   |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                      |
| Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                             | Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                        |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                   |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                      |
| <i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>                    |                                                                                                                   |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
  - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
  - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
  - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
  - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
  - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
  - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: None.

**BSC Aquatic & Wellness Center  
Pool Timing Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00615 – PAYMENT BOND**

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See attached document.

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## PAYMENT BOND

|                                                                                                                                                                                                                                        |                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Contractor</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                           | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> :                                          |
| <b>Owner</b><br>Name:<br>Mailing address <i>(principal place of business)</i> :                                                                                                                                                        | <b>Contract</b><br>Description <i>(name and location)</i> :<br><br>Contract Price:<br>Effective Date of Contract: |
| <b>Bond</b><br>Bond Amount:<br>Date of Bond:<br><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i><br>Modifications to this Bond form:<br><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18 |                                                                                                                   |
| Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.              |                                                                                                                   |
| Contractor as Principal                                                                                                                                                                                                                | Surety                                                                                                            |
| <i>(Full formal name of Contractor)</i>                                                                                                                                                                                                | <i>(Full formal name of Surety) (corporate seal)</i>                                                              |
| By: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                 | By: _____<br><div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>                  |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                   |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                      |
| Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                             | Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                        |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                   |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                      |
| <i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>                    |                                                                                                                   |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
  - 5.1. Claimants who do not have a direct contract with the Contractor
    - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2. Pay or arrange for payment of any undisputed amounts.
  - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
  - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
    - 16.1.1. The name of the Claimant;
    - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
    - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
  - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
  - 16.1.7. The total amount of previous payments received by the Claimant; and
  - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: None.

**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**Section 00700 – GENERAL CONDITIONS**

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See attached document.

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## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*
    - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
  - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
  - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
  - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
  - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
  - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - 1. does not conform to the Contract Documents;
  - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
  - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
  - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
  - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2—PRELIMINARY MATTERS**

### **2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance***

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
  - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

## ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

### 3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

#### B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

### 4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;
  - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
  2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
  3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
  4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
  5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

## 5.02 *Use of Site and Other Areas*

### A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
  - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

### 5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
  1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
  2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
  3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
  4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
  2. is of such a nature as to require a change in the Drawings or Specifications;
  3. differs materially from that shown or indicated in the Contract Documents; or
  4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
  - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
  - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
    - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
    - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
  3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
  2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
  3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
  4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
  - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
  - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
  4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

#### 5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6—BONDS AND INSURANCE**

### **6.01 *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

#### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
  - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

#### 6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
  - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
  - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
  - 3) has a proven record of performance and availability of responsive service; and
  - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
    - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
    - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
  - a. will certify that the proposed substitute item will:
    - 1) perform adequately the functions and achieve the results called for by the general design;
    - 2) be similar in substance to the item specified; and
    - 3) be suited to the same use as the item specified.
  - b. will state:
    - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
    - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
    - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
  - c. will identify:
    - 1) all variations of the proposed substitute item from the item specified; and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

#### 7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

### 7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
  2. *Samples*
    - a. Contractor shall submit the number of Samples required in the Specifications.
    - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

*D. Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

*E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

**7.17 Contractor's General Warranty and Guarantee**

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
  - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
  - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
  - 1. Observations by Engineer;
  - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  - 4. Use or occupancy of the Work or any part thereof by Owner;
  - 5. Any review and approval of a Shop Drawing or Sample submittal;
  - 6. The issuance of a notice of acceptability by Engineer;
  - 7. The end of the correction period established in Paragraph 15.08;
  - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

**7.18 Indemnification**

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**7.19 Delegation of Professional Design Services**

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

## **ARTICLE 8—OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

#### 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
  - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01    *Communications to Contractor***

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

### **9.02    *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

### **9.03    *Furnish Data***

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### **9.04    *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

## ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

### 10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

### 10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

### 10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

### 10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

**10.05 *Determinations for Unit Price Work***

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

**10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work***

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

**10.07 *Limitations on Engineer's Authority and Responsibilities***

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

**10.08 *Compliance with Safety Program***

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

## ARTICLE 11—CHANGES TO THE CONTRACT

### 11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

### 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

### 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

#### 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
  2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
  3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
  2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

#### 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

#### 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
  - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
  - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

### ARTICLE 12—CLAIMS

#### 12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
  1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
  3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
  4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
  - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
  - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
  - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **13.01 *Cost of the Work***

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
  - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
  4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
  5. Other costs consisting of the following:
    - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
    - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
  - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
  - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
  - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
  - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  - 6. Expenses incurred in preparing and advancing Claims.
  - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
  - 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
    - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
    - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
      - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
      - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
  - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

#### 13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

#### 13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
  - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

**ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  3. by manufacturers of equipment furnished under the Contract Documents;
  4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

**14.07 Owner May Correct Defective Work**

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

**ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

**15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
  - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*C. Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work;
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

**D. *Payment Becomes Due***

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

**E. *Reductions in Payment by Owner***

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such adjacent areas;
  - 2. correct such defective Work;
  - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## **ARTICLE 17—FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
  - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
  - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  - 2. agree with the other party to submit the dispute to another dispute resolution process; or
  - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18—MISCELLANEOUS**

### **18.01 *Giving Notice***

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
  - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
  - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
  - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

### **18.02 *Computation of Times***

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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**BSC Aquatic & Wellness Center  
Pool Timing System Replacement  
Bismarck Parks and Recreation District  
Apex Project# 25.184.0295**

**SECTION 00810 - SUPPLEMENTARY CONDITIONS TO THE CONSTRUCTION CONTRACT**

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These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

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SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

- A. Owner shall furnish to Contractor one (1) printed copy of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

- B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

- 1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the

requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

## 2. *System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
  - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is fifteen (15)MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
  - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.
- h. The Owner will operate a Project information management system (also referred to in this EDP as "Project Website") for use of Owner, Engineer and Contractor during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the parties as described in this Paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. The following conditions and standards will govern use of the Project Website:
  - 1) Project Website is not required for this project.

C. *Software Requirements for Electronic Document Exchange; Limitations*

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
  - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
- 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any

Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

| Item  | Electronic Documents                                                                                                                                                                                                                                                                                       | Transmittal Means          | Data Format | Note (1) |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|----------|
| a.1   | General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.                                                                                                                                                  | Email                      | Email       |          |
| a.2   | Meeting agendas, meeting minutes, and Contract forms.                                                                                                                                                                                                                                                      | Email w/ Attachment        | PDF         | (2)      |
| a.3   | Requests for Information (RFIs) and responses to RFIs                                                                                                                                                                                                                                                      | Email w/ Attachment        | PDF         | (2)      |
| a.4   | Contractors Submittals (Shop Drawings, “or equal” requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner’s and Engineer’s responses to Contractor’s Submittals, Shop Drawings, correspondence, and Applications for Payment. | Email w/ Attachment or LFE | PDF         |          |
| a.5   | Operation and Maintenance Manuals, Test Reports, and as-built drawings to be submitted to Owner for future reference and use..                                                                                                                                                                             | Email w/ Attachment or LFE | PDF         |          |
| Notes |                                                                                                                                                                                                                                                                                                            |                            |             |          |
| (1)   | All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.                                                                                                                                                                                                |                            |             |          |
| (2)   | Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.                                                                                                                                                                                                                   |                            |             |          |
| Key   |                                                                                                                                                                                                                                                                                                            |                            |             |          |
| Email | Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies                                                                                                                                          |                            |             |          |
| LFE   | Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)                                                                                                                                                                                                                                          |                            |             |          |
| PDF   | Portable Document Format readable by Adobe® Acrobat Reader, latest Version                                                                                                                                                                                                                                 |                            |             |          |
| DWG   | Autodesk® AutoCAD .dwg format Version: Current Version on advertisement date or newer.                                                                                                                                                                                                                     |                            |             |          |
| DOC   | Microsoft® Word .docx format Version Current Version on advertisement date or newer.                                                                                                                                                                                                                       |                            |             |          |
| EXC   | Microsoft® Excel .xls or .xml format Version Current Version on advertisement date or newer.                                                                                                                                                                                                               |                            |             |          |
| DB    | Microsoft® Access .mdb format Version Current Version on advertisement date or newer.                                                                                                                                                                                                                      |                            |             |          |

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.A:

This Contract does not contain a Geotechnical Data Report (GDR).

Copies of reports and drawings referenced above are included in the project specifications. These reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 5.03.B of the General Conditions has been identified and established in Paragraph 5.03 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any

“technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

The reports and drawings identified above are not part of the Contract Documents, but the “technical data” contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.

SC-5.05 Add the following new paragraphs immediately before Paragraph 5.05.A

*Underground Facilities*

Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others. The subsurface utility information in these contract documents is Utility Quality Level D in accordance to the guideline of CI/ASCE 38-02 entitled, “Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data”; and the costs of all the following are included in the Contract Price, and Contractor shall have full responsibility for:

SC-5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

- 1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® 00610, Performance Bond (2018 edition).
- 2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® 00615, Payment Bond (2018 edition).

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.H.2.

- 3. Contractor is solely responsible for ensuring Subcontractors and Suppliers comply with the above provisions at all times. Contractor shall document and maintain all worker’s compensation and insurance information provided by their Subcontractors and Suppliers and will submit documentation to the Owner and/or Engineer upon request.

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: J2 Studio Architecture, CW Structural, MBN Engineering, Braun Intertec, Terracon Consultants, Inc., KLJ.

- E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

| <b>Workers' Compensation and Related Policies</b>                                                                                                                                           | <b>Policy limits of not less than:</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Workers' Compensation</b>                                                                                                                                                                |                                        |
| State                                                                                                                                                                                       | Statutory                              |
| Applicable Federal (e.g., Longshoreman's)                                                                                                                                                   | Statutory                              |
| Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable                                                                                                 | Statutory                              |
| <b>Jones Act (if applicable)</b>                                                                                                                                                            |                                        |
| Bodily injury by accident—each accident                                                                                                                                                     | N/A                                    |
| Bodily injury by disease—aggregate                                                                                                                                                          | N/A                                    |
| <b>Employer's Liability</b>                                                                                                                                                                 |                                        |
| Each accident                                                                                                                                                                               | \$1,000,000                            |
| Each employee                                                                                                                                                                               | \$1,000,000                            |
| Policy limit                                                                                                                                                                                | \$1,000,000                            |
| <b>Stop-gap Liability Coverage</b>                                                                                                                                                          |                                        |
| For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of: | N/A                                    |

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
  2. damages insured by reasonably available personal injury liability coverage, and
  3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
    - a. Such insurance must be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
  4. Underground, explosion, and collapse coverage.
  5. Personal injury coverage.
  6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
  7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
  2. Any exclusion for water intrusion or water damage.
  3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
  4. Any exclusion of coverage relating to earth subsidence or movement.
  5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
  6. Any limitation or exclusion based on the nature of Contractor's work.
  7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

| <b>Commercial General Liability</b>               | <b>Policy limits of not less than:</b> |
|---------------------------------------------------|----------------------------------------|
| General Aggregate                                 | \$2,000,000                            |
| Products—Completed Operations Aggregate           | \$2,000,000                            |
| Personal and Advertising Injury                   | \$1,000,000                            |
| Bodily Injury and Property Damage—Each Occurrence | \$1,000,000                            |

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

| <b>Automobile Liability</b>                               | <b>Policy limits of not less than:</b> |
|-----------------------------------------------------------|----------------------------------------|
| <b>Bodily Injury</b>                                      |                                        |
| Each Person                                               | \$1,000,000                            |
| Each Accident                                             | \$1,000,000                            |
| <b>Property Damage</b>                                    |                                        |
| Each Accident                                             | \$1,000,000                            |
| <b>or</b>                                                 |                                        |
| <b>Combined Single Limit</b>                              |                                        |
| Combined Single Limit (Bodily Injury and Property Damage) | \$1,000,000                            |

- K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

| <b>Excess or Umbrella Liability</b> | <b>Policy limits of not less than:</b> |
|-------------------------------------|----------------------------------------|
| Each Occurrence                     | \$1,000,000                            |
| General Aggregate                   | \$1,000,000                            |

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein..
- M. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

| <b>Contractor's Pollution Liability</b> | <b>Policy limits of not less than:</b> |
|-----------------------------------------|----------------------------------------|
| Each Occurrence/Claim                   | N/A                                    |
| General Aggregate                       | N/A                                    |

- N. *Contractor's Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

| <b>Contractor's Professional Liability</b> | <b>Policy limits of not less than:</b> |
|--------------------------------------------|----------------------------------------|
| Each Claim                                 | N/A                                    |
| Annual Aggregate                           | N/A                                    |

Q. *Other Required Insurance:* N/A

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be 7 AM to 7 PM, Monday through Friday.
2. Owner's legal holidays are New Year's Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas Day.
3. Community Celebrations or other events, which the contractor may not perform certain work which may be disruptive (as determined by the Engineer) will be coordinated by Owner at least two weeks prior to the event.

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

- D. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-7.03 Amend the first and second sentences of Paragraph 7.03.C to state "...all Work at the Site must be performed during regular working hours, Monday through Friday. Work may be performed on Saturday if requested and approved. Contractor to submit Saturday work request in writing 2 weeks prior to work for approval. Contractor will not perform Work on a Sunday, any legal holiday, or during certain community celebrations and events."

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

- C. Owner intends to contract with others for the performance of other work at or adjacent to the Site.
1. The Contractor shall have authority and responsibility for coordination of the various contractors and work forces at the Site. The Contractor shall keep the Engineer well informed of progress, milestones, and schedule that relate to the work of others performing work at the site.
  2. The following other work will be performed at the site:
    - a. None
    - b. Other private utilities (gas, communications, etc.) may also be required to upgrade or relocate facilities to accommodate the Contractor's work. The contractor shall coordinate such activities and assume adequate time within the project schedule to allow for this work.

3. The extent of such authority and responsibilities is limited to the notification, coordination, and communicating with others as it relates to their work. The Contractor shall not direct or have control over other work. The Contractor shall immediately notify the Engineer if the work of others will cause delay or other adverse impact to the project, beyond what could be reasonably assumed or expected with the nature of Work.

SC-10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
  1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
  2. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by the Contractor and consult with the Engineer concerning acceptability.
  3. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
  4. *Liaison*
    - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
    - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
    - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
    - d. Interpretation of Contract Documents: Report to the Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to the Contractor clarifications and interpretations as issued by the Engineer.
    - e. Modifications: Consider and evaluate the Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with the RPR's recommendations, if any, to the Engineer. Transmit to the Contractor in writing decisions as issued by the Engineer.

- f. *Shop Drawings and Samples:* Record date of receipt of Samples and Contractor-approved shop drawings, receive samples which are furnished by Contractor and notify engineer of availability of Samples for examination, advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

4. *Review of Work; Defective Work*

- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
- b. Observe whether any Work in place appears to be defective.
- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to the Engineer, noting particularly the relationship of the payment requested with the Schedule of Values, Work completed, and materials and equipment delivered at the Site by not incorporated in the Work.

7. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operations and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by the Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to the Engineer for review and forwarding to the Owner prior to payment for that part of the Work.

8. *Completion*

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than the Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of the Rental Rate Blue Book as published by Primedia Information, Inc.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

- a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than \$1,000.

SC-13.02 Delete Paragraph 13.02.A, B, C, AND D their entirety.

SC-13.03 Delete Paragraph 13.03.A, B, C, D, and E their entirety.

SC-14.02 Add the following to 14.02 following Paragraph F:

- G. The Contractor shall pay for tests and associated costs to the Owner that fail to meet the specified standards. All costs associated with failing tests shall be deducted from the contract and withheld from following payments which may be due to the contractor.

SC-15.01 Delete 15.01.D and replace with the following:

D. Payment Becomes Due:

1. Thirty (30) days after the presentation of the Application for Payment to Owner with Engineer's recommendations and funding agency concurrence, the amount recommended will (subject to the provisions of Paragraph 14.02D) become due and will be paid by the Owner to the Contractor.

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be

paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

SC-15.08 Revise 15.08.C to read as follows:

In Special circumstances where a particular item of equipment is placed in continuous service before substantial completion of all the work, the correction period for that item may start to run from an earlier date, if a separate substantial completion, in accordance with 14.05 of the General Conditions, was requested by the contractor and executed by all parties.

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

**17.02 Arbitration**

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of a mutually agreed upon arbitration agency subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.
- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
  - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
  - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.

- F. The fees and expenses of the arbitrators and any arbitration service shall be paid by the Contractor.

**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Summary of Project
- B. Coordination and Project Conditions
- C. Contractor's use of Site and Premises
- D. Owner Occupancy

**1.02 LOCATION OF WORK**

- A. The work of this Contract is located at the Bismarck State College Aquatic & Wellness Center, 1601 Canary Avenue, Bismarck, ND 58503.

**1.03 SUMMARY OF PROJECT**

- A. Furnish all labor, materials, equipment, and incidentals required and perform all demolition, construction, installation, and testing of all improvements, modifications, and additions as shown on the Drawings and specified in the Project Manual.
- B. Major components of the project include but not limited to the following:
  - a. Removal and disposal of existing Daktronics Pool Timing System.
  - b. New Pool Timing System equipment and installation.
  - c. Integration with the existing Daktronics Video Board.
  - d. Alternate bid item for on-site training/support during the first swim meet after the new system is commissioned.

**1.04 COORDINATION AND PROJECT CONDITIONS**

- A. Construction Coordinator provided by the Prime Contractor
  - 1. Allocate and coordinate use of Site for field offices and construction trailers and for access, traffic, and parking facilities.
  - 2. Instruct and coordinate the use of temporary utilities and construction facilities.
  - 3. Coordinate field engineering and layout of Work.
  - 4. Coordinate the Work of the Subcontractors.

**1.05 CONTRACTOR USE OF SITE AND PREMISES**

- A. Contractor shall limit use of site and premises to allow for the following:
  - 1. Owner and patron occupancy
  - 2. Access to site for Owner's personnel and agents.
- B. Contractor Staging Areas
  - 1. In general, the Contractor shall be allowed to use property owned by the Owner for staging areas. Use of these areas shall be coordinated with the Owner and Engineer
  - 2. All other areas necessary for Contractor's staging shall be obtained and paid for by the Contractor.

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1.06 OWNER OCCUPANCY

- A. The Owner will occupy the entire site during the entire period of Construction for the conduct of normal operations, construction observation, and quality control testing.
- B. The Contractor shall schedule the Work to accommodate this requirement.
- C. Refer to Section 01015 Sequence and Constraints of Construction for additional schedule requirements.

**SECTION 2 – PRODUCT (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

## **SECTION 1 – GENERAL**

### **1.01 SPECIFICATION INCLUDES**

- A. Construction Sequence and Constraints

### **1.02 RELATED SPECIFICATIONS**

- A. Section 00520 – Agreement
- B. Section 01010 – Summary of Work
- C. Section 01300 – Submittals (Progress Schedule and Reports)

### **1.03 CONSTRUCTION SEQUENCE AND CONSTRAINTS**

- A. General constraints within which the Contractor shall cooperatively schedule the Work include, but are not limited to, the following:
  - 1. All Work must be completed during the time set forth in the Bid Form and Agreement and within the construction windows identified herein.
    - i. The facility is heavily utilized and has the following construction window dates when the existing/new pool timing system can be out of service to complete the work. Preliminary work that does not affect the operation of the existing pool timing system may be performed at other times and as scheduled with the Owner.
      - 1. Construction Window #1: December 18, 2026 through January 1, 2027.
      - 2. Construction Window #2: February 22, 2027 through March 5, 2027.
      - 3. Construction Window #4: April 1, 2027 through April 30, 2027.
    - ii. At the end of each construction window, the new timing system shall be operational, integrated with existing Daktronics video board, fully tested, commissioned and in final working order to allow the video board to be used at scheduled events.
- B. Constraints affecting specific areas of the Work and specific Work sequencing requirements are described in the following sections:
  - 1. The Owner intends to occupy and utilize the facility during construction activities.
  - 2. Contractor shall coordinate all work with the Owner that is to be performed while the facility is being utilized by patrons.
  - 3. Provide barriers and caution tape to identify construction zones and to prevent unauthorized entry to the construction area by facility patrons.
  - 4. Provide barriers along edge of pool to prevent accidental falls into pool.

## **SECTION 2 – PRODUCTS (NOT USED)**

## **SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Schedule of Values / Allowances
- B. Applications for Payment
- C. Change Procedures
- D. Alternates

**1.02 RELATED SPECIFICATIONS**

- A. Section 01027 – Applications for Payment
- B. Section 01300 – Submittals
- C. Section 01600 – Material and Equipment
- D. Section 01630 – Product Options and Substitutions

**1.03 SCHEDULE OF VALUES / ALLOWANCES**

- A. Contractor shall submit to the Engineer a typed Schedule of Values on EJCDC Form C-620. Other forms, such as the Contractor's standard form or other electronic media printout, shall be submitted to the Engineer for approval for use.
- B. Contractor shall submit the Schedule of Values in triplicate within fifteen (15) days after the Owner-Contractor Agreement.
- C. Contractor shall utilize the Table of Contents of the Specifications as the format for the Schedule of Values. Identify each line item with number and title of the major Specification section. General Conditions, such as mobilization, bonds, and insurance shall be identified in a separate line item.
- D. Include in each line item the amount of Allowances specified in this Section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- E. Revise the Schedule of Values to include approved Change Orders with each Application for Payment.
- F. General Contractor shall provide a separate line item allowance for performing services associated with Construction Coordinator.
- G. General Contractor shall be required to obtain all building permits associated with all construction activities.

**1.04 APPLICATIONS FOR PAYMENT**

- A. Submit four (4) copies of each application on EJCDC C-620 or other prior approved form.
- B. Contractor shall utilize the Schedule of Values for listing items in the Application for Payment.
- C. Payment shall be made approximately every 30 days. Contractor shall adhere to Owner's and Engineer's schedules for submission of Applications for Payment.

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#### 1.05 CHANGE PROCEDURES

- A. The Engineer may advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Times as authorized by issuing supplemental instructions.
- B. The Engineer may issue a Notice of Change which includes a detailed description of a proposed change with supplementary or revised Drawings and Specifications, and a change in Contract Times for executing the change. Contractor will prepare and submit a proposal within five (5) days.
- C. Stipulated Price Change Order: Based on Notice of Change and Contractor's fixed price proposal or quotation.
- D. Unit Price Change Order: For pre-determined unit prices and quantities, the Change order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Change Directive. Changes in Contract Price or Contract Time will be computed as specified for Time and Material Change Order.
- E. Work Change Directive: Engineer may issue a directive signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Price or Contract Time. Contractor shall promptly execute the Change.
- F. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Price and Contract Time as provided in the Contract Documents.
- G. Maintain detailed records of work done on Time and Material bases. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- H. Change Order Form: Utilize EJCDC C941 or other form with the approval of the Engineer.
- I. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

#### 1.06 ALTERNATES

- 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.
  - a. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
- B. The Owner reserves the right to accept or reject alternates in any numerical orders listed.
- C. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

- a. 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.
- D. 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.
- E. Execute accepted alternates under the same conditions as other work of the Contract.
- F. Schedule of Alternates:
  - a. Alternate No. 1:
    - i. State the amount to be ADDED to the BASE BID for all labor, material and equipment costs associated with on-site training/support during the first swim meet after the new system is commissioned.
    - ii. Base Bid: No additional work shall be performed.
  - b. Alternate No. 2:
    - i. State the amount to be ADDED to the BASE BID for all labor, material and equipment costs associated with an additional control console as specified in Section 27 5500.
    - ii. Base Bid: No additional work shall be performed.

## **SECTION 2 – PRODUCTS (NOT USED)**

## **SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Procedures for preparation of Applications for Payment
- B. Procedures for submittal of Applications for Payment
- C. Procedures for submitting substantiating data, when applicable.

**1.02 RELATED SPECIFICATIONS**

- A. Section 00520 - Agreement
- B. Section 00700 – General Conditions
- C. Section 01019 – Contract Considerations
- D. Section 01300 – Submittals
- E. Section 01700 – Contract Closeout

**1.03 APPLICATION FORMAT**

- A. All Applications for Payment shall be submitted on EJCDC Form C-620 or AIA equivalent, including all continuation sheets or per approved application for payment.
- B. Alternative Formats will be acceptable when prior approval is granted by the Engineer.

**1.04 PREPARATION OF APPLICATIONS FOR PAYMENT**

- A. All required information shall be presented on an electronic media printout.
- B. Applications for Payment shall be executed with the signature of an authorized officer.
- C. Applications for Payment shall utilize data from the approved Schedule of Values. Dollar value shall be shown in separate columns for each portion of Work performed and also for stored materials.
- D. All approved Change Orders shall be shown on a continuation sheet and shall list the Change Order number and dollar value of the Change Order.
- E. The Final Application for Payment shall be prepared as outlined in Section 01700 – Contract Closeout.

**1.05 SUBMITTAL OF APPLICATIONS FOR PAYMENT**

- A. Contractor shall submit four (4) original Applications for Payment for each payment period. Digital electronic copies may be accepted with prior approval by the Engineer. The payment period shall be as outlined in Section 00520 – Agreement.
- B. Contractor shall submit an updated Construction Schedule with each Application for Payment. Failure to do so may delay processing of the Application for Payment.
- C. All Applications for Payment shall be accompanied by a Transmittal Letter as outlined in Section 01300 – Submittals.

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1.06 SUBSTANTIATING DATA

- A. When required by the Engineer, Contractor shall submit adequate data to justify any dollar amounts shown on the Applications for Payment.
- B. Contractor shall provide Engineer with access to inspect and quantify any Stored Material shown on the Applications for Payment.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Project Coordination
- B. Preconstruction Conference
- C. Construction Progress Meetings

**1.02 RELATED SPECIFICATIONS**

- A. Section 01027 – Applications for Payment
- B. Section 01700 – Contract Closeout

**1.03 PROJECT COORDINATION**

- A. The Construction Coordinator for the Project shall be provided by the Prime Contractor for all Contracts associated with the Project. In this capacity, the duties and responsibilities in scheduling and performance of the Work shall be as follows:
  - 1. Allocate and coordinate the use of a site for field offices/construction trailers, site access, traffic, and parking.
  - 2. Install and coordinate the use of temporary utilities and construction facilities.
  - 3. Coordinate field engineering and layout of the Work.
  - 4. Coordinate the Work of individual Contractors and Subcontractors.
- B. Coordinate scheduling, submittals and Work of the various Sections of the Specifications to ensure efficient and orderly sequencing of the installation of interdependent portions of the Work.
- C. Verify that the utility requirements of equipment are compatible with the utilities. Coordinate the Work of Sections having interdependent responsibilities for installing, connection to, and placing in service, this equipment.
- D. Coordinate the completion and cleanup of the Work of separate Sections in preparation of Substantial Completion and for portions of the Work designated for Owner occupancy.
- E. After Owner occupancy, coordinate access for correction of deficiencies and Work not in accordance with the Contract Documents so as to minimize disruption of Owner's activities.

**1.04 PRECONSTRUCTION CONFERENCE**

- A. After the issuance of the Notice of Award and execution of the Agreement, Engineer will schedule a Preconstruction Conference.
- B. Attendance will be mandatory for the following:
  - 1. Engineer Representatives
  - 2. Owner Representatives
  - 3. Contractor Representatives
- C. Engineer will prepare an Agenda that will include, at a minimum, the following:
  - 1. Submission of executed Bonds and Insurance Certificates.
  - 2. Distribution of Contract Documents

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3. Submission of a list of Subcontractors, Product Lists, Schedule of Values, and Preliminary Progress Schedule.
  4. Designation of personnel representing the parties in the Controls.
  5. Procedures for field decisions, submittals, substitutions, applications for payments, requests for information, requests for proposals, Change Orders, O&M Manuals, project closeout procedures, and other contractual items.
  6. Contractor's Scheduling.

#### 1.05 CONSTRUCTION PROGRESS MEETINGS

- A. Engineer will schedule and administer construction progress meetings throughout the progress of the Work. Meeting intervals may be variable to coincide with the execution of the work but will not be less often than every two weeks.
- B. Engineer will arrange the meeting, prepare an agenda, preside over the meeting, record minutes and distribute those minutes to all affected by decisions made at the meeting.
- C. Contractor shall ensure that the Job superintendent, major subcontractors, and major suppliers are in attendance, as appropriate for agenda items.
- D. The Agenda will include, at a minimum, the following items:
  1. Review the Minutes of the Previous Meeting.
  2. Review of Work progress.
  3. Field Observations, issues, and decisions.
  4. Discussion of issues which may impede progress.
  5. Status of submittals.
  6. Status of delivery schedules
  7. Upcoming Work.
  8. Project coordination.
  9. Discussion on quality of Work.
  10. Other items related to the Work.

#### **SECTION 2 – PRODUCTS (NOT USED)**

#### **SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

## **SECTION 1 – GENERAL**

### **1.01 SPECIFICATION INCLUDES**

- A. Facility Control
- B. Private Land
- C. Control of Other Work

### **1.02 RELATED SPECIFICATIONS**

- A. Section 01010 – Summary of Work
- B. Section 01015 – Sequence and Constraints of Construction

### **1.03 FACILITY**

- A. Furnish plant equipment and supplies which will be efficient, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the Work within the Contract Time. If at any time such plant appears to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, Engineer may order the Contractor to increase the efficiency, change the character or increase the plant equipment and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

### **1.04 PRIVATE LAND**

- A. Do not enter or occupy private land outside of easements, except by permission of the land owner.

### **1.05 MAINTENANCE OF TRAFFIC**

- A. Detours around construction will be subject to the approval of the Owner and the Engineer. Where detours are permitted, provide all necessary barricades and signs as required to divert the flow of traffic. Expedite construction operations while traffic is detoured. Periods when traffic is being detoured will be strictly controlled by the Owner and/or the traffic control plans.
- B. Take precautions to prevent injury to the public due to construction activities. Site security is the responsibility of the Contractor.

### **1.06 CARE AND PROTECTION OF PROPERTY**

- A. Be responsible for the preservation of all public and private property and use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, restore such property to a condition equal or better than that of the existing condition before the damage was done, or make good the damage in other manner acceptable to the Engineer.

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1.07 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

- A. Assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the Drawings. Carefully support and protect all such structures and utilities from injury of any kind. Immediately repair and report any damage resulting from the construction operations. Any methods necessary to protect existing infrastructure shall be incidental.
- B. Assistance will be given the Contractor in determining the location of existing services. The Contractor, however, shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, electrical lines, drain lines, sewers, storm sewers, telephone lines, fiber optics, etc.). Maintain services to buildings and pay costs or charges resulting from damage thereto.
- C. If, in the opinion of the Engineer, permanent relocation of a utility is required, the Engineer may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 11 of the Supplementary Conditions. If relocation of a privately owned utility is required, the Engineer will notify the Utility to perform the work as expeditiously as possible. Cooperate with the Utility. No claim for delay will be allowed due to such relocation.
- D. Notify all utility companies in writing at least 48 hours (excluding Saturdays, Sundays, and legal holidays) before excavating in any public way. Also notify North Dakota One Call, telephone 800.495.0555 at least 48 hours prior to the start of work.

1.08 COOPERATION WITHIN THIS CONTRACT

- A. The Contractor and his subcontractors shall cooperate with all firms or persons authorized to perform all Work under this Contract, and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

1.09 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

- A. During the course of the work, keep the site of operations as clean and neat as possible. Dispose of all residue resulting from the construction work and, at the conclusion of the work, remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and leave the entire site of the work in a neat and orderly condition.
- B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, comply with all applicable Federal, State and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and in other related Sections.
- C. Disposal of excess excavated material in wetlands, stream corridors and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by the Contractor, will be brought to

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the attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. The Contractor will be required to remove the fill and restore the area impacted at no increase in the Contract Price.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Special Provisions for Construction
- B. Special Provisions for Start-up
- C. Special Provisions for Equipment Testing
- D. Special Provisions for Warranty Information

**1.02 RELATED SPECIFICATIONS**

- A. Section 01010 – Summary of Work
- B. Section 01015 – Sequence and Constraints of Construction
- C. Section 01300 – Submittals
- D. Section 01465 – Equipment Testing and Start-up
- E. Section 01600 – Material and Equipment
- F. Section 01730 – Operation and Maintenance Information
- G. Individual Product Specifications

**1.03 ON SITE STORAGE**

- A. Attention is invited to special storage requirements and possible charges for noncompliance of onsite storage requirements for materials and equipment as specified in Section 01600.

**1.04 CONNECTIONS TO EXISTING OR OTHER NEW SYSTEMS**

- A. Perform all work necessary to locate, excavate and prepare for connections to the terminus of the existing and new systems all as shown on the Drawings or where directed by the Engineer. The cost for this work and for the actual connection of the existing mains shall be included in the bid for the project and shall not result in any additional cost to the Owner.

**1.05 EXISTING UTILITY PROTECTION**

- A. Existing utilities are shown in their approximate locations. Locate and protect all utilities whether shown on Drawings or not.
- B. Contact utility companies at least 48 hours before starting construction so maintenance personnel can locate and protect facilities, if required by the utility company.

**1.06 FINAL GUARANTEE**

- A. All work shall be guaranteed by the Contractor for a period of 1 year from and after the date of Substantial Completion, unless otherwise required in the Specifications.
- B. If, within the guarantee period, repairs or changes are required in connection with guaranteed work, which, in the opinion of the Engineer, is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the Contract, promptly upon receipt of notice from the Owner and without expense to the Owner, do the following.
  - 1. Place in satisfactory condition in every particular all of such guaranteed work and correct all defects therein.

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2. Make good all damage to the building or site, or equipment or contents thereof, which, in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract.
  3. Make good any work or material, or the equipment and contents of building, structure of site disturbed in fulfilling any such guarantee.
- C. If the Contractor, after notice, fails within 10 days to proceed to comply with the terms of this guarantee, the Owner may have the defects corrected, and the Contractor and his/her surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Owner, delay would cause loss or damage, repairs may be started without notice being given to the Contractor and the Contractor shall pay the cost thereof.
  - D. All special guarantees or warranties applicable to specific parts of the work as may be stipulated in the Contract Documents or other papers forming a part of this Contract shall be subject to the terms of this paragraph during the first year of life of each such guarantee. All special guarantees and manufacturers' warranties shall be assembled by the Contractor and delivered to the Engineer, along with a summary list thereof, before the acceptance of the Work.

**1.07 EMERGENCY PHONE NUMBERS AND ACCIDENT REPORTS**

- A. Emergency phone numbers (fire, medical, police) shall be posted at the Contractor's phone and its location known to all.
- B. Accidents shall be reported immediately to the Engineer by messenger or phone.
- C. All accidents shall be documented and a fully detailed written report submitted to the Engineer after each accident.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 - GENERAL****1.01 DESCRIPTION OF REQUIREMENTS**

- A. This Section specifies the general methods and requirements of submissions applicable to Shop Drawings, Product Data, Samples, Construction Photographs, and Construction or Submittal Schedules. Detailed submittal requirements are specified in the technical Sections. All submittals shall be clearly identified by reference to Section Number, Paragraph, Drawing Number or Detail as applicable. Submittals shall be clear and legible and of sufficient size for presentation of data.

**1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES****A. Shop Drawings**

1. The Contractor shall submit preliminary schedule of Shop Drawing and Sample Submittals (Schedule of Submittals) which will list each required submittal and the times for submitting, reviewing and processing such submittals. The Schedule of Submittals shall be listed in order of specification section and by the 10-digit submittal identification number.
2. Shop drawings as specified in individual Sections include, custom-prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the work.
3. All shop drawings submitted by subcontractors shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
4. Check all subcontractors' shop drawings regarding measurements, size of members, materials, and details to make sure that they conform to the intent of the Drawings and related Sections. Return shop drawings found to be inaccurate or otherwise in error to the subcontractors for correction before submission thereof.
5. All details on shop drawings shall show clearly the relation of the various parts to the main members and lines of the structure and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted.
6. Submittals for equipment specified under this Contract shall include a listing of all installations where identical or similar equipment has been installed and been in operation for a period of at least one year.

**B. Product Data**

1. Product data as specified in individual Sections include, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or

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quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing and printed product warranties, as applicable to the work.

### 1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Review shop drawings, product data, and samples, including those by subcontractors, prior to submission to determine and verify the following:
  - 1. Field measurements.
  - 2. Field construction criteria.
  - 3. Catalog numbers and similar data.
  - 4. Conformance with related Sections.
- B. Each shop drawing, sample and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
- C. Shop drawings and product data sheets 11-inches x 17-inches and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package. Provide to the Resident Project Representative a copy of each transmittal sheet for shop drawings, product data and samples at the time of submittal to the Engineer. Shop Drawings that are not stamped will not be reviewed.
- D. For each submittal, allow 15 days for review, excluding delivery time to and from the Contractor.
- E. The Contractor shall utilize a 10-character submittal identification numbering system in the following manner:
  - 1. The first character shall be a D, S, P, M, or R, which represents Shop/Working Drawing and other Product Data (D), Sample (S), Preliminary Submittal (P), Operating/Maintenance Manual (M), or Request for Information (R).
  - 2. The next five digits shall be the applicable Section Number.
  - 3. The next three digits shall be the numbers 001 to 999 to sequentially number each initial separate item or drawing submitted under each specific Section Number.
  - 4. The last character shall be a letter, A to Z, indicating the submission, or resubmission of the same Drawing, i.e., "A=1st submission, B=2nd submission, C=3d submission, etc. A typical submittal number would be as follows:  
  
D-03300-008-B  
D = Shop Drawing  
03300 = Section for Concrete  
008 = The eighth initial submittal under this section  
B = The second submission (first resubmission) of that particular shop drawing
- F. Notify the Engineer in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.

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- G. The review and approval of shop drawings, samples or product data by the Engineer shall not relieve the Contractor from the responsibility for the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Engineer will have no responsibility therefor.
  - H. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased, or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.
  - I. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

#### 1.04 SUBMISSION REQUIREMENTS

- A. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the Work or in the work of any other contractor.
- B. All submittals shall be delivered to: Wesley Gullicks, PE, Apex Engineering Group, Inc., 600 South 2<sup>nd</sup> Street, Suite 145, Bismarck ND 58504.
- C. Each submittal, appropriately coded, will be returned within 28 calendar days following receipt of submittal by the Engineer.
- D. Number of submittals required:
  - 1. Shop Drawings: Four (4) paper copies, in addition to the number needed by the Contractor or one (1) digital copy.
  - 2. Product Data: Four (4) copies, in addition to the number needed by the Contractor or one (1) digital copy.
  - 3. Samples: Submit the number stated in the respective Sections.
- E. Submittals shall contain:
  - 1. The date of submission and the dates of any previous submissions.
  - 2. The Project title and number.
  - 3. Contractor identification.
  - 4. The names of:
    - a. Contractor
    - b. Supplier
    - c. Manufacturer
  - 5. Identification of the product, with the section number, page and paragraph(s).
  - 6. Field dimensions, clearly identified as such.
  - 7. Relation to adjacent or critical features of the work or materials.
  - 8. Applicable standards, such as ASTM or Federal Standards numbers.
  - 9. Identification of deviations from Contract Documents.
  - 10. Identification of revisions on resubmittals.
  - 11. A blank space suitably sized for Contractor and Engineer stamps.

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12. Where calculations are required to be submitted by the Contractor, the calculations shall have been checked by a qualified individual other than the preparer. The submitted calculations shall clearly show the names of the preparer and of the checker.
- F. All submittals shall be in English.

1.05 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

- A. The review of shop drawings, data and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed:
1. as permitting any departure from the Contract requirements.
  2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials.
  3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.
- B. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or Contract Time, the Engineer may return the reviewed drawings without noting an exception.
- D. Submittals will be returned to the Contractor under one of the following codes.

Code 1 - "APPROVED" is assigned when there are no notations or comments on the submittal. When returned under this code the Contractor may release the equipment and/or material for manufacture.

Code 2 - "APPROVED AS NOTED". This code is assigned when a confirmation of the notations and comments IS NOT required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.

Code 3 - "APPROVED AS NOTED/CONFIRM". This combination of codes is assigned when a confirmation of the notations and comments IS required by the Contractor. The Contractor may, at his own risk, release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This confirmation shall specifically address each omission and nonconforming item that was noted. Confirmation is to be received by the Engineer within 15 calendar days of the date of the Engineer's transmittal requiring the confirmation.

Code 4 - "NOT APPROVED/RESUBMIT" is assigned when the submittal does not meet the intent of the Contract Documents. The Contractor must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.

Code 5 - "COMMENTS ATTACHED" is assigned where there are comments attached to the returned submittal which provide additional data to aid the Contractor.

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Codes 1 through 4 designate the status of the reviewed submittal with Code 5 showing there has been an attachment of additional data.

- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall identify all revisions made to the submittals, either in writing on the letter of transmittal or on the shop drawings by use of revision triangles or other similar methods. The resubmittal shall clearly respond to each comment made by the Engineer on the previous submission. Additionally, the Contractor shall direct specific attention to any revisions made other than the corrections requested by the Engineer on previous submissions.
- F. Partial submittals may not be reviewed. The Engineer will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor and will be considered "Not Approved" until resubmitted. The Engineer may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- G. Repetitive Review.
  - 1. Shop drawings and other submittals will be reviewed no more than twice at the Owner's expense. All subsequent reviews will be performed at times convenient to the Engineer and at the Contractor's expense, based on the Engineer's then prevailing rates. The Contractor shall reimburse the Owner for all such fees invoiced to the Owner by the Engineer. Submittals are required until approved.
  - 2. Any need for more than one resubmission, or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the Contract Time.
- H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Engineer at least thirty (30) calendar days prior to release for manufacture.
- I. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

#### 1.06 DISTRIBUTION

- A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall not exceed six.

#### 1.07 GENERAL PROCEDURES FOR SUBMITTALS

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work of other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

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## 1.08 RECORD DRAWINGS

- A. The Record Drawings shall consist of annotated (in ink) Contract Drawings and the approved Shop Drawings and shall be submitted to the Engineer at any time upon request during construction. The Record Drawings shall also be prepared in reproducible form (3 mil Mylar) and shall be submitted to the Engineer upon completion of the construction. The Contractor will be furnished AutoCAD CD's of the Contract Drawings in the latest version for preparation of the Record Drawings.
- B. Contract Drawings shall be legibly marked to record actual construction including:
  - 1. All deviations in location or elevation of any underground installation from that shown on the Contract Drawings.
  - 2. Any significant changes in above ground installations from approved Shop Drawings or Contract Drawings.
  - 3. No such deviations from the Contract Drawings or approved Shop Drawings shall be made without approval by the Engineer.
  - 4. Actual location and depth of all installed below grade conduit and piping not specifically shown on the Contract Drawings.
- C. Specifications and addenda shall be legibly marked up to record:
  - 1. Manufacturer, trade name, catalog number, and Supplier of each product and item of equipment actually installed.
  - 2. Changes made by Change Order or Field Order.
  - 3. Other matters not originally specified.
- D. Shop Drawings shall be legibly annotated to record changes made after review.
- E. In addition to the 3 mil Mylar Record Drawings, and annotated Contract Drawings and Shop Drawings, the Contractor shall also furnish AutoCAD diskettes of the Record Drawings in Version 2018.

## SECTION 2 – PRODUCTS (NOT USED)

## SECTION 3 – EXECUTION (NOT USED)

## END OF SECTION

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**SECTION 1 - GENERAL****1.01 REQUIREMENTS INCLUDED**

- A. Submit to the Engineer a Schedule of Values allocated to the various portions of the work, within twenty-one (21) calendar days after the effective date of the Agreement.
- B. Upon request of the Engineer, support the values with data which will substantiate their correctness.
- C. The accepted Schedule of Values shall be used only as the basis for the Contractor's Applications for Payment.

**1.02 RELATED REQUIREMENTS**

- A. Standard General Conditions of the Construction Contract are included in Section 00700.
- B. Application for Payment is included in Section 01027.

**1.03 FORM AND CONTENT OF SCHEDULE OF VALUES**

- A. Type schedule on an 8-1/2-in by 11-in or 8-1/2-in by 14-in white paper; Contractor's standard forms and automated printout will be considered for approval by the Engineer upon Contractor's request. Identify schedule with:
  - 1. Title of Project and location.
  - 2. Engineer and Project number.
  - 3. Name and Address of Contractor.
  - 4. Contract designation.
  - 5. Date of submission.
- B. Schedule shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- C. Identify each line item with the number and title of the respective Section. Each item shall be broken down into two categories:
  - a. Labor
  - b. Material
- D. For each major line item list sub-values of major products or operations under the item.
- E. For the various portions of the work:
  - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
  - 2. For items on which progress payments will be requested for stored materials, break down the value into:
    - a. The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials upon request by the Engineer.
    - b. The total installed value.
- F. The sum of all values listed in the schedule shall equal the total Contract Sum.

**1.04 SUBSCHEDULE OF UNIT MATERIAL VALUES**

- A. Submit a sub-schedule of unit costs and quantities for:
  - 1. Products on which progress payments will be requested for stored products.
- B. The form of submittal shall parallel that of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.
- C. The unit quantity for bulk materials shall include an allowance for normal waste.
- D. The unit values for the materials shall be broken down into:
  - 1. Cost of the material, delivered and unloaded at the site, with taxes paid.

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2. Copies of invoices for component material shall be included with the payment request in which the material first appears.
  3. Paid invoices shall be provided with the second payment request in which the material appears or no payment shall be allowed and/or may be deleted from the request.
- E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Quality Control and Quality Assurance of installation.
- B. References and Standards
- C. Inspection and Testing Laboratory Services
- D. Manufacturer's Field Services and Reports

**1.02 RELATED SPECIFICATIONS**

- A. Section 01300 – Submittals
- B. Section 01600 – Material and Equipment

**1.03 QUALITY CONTROL AND QUALITY ASSURANCE OF INSTALLATION**

- A. Contractor shall monitor the quality control of his subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship to ensure the Work complies with the specified quality.
- B. Contractor shall comply with all manufacturers' instructions, including sequencing.
- C. Prior to proceeding, Contractor shall request clarification if conflicts are found between the Contract Documents and the manufacturer's recommendations/instructions.
- D. Contractor shall comply with specified standards as a minimum quality for the Work. When more stringent requirements are dictated by codes, laws, regulations, or manufacturer's requirements, Contractor shall adhere to the higher standard for Workmanship.
- E. Contractor shall ensure that all Work is performed by personnel qualified and trained to produce Workmanship of the specified quality.
- F. Contractor shall secure all components of the Work in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

**1.04 REFERENCES AND STANDARDS**

- A. Contractor shall conform to all reference standards as of the date of issuance of the Contract Documents.
- B. Contractor shall obtain copies of all standards when required to conform to the Contract Documents.
- C. Prior to proceeding, Contractor shall obtain clarification from Engineer when specified standards are in conflict with the Contract Documents.
- D. No reference documents shall alter the contractual relationship of the parties to the Contract.

**1.05 INSPECTION AND TESTING LABORATORY SERVICES**

- A. The Contractor shall appoint and employ the services of an independent testing firm to perform inspection and testing.
- B. The independent testing firm will perform inspection, testing, and other service specified in individual specification section and as required by the Engineer.

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- C. The independent testing firm will submit reports to the Engineer indicating observations and results of tests. Such reports will indicate compliance or non-compliance with the Contract Documents.
  - D. Contractor shall cooperate with the independent testing firm and furnish samples of material, equipment, tools, storage, and assistance as required. This shall include, but not be limited to the following:
    - a. Notify Engineer at least twenty-four (24) hours prior to the expected time for operations requiring the services of the independent testing firm.
    - b. Make arrangements with the independent testing firm and pay for additional samples and tests required for the Contractor's use.
  - E. Any retests required due to failure or non-conformance with the specifications shall be performed by the same independent testing firm. Payment for retesting will be charged to the Contractor by deducting inspections and testing charges from the Contract Sum/Price.

**1.06 MANUFACTURER'S FIELD SERVICES AND REPORTS**

- A. Contractor shall submit to the Engineer the qualifications of any manufacturer's field representatives a minimum of 30 days prior to that representative providing field services. Representative shall be subject to the approval of the Engineer.
- B. Contractor shall require all suppliers and manufacturers to provide qualified personnel to observe site conditions, conditions of the installation, quality of workmanship, start-up of equipment (including testing, balancing, and adjusting), and to provide instruction of Owner's Personnel.
- C. No decisions or instructions given to applicators or installers shall be outside of the manufacturer's written instructions.
- D. Manufacturers shall prepare a report of any site observations and provide this report to Engineer within thirty (30) days of observation.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Temporary Utilities, including electricity, telephone, water, and sanitary facilities.
- B. Temporary Controls, including barriers, enclosure, fencing, security, protection of the Work, and water and dust control.
- C. Temporary Construction Facilities, including access roads, parking, site cleaning, project signage, Engineer's field office, and temporary buildings.

**1.02 RELATED SPECIFICATIONS**

- A. Section 01010 – Summary of Work
- B. Section 01015 – Sequence and Constraints of Construction
- C. Section 01700 – Contract Closeout
- D. Section 01710 – Cleaning

**1.03 TEMPORARY ELECTRICITY**

- A. The owner will allow the use of existing receptacles for standard 120-v, 20-amp electrical tools. Any additional power requirements will be at the Contractor's expense.

**1.04 TEMPORARY TELEPHONE SERVICE**

- A. Contractor shall provide cellular phones for all personal on the project site.

**1.05 TEMPORARY SANITARY FACILITIES**

- A. Contractor may use the existing facilities but is required to maintain sanitary conditions. At the Owner discretion the use of these facilities maybe taken away.

**1.06 BARRIERS**

- A. Contractor shall provide barriers to provide for the following:
  - 1. Prevention of unauthorized access to the construction site.
  - 2. Allow for Owner's use of the site.
  - 3. Protection of existing facilities.
  - 4. Protection of adjacent properties.
  - 5. Protection of contractor's employees.
- B. Provide barricades and temporary controls required by the governing authority for public rights-of-way.
- C. Provide protection for plant life designated to remain. Replace any plant life damaged by construction activities.
- D. Provide protection for vehicular traffic, stored materials, site, and structures.

**1.07 FENCING**

- A. Contractor shall install site fencing at their option with the approval of Engineer.
- B. Any temporary fencing to control access to the site to prevent vandalism or theft is the responsibility of the Contractor. Any repair or replacement required due to vandalism or theft at the site is the responsibility of the Contractor.

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1.08 PROTECTION OF INSTALLED WORK

- A. Contractor shall provide for the protection of completed Work and installed products. Work of products damages shall be repaired or replaced at the Contractor's expense.

1.09 SITE SECURITY

- A. Contractor shall provide security at the site to prevent unauthorized access, vandalism, and theft of items of the Work or Owner's property.
- B. Contractor is responsible for all site security. Any repair or replacement required due to vandalism or theft at the site is the responsibility of the Contractor.

1.10 ACCESS ROADS

- A. Contractor shall submit a plan and get approval by Engineer prior to any temporary roads being constructed.
- B. Contractor shall construct and maintain any temporary roads to serve the construction site. Maintain continuous access for all residences, businesses, and facilities at all times. Temporary roads shall be extended, relocated, and removed as necessary to accommodate the Work.
- C. Contractor shall provide detours, including signage and signaling, as needed for uninterrupted traffic flow.
- D. Contractor shall provide wash areas to remove dirt, mud, and other debris from vehicle prior to entering roadways.
- E. Contractor shall provide and maintain access to all manholes and fire hydrants.
- F. All work and materials necessary to construct, maintain, and remove temporary access roads shall be incidental.

1.11 CLEANING OF WORK

- A. Maintain the site in a clean, neat, and orderly condition. All waste and debris shall be removed periodically and disposed of off-site no less often than weekly.

1.12 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS

- A. Contractor shall remove all temporary utilities, equipment, facilities, and materials prior to substantial completion. Areas used for temporary facilities shall be restored to their original condition and any damage repaired at the Contractor's expense.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Products
- B. Transportation and Handling
- C. Storage and Protection
- D. Product Options and Substitutions

**1.02 RELATED SPECIFICATIONS**

- A. Section 00100 – Instructions to Bidders
- B. Section 00700 – General Conditions
- C. Section 01400 – Quality Controls
- D. Section 01630 – Product Options and Substitutions

**1.03 PRODUCTS**

- A. All products used in the Work shall be new material. This shall not include the equipment or machinery used for preparation, fabrication, conveyance, or erection of the Work. This shall also not include existing materials or components required for reuse.
- B. Similar components shall be of the same manufacturer and shall be interchangeable.

**1.04 STORAGE AND PROTECTION**

- A. Contractor shall store and protect all products and materials as instructed by the manufacturer. As required, store products and materials in weather-tight and climate-controlled areas or enclosures. Protect against dust and debris.
- B. Products stored outside shall be supported and shall be placed above ground with positive drainage away from them.
- C. Contractor shall provide off-site storage when on-site storage is not possible or will not provide adequate protection.
- D. Products shall be covered with an impervious covering with ventilation provided to avoid condensation.
- E. Granular materials shall be stored on a solid, flat surface with positive drainage away from it. Contractor shall take measures to prevent mixing with foreign materials.
- F. Contractor shall take measures that will allow for periodic inspection of all stored items to ensure products are undamaged and storage facilities and methods are adequate.

**1.05 PRODUCT OPTIONS AND SUBSTITUTIONS**

- A. All substitution request are required prior to bid submittal as identified in other Sections.
- B. Contractor shall submit all requests for product options and substitutions and shall be approved by the Engineer prior to purchase.

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**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. The Furnishing and Installation of Product specified, under options and conditions for substitutions outlined in this Section.
- B. Whenever a product, material or item of equipment is specified or described by using the name of a proprietary product or the name of a particular manufacturer or vendor, followed by the phrase “or equal,” the specific item mentioned shall be the basis upon which bids are to be prepared, and shall be understood as establishing the type, function, dimension, appearance and quality desired.
- C. Other manufacturer's or vendor's products not named will be considered as substitutions, provided the required information is submitted in the manner set forth in this section and provided the substitution will not require substantial revisions to the Contract Documents.

**1.02 RELATED SPECIFICATIONS**

- A. Section 00100 – Instructions to Bidders
- B. Section 00300 – Bid Form
- C. Section 00400 – Bidder's List of Major Equipment Suppliers
- D. Section 01600 – Material and Equipment

**1.03 CONTRACTOR'S OPTIONS**

- A. For Products specified only by reference standard, Contractor may select any product meeting that standard, by any manufacturer.
- B. For Products specified by naming several products or manufacturers, select any one of the products and manufacturers named which complies with the Specifications.
- C. For Products specified by naming one or more products or manufacturers and stating 'or equal', Contractor shall submit a request as for substitutions, for any product or manufacturer which is not specifically named. Requests for Substitutions will not be accepted prior to Notice of Award being issued.

**1.04 SUBSTITUTIONS**

- A. In order for substitutions to be considered, the Contractor shall submit, within thirty (30) days of issuance of the Notice of Award, complete data as set forth herein to permit a complete analysis of all proposed substitutions noted on his/her substitution list. No substitutions shall be considered unless the Contractor provides the required data in accordance with the requirements of the Section within the thirty (30) day period.
- B. Contractor shall submit separate requests for each substitution. Each request shall be supported with a minimum of the following items, although individual specification sections may require additional information not included in this list:
  - 1. Complete data substantiating compliance of proposed substitution with requirements stated in the Contract Documents, including:
    - a. Product Identification, including manufacturer's name and address.
    - b. Manufacturer's Literature, including, but not limited to the following:

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- 1) Product Description
  - 2) Reference Standards
  - 3) Performance and Test Data
  - 4) Operation and Maintenance Data
  - 5) Product Drawings
  - 6) Product Specifications
  - 7) Documentation of NSF Standards, as applicable
- c. Samples, if applicable.
  - d. A list of 10 installations of similar type and size with address, telephone numbers, and dates of installation. The Engineer and Owner may contact these installations sites to determine experience.
2. Itemized comparison of the proposed substitution with product specified; list significant variations. Substitution shall not change design intent and shall perform equal to that specified.
  3. Data relating to impact on construction schedule occasioned by the proposed substitution.
  4. Effect of substitution on separate contracts, if any.
  5. List of changes required in other work or products. Contractor shall pay for all changes, including any engineering re-design work and/or revisions to drawings.
  6. Accurate cost data comparing the proposed substitution with product specified. The Owner shall benefit from any decrease in costs as a result of using the substitution.
  7. Designation of required license fees or royalties.
  8. Designation of availability of maintenance services and sources of replacement materials.
- C. Substitutions will not be considered for acceptance when:
1. They are indicated or implied on shop drawings or product data submittals without a formal request from the Contractor.
  2. They are requested directly by a subcontractor or supplier.
  3. No other manufacturers will be considered is noted in the specifications.
  4. Acceptance will require substantial revision of the Contract Documents.
- D. Requests for substitutions submitted after Notice of Award will not be considered unless evidence is submitted to the Engineer that all of the following circumstances exist:
1. The specified product is unavailable for reasons beyond the controls of the Contractor. Such reasons shall consist of strikes, bankruptcy, discontinuance of manufacture, or acts of God.
  2. The Contractor placed, or attempted to place, orders for the specified products within 10 days after Notice of Award.
  3. Request for substitution is made in writing to the Engineer within 10 days of the date on which the Contractor ascertains that he cannot obtain the item specified.
  4. Complete data, as set forth herein to permit a complete analysis of the proposed substitution, is submitted with the request.
- E. The Engineer's decision regarding evaluation of substitutions shall be considered final and binding. Requests for time extensions and additional costs based on submission of,

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acceptance of, or rejection of substitutions will not be allowed. All approved substitutions will be incorporated into the Agreement by Change Order.

**1.05 CONTRACTOR'S REPRESENTATION**

- A. In making formal requests for substitutions, the Contractor represents that:
1. He has investigated the proposed products and has determined that they are equal to or superior in all respects to the specified product.
  2. He will provide, at a minimum, the same warranties or bonds for the substitutions as for the specified products.
  3. He will coordinate the installation of the substitutions into the Work, and he will make such changes as may be required for the Work to be complete in all respects.
  4. He waives any and all claims for additional costs caused by the substitutions, which may subsequently become apparent.
  5. Cost data is complete and includes related costs under his contract, but not:
    - a. Costs under separate contracts.
    - b. Engineer's costs for redesign or revision of Contract Documents.
  6. If, after installation, the substitution equipment does not perform in accordance with the specifications or other deficiencies are noted, the Contractor shall make modifications or replacement of such equipment to meet the specifications at no additional expense to the Owner.

**1.06 ENGINEER'S RESPONSIBILITIES**

- A. Engineer shall review the Contractor's requests for substitutions with reasonable promptness.
- B. Engineer shall notify the Contractor, in writing, of the decision to accept or reject the requested substitution.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Contract Closeout Procedures
- B. Final Cleaning
- C. Record Documents
- D. Guarantees and Warranties
- E. Spare Parts and Maintenance Materials

**1.02 RELATED SPECIFICATIONS**

- A. Section 01027 – Applications for Payment
- B. Section 01500 – Construction Facilities and Temporary Controls
- C. Section 01650 – Starting of Systems
- D. Section 01710 - Cleaning
- E. Section 01730 – Operation and Maintenance Information

**1.03 CONTRACT CLOSEOUT PROCEDURES**

- A. Contractor shall submit a written certification indicating that the Contract Documents have been reviewed, the Work has been inspected, and that all Work has been completed in accordance with the Contract Documents. Certification shall indicate that the work is ready for inspection by the Engineer.
- B. Contractor shall certify that all submittals have been delivered to the Engineer.
- C. Contractor shall submit a final Application for Payment in accordance with Section 01027. Application shall identify the total adjusted Contract Sum, all previous payments, and the remaining sum due.

**1.04 FINAL CLEANING**

- A. Prior to final inspection, Contractor shall execute a final cleaning of the Work and premises.
- B. Contractor shall remove all waste materials and temporary facilities from the site.

**1.05 RECORD DOCUMENTS**

- A. Contractor shall maintain, on site, a set of each of the following documents and shall record revisions to the Work:
  - 1. Drawings
  - 2. Specifications
  - 3. Addenda
  - 4. Change Orders
  - 5. Reviewed Shop Drawings, product data, and product samples.
- B. Contractor shall keep Record Documents separate from Construction Documents.
- C. Contractor shall record all information as construction progresses.

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- D. Contractor shall make annotations in each Specification for each Product installed. This shall include, at a minimum, the following:
    - 1. Changes or modifications made by Addendum.
    - 2. Substitutions or Product Options.
    - 3. Manufacturer's name, product model and number.
  - E. Contractor shall legibly mark all drawings and shop drawings to record actual construction including, but not limited, to the following:
    - 1. Locations, including both horizontal and vertical measurements, of underground utilities and appurtenances. Locations shall be referenced to permanent surface structures.
    - 2. Locations of internal utilities and appurtenances concealed within the construction. Locations shall be referenced to visible and accessible items of the Work.
    - 3. Any field changes, including dimensions and details.
    - 4. Any dimensions or details not included on the Contract Documents.
  - F. Engineer's seal shall be deleted from all Record Documents.
  - G. All Record Documents shall be submitted to the Engineer along with any final Application for Payment.

#### 1.06 GUARANTEES AND WARRANTIES

- A. Contractor shall provide a minimum of two (2) notarized copies of all Guarantees and Warranties.
- B. Any Guarantees or Warranties from Subcontractor, Suppliers, or Manufacturers shall be assembled by the Contractor and provided to the Engineer and Owner.
- C. All Guarantees and Warranties shall be provided with a Table of Contents within a durable, plastic, three-ring binder.
- D. All Guarantees and Warranties shall be submitted prior to making final Application for Payment.

#### 1.07 COMMISSIONING / TRAINING

- A. The Contractor shall provide 2-hours of training instructions to the owner's staff illustrating which breakers control which pedestal circuit.

#### 1.08 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Contractor shall provide spare parts and all maintenance materials as specified in individual Sections of the Specifications.
- B. All spare parts and maintenance materials shall be delivered to a place and location as directed by the Engineer.
- C. Engineer and Owner shall conduct an inspection of the spare parts and materials. Contractor shall provide a receipt of all materials delivered.
- D. All spare parts and materials shall be delivered and accepted prior to final Application for Payment.

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**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Requirements for project cleaning during the progress of the Work and at completion of the Work.

**1.02 RELATED SPECIFICATIONS**

- A. Section 00700 – General Conditions
- B. Refer to each individual Section for specific requirement for certain products of portions of the Work.

**1.03 REQUIREMENTS**

- A. All cleaning operations and disposal of spent products and materials shall comply with all codes, ordinances, regulations, and any anti-pollution laws.

**SECTION 2 – PRODUCTS****2.01 MATERIALS**

- A. All cleaning materials and products shall not create hazards to health or property and shall not damage surfaces.
- B. Surfaces to be cleaned shall be done so in accordance with the requirements of the manufacturer with cleaning products as recommended by the manufacturer.

**SECTION 3 – EXECUTION****3.01 PROGRESS CLEANING**

- A. Contractor shall clean the Work daily and keep the site and adjacent properties free from the accumulation of waste materials, rubbish, and windblown debris that result from construction activities.
- B. Contractor shall provide an on-site container for the collection and disposal of waste, rubbish, and debris.
- C. Contractor shall remove all waste periodically from the site and dispose of at a legal disposal or landfill away from the site.
- D. Contractor shall be responsible for the general maintenance of the Work areas and shall coordinate the cleanup of all trades on a daily basis.
- E. Premises that are not maintained properly may be cleaned by the Owner and the costs charges to the Contractor.
- F. The Work shall be thoroughly cleaned prior to the application of any coatings, paint, or other finishes.
- G. Cleaning of the Work shall apply to all portions of the Work.
- H. Contractor shall keep roadways free of dust, dirt, mud, and any other debris.

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3.02 FINAL CLEANING

- A. Final cleaning shall be completed by skilled workman with experience using the products and materials needed to execute the final cleaning.
- B. All foreign materials shall be removed from all interior and exterior surfaces.
- C. Prior to final Owner occupancy, Engineer shall inspect the Work and verify that the entire work is clean. Any areas not entirely clean shall be cleaned until acceptable to the Owner and Engineer.

**END OF SECTION**

**SECTION 1 – GENERAL****1.01 SPECIFICATION INCLUDES**

- A. Format and Contents of Operation and Maintenance Manuals
- B. Schedule of Submittals

**1.02 RELATED SPECIFICATIONS**

- A. Section 01300 – Submittals
- B. Section 01400 – Quality Control
- C. Section 01600 – Material and Equipment
- D. Section 01700 – Contract Closeout
- E. Refer to individual Specification Section for additional requirements.

**1.03 QUALITY CONTROL/ASSURANCE**

- A. Operations and Maintenance information shall be prepared by personnel with experience in the design and operation of the individual products.

**1.04 FORMAT**

- A. Operational and Maintenance information shall be prepared as an instructional manual.
- B. Information shall be contained in commercial quality, 8 ½" x 11", three-ring binders with hardback, cleanable, plastic cover. Maximum ring size shall be one inch. If multiple binders are required for a specific product, information shall be grouped in logical sections and labeled. Digital copies are acceptable.
- C. The cover of each binder shall identify the title of project and the subject matter of its contents. Each title shall be typed and bear the general title 'OPERATION AND MAINTENANCE INSTRUCTIONS'.
- D. Contents shall be labeled by specification section, section number, and in the sequence of the Table of Contents of the Contract Documents.
- E. Provide a tabbed flyleaf for each product and system, with a typed description of the product and each major component.
- F. Paper used shall be a minimum of 24 pound paper.
- G. Drawings shall be provided with reinforced punched binder tabs. All drawings shall be included with the text and folded to the size of the text pages.

**1.05 CONTENTS**

- A. Provide a Table of Contents that includes the following:
  - 1. Title of Project
  - 2. Name, addresses, telephone numbers of Engineer, Subconsultants, and Contractor with name of responsible parties.
  - 3. Schedule of Products and Systems.
  - 4. Volume Contents.
- B. List names, addresses, and telephone numbers of subcontractors or suppliers for each product or system. Include a local source of supplies and replacement parts.

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- C. Each sheet shall be marked to clearly identify specific products and component parts, including data applicable to the installation. All information not applicable to the installation shall be deleted or lined out.
  - D. Product data shall be supplemented with drawings or illustrations or components to show control and flow diagrams. Project Record Drawings shall not be used as operation and maintenance drawings.
  - E. Copies of all warranties and bond shall be bound in each copy of each manual.

#### 1.06 EQUIPMENT AND SYSTEMS MANUALS

- A. Each manual for equipment and systems shall include a description of the unit or system and all component parts. The manual shall identify the function, normal operation, and limiting conditions. Include performance curves, engineering data and tests, complete system nomenclature, and commercial numbers of the replacement parts.
- B. Provide panelboard circuit directories that include electrical service characteristics, controls, and communications.
- C. Include as-built, color-coded wiring diagrams.
- D. Include operations procedures consisting of the following, at a minimum:
  - 1. Start-up procedures.
  - 2. Break-in procedures
  - 3. Normal Operation instruction and any sequencing instructions
  - 4. Regulation, control, stopping, and shut-down procedures.
  - 5. Emergency Instructions.
  - 6. Instructions for seasonal operation.
- E. Include maintenance information consisting of the following, at a minimum:
  - 1. Routine maintenance.
  - 2. Troubleshooting information.
  - 3. Instructions on disassembly, repair, and reassembly.
  - 4. Alignment, adjusting, checking, and balancing.
- F. Provide a schedule for servicing and lubrication, including a list of required products and tools.
- G. Include manufacturer's standard operations and maintenance instructions.
- H. Include the controls sequence of operation and controls diagrams.
- I. Include manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Include coordination drawings from the Contractor showing color-coded piping diagrams as installed.
- K. Provide valve tag number in a chart that is correlated to the flow and control diagrams.
- L. Provide a list of standard spare parts, current prices and recommended inventory to be maintained of each.
- M. Include any testing and balancing reports.
- N. Include any additional information called for in individual specification sections.

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1.07 SUBMITTALS

- A. Contractor shall submit three (3) hard copies of preliminary draft manuals. Engineering shall review the draft and return one copy to the Contractor with comments.
- B. Submit one (1) hard copy of the completed manual in final form a minimum of 15 days prior to startup of the equipment, component, or system. Engineer will return copy after startup with comments. Manuals shall be revised based on these comments.
- C. Contractor shall provide copies of applicable sections of preliminary manuals necessary to complete start up and operator training.
- D. Contractor shall submit four (4) hard copies of each manual in final form within 14 days of receiving Engineer's comments after startup.

**SECTION 2 – PRODUCTS (NOT USED)**

**SECTION 3 – EXECUTION (NOT USED)**

**END OF SECTION**

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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.

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- 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: ON-SITE TRAINING**

- A. State the amount to be ADDED to the BASE BID for all labor, material and equipment costs associated with having a manufacturer representative of the Pool Timing System present to train and assist with the first swim meet after the system is commissioned.
- B. BASE BID: No additional work shall be required.

**3.02 ALTERNATE NO. 2: ADDITIONAL CONTROL CONSOLE**

- A. State the amount to be ADDED to the BASE BID for all labor, material and equipment costs associated with providing a third control console, the control console shall be turned over to the owner as a spare (back up) unit to the two required under the Base Bid.
- B. BASE BID: No additional work shall be required.

**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 01300.
- 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.

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#### 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.

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#### 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.

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### 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. Organize in commercial quality, 8-1/2" x 11", three-ring binders with hard black, cleanable, plastic covers. When multiple binders are used, correlate data into related consistent groupings.
  - 3. Identify each binder on cover with typed or printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," list title of Project and identify subject matter of contents.
- B. Arrange contents by section numbers and sequence of Table of Contents by this Project Manual.
- C. Provide tabbed flyleaf for each separate product and system, with typed description of product and major component parts of equipment.
- D. Text: Manufacturer's printed data or typewritten data on 20-pound paper.
- E. Drawings: Provide with reinforced punched binder tab. Bind in with text. Fold larger drawings to size of text pages.
- F. 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.

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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.

G. 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.

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. Submit under provisions of Section 01720.
- B. 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 Pool Timing System: Maintain existing system in service until all preparation work associated with the electrical infrastructure is complete. Disable system only to make switchovers and connections. Minimize outage duration such that scheduled events are not impacted.
  - 1. Obtain permission from Owner at least 48 hours before partially or completely disabling system.

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### 3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Remove, relocate, and extend existing installations to accommodate new construction.
- B. Remove abandoned above ground wiring to source of supply.
- C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
- D. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- E. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- 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  
CONDUCTORS 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.

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- 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 - Standard for 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 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.
- C. Manufacturer's Installation 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.

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## 1.06 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.

## 1.07 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. Service entrance cable is not permitted.
- E. Armored cable is not permitted.
- F. 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.

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- 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.
    - 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. 208Y/120 V, 3 Phase, 4 Wire System:
        - 1) Phase A: Black.
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- 2) Phase B: Red.
  - 3) Phase C: Blue.
  - 4) Neutral/Grounded: White with phase matching stripe.
- b. Equipment Ground, All Systems: Green.

## 2.03 SINGLE CONDUCTOR BUILDING WIRE

### A. Manufacturers:

#### 1. Copper Building Wire:

- a. Cerro Wire LLC: [www.cerrowire.com](http://www.cerrowire.com).
- b. Encore Wire Corporation: [www.encorewire.com](http://www.encorewire.com).
- c. General Cable Technologies Corporation: [www.generalcable.com](http://www.generalcable.com).
- d. Southwire Company: [www.southwire.com](http://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.

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## 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](http://www.burndy.com).
    - b. IlSCO: [www.ilsco.com](http://www.ilsco.com).
    - c. Thomas & Betts Corporation: [www.tnb.com](http://www.tnb.com).
    - d. Or equal.
- E. Compression Connectors: Provide circumferential type or hex type crimp configuration.
  - 1. Manufacturers:
    - a. Burndy: [www.burndy.com](http://www.burndy.com).
    - b. IlSCO: [www.ilsco.com](http://www.ilsco.com).
    - c. Thomas & Betts Corporation: [www.tnb.com](http://www.tnb.com).

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- d. Or equal.

## 2.05 ACCESSORIES

### A. Electrical Tape:

#### 1. Manufacturers:

- a. 3M: [www.3m.com](http://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.

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### 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.

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- 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 contaminants. 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.
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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. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
  - P. 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. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Perform inspection, testing, and adjusting in accordance with Section 01 4000.
- C. Correct deficiencies and replace damaged or defective conductors and cables.

#### END OF SECTION

## **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 - Conductors 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 - Standard for 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**

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- A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.
  - B. Do not use products for applications other than as permitted by NFPA 70 and product listing.
  - C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
  - D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
  - E. Grounding System Resistance:
    - 1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Engineer. Precipitation within the previous 48 hours does not constitute normally dry conditions.
  - F. Bonding and Equipment Grounding:
    - 1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
    - 2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
    - 3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
    - 4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
    - 5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
    - 6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
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## 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](http://www.burndy.com)

### B. Exothermic Connections:

1. Equal to Cadwell, a Division of Erico: [www.erico.com](http://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.
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- 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. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Owner will provide field inspection in accordance with Section 01 4000.
- C. Perform inspection, testing, and adjusting in accordance with Section 01 4000.
- D. 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.

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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.

B. Sequencing:

1. Do not install products on or provide attachment to concrete surfaces until concrete has cured; see Section 03 3000.

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

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- 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:
- C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.
1. Manufacturers:
- 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 zinc-plated steel or 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.
- E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.
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1. Minimum Size, Unless Otherwise Indicated or Required:

- a. Equipment Supports: 1/2-inch diameter.
- b. Single Conduit up to 1-inch (27 mm) Trade Size: 1/4-inch diameter.
- c. Single Conduit Larger than 1-inch (27 mm) Trade Size: 3/8-inch diameter.
- d. Trapeze Support for Multiple Conduits: 3/8-inch diameter.
- e. Outlet Boxes: 1/4-inch diameter.

F. 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.
- 9. Hammer-driven anchors and 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.

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- 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. See Section 01 4000 - Quality Requirements for additional requirements.
- B. Inspect support and attachment components for damage and defects.
- C. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- D. 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 - Conductors and Cables.
- B. Section 26 0526 - GROUNDING AND BONDING.
  - 1. Includes additional requirements for fittings for grounding and bonding.
- C. Section 26 0529 - HANGERS AND SUPPORTS.
- D. 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. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- D. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT).
- E. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.
- F. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit.

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- G. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
  - H. NFPA 70 - National Electrical Code.
  - I. UL 1 - Flexible Metal Conduit.
  - J. UL 6 - Electrical Rigid Metal Conduit-Steel.
  - K. UL 360 - Liquid-Tight Flexible Metal Conduit.
  - L. UL 514B - Conduit, Tubing, and Cable Fittings.
  - M. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings.
  - N. UL 797 - Electrical Metallic Tubing-Steel.
  - O. 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.

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## 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. Underground:
  - 1. Exterior, Direct-Buried: Use rigid PVC conduit.
  - 2. Exterior, Embedded Within Concrete: Use rigid PVC conduit.
  - 3. Where rigid polyvinyl chloride (PVC) conduit is provided, transition to galvanized steel rigid metal conduit (RMC) where emerging from underground.
- D. Interior, Damp or Wet Locations: Use galvanized steel electrical metallic tubing (EMT).
- E. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel electrical metallic tubing (EMT).
- F. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit (RMC).

### 2.02 CONDUIT - GENERAL REQUIREMENTS

- A. Comply with NFPA 70.

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- 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. Fittings for Grounding and Bonding: See Section 26 0526 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.
  - 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/](http://www.alliedeg.com/).
  - 2. Republic Conduit: [www.republic-conduit.com/](http://www.republic-conduit.com/).
  - 3. Wheatland Tube, a Division of Zekelman Industries: [www.wheatland.com/](http://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. Bridgeport Fittings Inc: [www.bptfittings.com/](http://www.bptfittings.com/).
    - b. O-Z/Gedney, a brand of Emerson Electric Co: [www.emerson.com/](http://www.emerson.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.

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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](http://www.afcweb.com).
2. Electri-Flex Company: [www.electriflex.com](http://www.electriflex.com).
3. International Metal Hose: [www.metalhose.com](http://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. Manufacturers:

- a. Bridgeport Fittings Inc: [www.bptfittings.com/](http://www.bptfittings.com/).
- b. O-Z/Gedney, a brand of Emerson Electric Co: [www.emerson.com/](http://www.emerson.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.

D. Description: Interlocked steel construction.

#### 2.05 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

A. Manufacturers:

1. AFC Cable Systems, Inc: [www.afcweb.com](http://www.afcweb.com).
2. Electri-Flex Company: [www.electriflex.com](http://www.electriflex.com).
3. International Metal Hose: [www.metalhose.com](http://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:

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1. Manufacturers:
    - a. Bridgeport Fittings Inc: [www.bptfittings.com/](http://www.bptfittings.com/).
    - b. O-Z/Gedney, a brand of Emerson Electric Co: [www.emerson.com/](http://www.emerson.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](http://www.alliedeg.com).
  2. Republic Conduit: [www.republic-conduit.com/](http://www.republic-conduit.com/).
  3. Wheatland Tube Company: [www.wheatland.com](http://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. Manufacturers:
    - a. Bridgeport Fittings Inc: [www.bptfittings.com/](http://www.bptfittings.com/).
    - b. O-Z/Gedney, a brand of Emerson Electric Co: [www.emerson.com/](http://www.emerson.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.
  4. Connectors and Couplings: Use compression/gland or set-screw type.
    - a. Do not use indenter type connectors and couplings.
  5. Damp or Wet Locations, Where Permitted: Use fittings listed for use in wet locations.

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## **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. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.
- D. 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.

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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.

E. 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.
4. Use conduit strap to support single surface-mounted conduit.
  - a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
5. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.
6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
7. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits.
8. Use of spring steel conduit clips for support of conduits is permitted only as follows:
  - a. Support of electrical metallic tubing (EMT) up to 1-inch (27 mm) trade size concealed above accessible ceilings and within hollow stud walls.
9. Where conduit support intervals specified in NFPA 70 and NECA standards differ, comply with most stringent requirements.

F. Connections and Terminations:

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1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
  2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
  3. Use suitable adapters where required to transition from one type of conduit to another.
  4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
  5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
  6. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
  7. Secure joints and connections to provide mechanical strength and electrical continuity.

G. 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.
8. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 8400.

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- H. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment.
    - 1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
  - I. Conduit Sealing:
    - 1. 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.
  - 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. See Section 01 4000 - Quality Requirements for additional requirements.
- 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 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 RACEWAYS FOR ELECTRICAL 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 2726 - Wiring Devices: Receptacles.

1.03 REFERENCE STANDARDS

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

**PART 2 PRODUCTS**

2.01 MANUFACTURERS

- A. Equal to Wiremold Company: [www.wiremold.com](http://www.wiremold.com).
- B. Substitutions: See Section 01 6000 - Product Requirements.

2.02 SURFACE RACEWAYS

- A. Surface Metal Raceway: Sheet metal channel with fitted cover, suitable for use as surface metal raceway.
  - 1. Equal to Wiremold 500/700 Series.
  - 2. Finish: Buff enamel.
  - 3. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories.
- B. Two Compartment Surface Metal Raceway: Sheet metal channel with two compartments. Fitted cover. Suitable for use as surface metal raceway.
  - 1. Equal to Wiremold Series.

- 
2. Finish: Standard ivory enamel.

### **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. Close unused raceway openings.
- F. 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. Inspect raceways for damage and defects.
- C. Correct wiring deficiencies and replace damaged or defective raceways.

#### **3.04 CLEANING**

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

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### 3.05 PROTECTION

- A. Protect installed raceways from subsequent construction operations.

**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.
  - 2. Additional requirements for locating boxes to limit conduit length and/or number of bends between pulling points.
- C. 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. NECA 130 - Standard for Installing and Maintaining Wiring Devices.
- C. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- D. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- E. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- 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.

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#### 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.
  - 5. Minimum Box Size, Unless Otherwise Indicated:

- 
- a. Wiring Devices (Other Than Communications Systems Outlets): 4 inch square by 2-1/8 inch deep (100 by 54 mm) trade size.
  - b. Communications Systems Outlets: 4 inch square by 3-1/2" deep trade size.
  - c. Ceiling Outlets: 4 inch octagonal or square by 1-1/2 inch deep (100 by 38 mm) trade size.
- 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:
    - a. Indoor Clean, Dry Locations: Type 1, painted steel.
  - 3. Junction and Pull Boxes Larger Than 100 cubic inches:
    - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
  - 4. Finish for Painted Steel Enclosures: Manufacturer's standard grey 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.

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- 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. Locate boxes to be accessible. Provide access panels in accordance with Section 08 3100 as required.
    - 2. Unless dimensioned, box locations indicated are approximate.
    - 3. Locate boxes so that wall plates do not span different building finishes.
    - 4. Locate boxes so that wall plates do not cross masonry joints.
    - 5. Fire Resistance Rated Walls: Install flush-mounted boxes such that the required fire resistance will not be reduced.
      - a. Do not install flush-mounted boxes on opposite sides of walls back-to-back; provide minimum 24 inches separation where wall is constructed with individual noncommunicating stud cavities or protect both boxes with listed putty pads.
      - b. Do not install flush-mounted boxes with area larger than 16 square inches or such that the total aggregate area of openings exceeds 100 square inches for any 100 square feet of wall area.
    - 6. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 26 0534.
    - 7. Locate junction and pull boxes in the following areas, unless otherwise indicated or approved by the Architect:
      - a. Concealed above accessible suspended ceilings.
      - b. Within joists in areas with no ceiling.
      - c. Electrical rooms.
      - d. Mechanical equipment rooms.
  - 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.
  3. Installation Above Suspended Ceilings: Do not provide support from ceiling grid or ceiling support system.
- 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. Maintain headroom and present neat mechanical appearance.
  - P. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
  - Q. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than from ceiling access panel or from removable recessed luminaire.
  - R. Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section .
  - S. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.
  - T. Use flush mounting outlet box in finished areas.
  - U. Locate outlet boxes so that wall plates do not span different building finishes.
  - V. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
  - W. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
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- X. Use adjustable steel channel fasteners for hung ceiling outlet box.
  - Y. Do not fasten boxes to ceiling support wires.
  - Z. Support boxes independently of conduit, except cast box that is connected to two rigid metal conduits both supported within 12 inches of box.
  - AA. 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 26 0519 - Conductors 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.

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## 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 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.
- C. Identification for Boxes:
  - 1. Use identification labels or handwritten text using indelible marker to identify circuits enclosed.
    - a. For exposed boxes in public areas, use only identification labels or handwritten text using indelible marker to identify circuits enclosed.

### 2.02 IDENTIFICATION NAMEPLATES AND LABELS

- A. Identification Nameplates:
  - 1. Manufacturers:
    - a. Brimar Industries, Inc: [www.brimar.com](http://www.brimar.com).
    - b. Kolbi Pipe Marker Co: [www.kolbipipemarkers.com](http://www.kolbipipemarkers.com).
    - c. Seton Identification Products: [www.seton.com](http://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.
- B. Identification Labels:

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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. Surface-Mounted Equipment: Enclosure front.
  2. Boxes: Outside face of cover.
  3. Conductors and Cables: Legible from the point of access.
- C. Install identification products centered, level, and parallel with lines of item being identified.
- D. Mark all handwritten text, where permitted, to be neat and legible.

### **END OF SECTION**

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**SECTION 27 5500  
POOL TIMING SYSTEM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Eight lane In-Deck timing system with eight on-deck (portable) timing system.
- B. Diving scorer's system with minimum of ten judge's stations.
- C. Starting system integrated with electronic timing, relay judging platforms, and scoreboard system.
- D. Electronic timing and scoreboard system with multi-sport capability used for practice pacing and instruction, competitive swimming events, diving, water polo, and synchronized swimming.
- E. Integration with existing aquatic timing system and the other existing Daktronics video board that is to remain.
- F. System testing, commissioning and Owner Training.

**1.02 REFERENCES**

- A. FCC, cULus, CE, RoHS
- B. Federal Communications Commission Regulation Part 15
- C. National Electric Code

**1.03 SUBMITTALS**

- A. Product data: Submit manufacturer's product illustrations, data and literature that fully describe the displays and accessories proposed for installation.
  - 1. Include declaration and documentation that the proposed system is compatible with the specified timing systems.
- B. Shop drawings: Submit mechanical and electrical drawings.
- C. integration drawings detailing scoreboards, conduit, and junction boxes.
- D. Warranty information.
- E. Maintenance data: Submit manufacturer's installation, operation, and maintenance manuals.

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#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to the job site in standard shipping containers. Leave labels intact.
- B. Electrical contractor responsible to unload equipment and stage in location as directed by the Owner.
- C. Display and equipment to be housed in a clean, dry environment

#### 1.05 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install equipment until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for project when occupied for its intended use.
- B. Field Measurements: Coordinate display location and height with the customer. Verify dimensions by field measurements.
- C. Supply weight and mounting method for owner to verify that building structure can support the display's weight in addition to the auxiliary equipment.
- D. Manufacturers proposing to submit a quotation for the electronic timing and scoreboard system must confirm that all embedded items are compatible with the installation of their respective systems. Proposed system must integrate with existing Colorado Time Systems' equipment when present.
- E. Manufacturers shall review the construction documents and shall notify the architect 10 (ten) days prior to the bid date of conflicts or additions to the work of other subcontractors for the proper installation of their system.

#### 1.06 QUALITY ASSURANCE

- A. For indoor use only in an aquatic environment.
- B. Source Limitations: Obtain each type of electronic display through one source from a single manufacturer.
- C. ETL listed to UL Standards 48 and 1433
- D. ETLC listed to CAN/CSA 22.2
- E. CE compliant
- F. FCC compliant

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G. EU EMC Directives 55022/55024/61000 compliant

H. Installed per National Electrical Code

#### 1.07 ADA COMPLIANCE

- A. Bismarck Parks and Recreation District requires its digital products and services, including websites, mobile applications, hardware, software, subscription services, electronic communications, and digital documents such as PDFs, to meet Digital Accessibility Standards.
- B. The vendor must meet or exceed WCAG 2.1 Level AA requirements for web and mobile accessibility.
- C. Vendors must provide documentation of ADA compliance, either through a third-party accessibility evaluation or a Voluntary Product Accessibility Template (VPAT), also known as a Accessibility Compliance Report (ACR).

#### 1.08 WARRANTY

- A. Provide toll-free service coordination.
- B. Manufacturer shall warrant the deck plates for 5 years, display board/scoreboard and touchpads for 3 years, starting system for 2 years, all other items including computers 1 year.
- C. Timing Company must supply onsite meet support to be scheduled with system supplier and the End User.

#### 1.09 OPERATION AND MAINTENANCE DATA

- A. Submit in accordance with Section 26 0500 information for operating and maintaining the system including wiring diagrams, repair parts list, setting of controls (including initial setting), rigging drawing, as-built drawings, troubleshooting guide, theory of system function and name/contact information of nearest service organization. Provide an electronic copy of system software configurations and system code for all applicable products listed in this specification.

### **PART 2 PRODUCTS**

#### **2.01 GENERAL DESCRIPTION:**

- A. All Serial timing connection points shall employ the following:
  - 1. The timing system shall employ topography of one communication bus to which all timing and connectivity nodes are connected and communicate with each other.

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2. Connection points shall be production items and not a one off or prototypes.
  3. Contacts as exposed connectors are wet pluggable and electrically passive if not connected. No maintenance for corrosion shall be needed.
  4. Self-test capabilities to detect compromised timing bus wire terminations and scoreboard bus wire terminations.

## 2.02 MANUFACTURER:

### A. Basis of Design: Colorado Time Systems, Inc., 1551 E 11th St., Loveland, CO 80537.

1. Contact: Jenny Ruffner:
  - a. 970-203-5056
  - b. jenny.ruffner@coloradotime.com

### B. Alternate Manufacturer:

1. Omega/Swiss Timing:
  - a. Contact: James Barber, United Sports Services
    - 1) james@unitedsportsservices.com

### C. Supplier Substitution Requests

1. In order to assure the quality and reliability of potential video display equipment manufacturers, suppliers, and installers, provide all information as follows:
  - a. Supplier/Installer Experience
    - 1) Firm History & Background
    - 2) Relevant Project References
      - (a) Provide a minimum of three (3) project references similar in scope to this project.
      - (b) Contact information for the client's staff that were involved with system operation and maintenance.
      - (c) Description of project including number, size, and manufacturer of video walls installed. Include year of installation

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b. Product Information

- 1) Product Data Sheets
  - (a) Control Consoles
  - (b) Deck plates
  - (c) Software
- 2) Cabinet and module dimensions
- 3) Project specific panel configuration, size and layout.
- 4) Total installed weight.
- 5) Electrical and control connection quantities and locations.
- 6) Total power requirement.
- 7) System flow/connection diagram.
- 8) Proposed modifications to existing support structure.

## 2.03 PRODUCTS

A. Control Consoles:

1. Basis of Design: Colorado Timing: GEN7 SERIAL TIMING SYSTEM (GEN7-TMR)
2. The Swim Timing System must be supplied with necessary software to time swimming in compliance with the appropriate sanctioning body - World Aquatics, USA SWIMMING, NCAA, and NFHS.
3. Swim Timing System must be a standalone unit with physical connections to timing inputs. Timer must be controlled by Windows based user interface device (computer) via network. One laptop must be provided per simultaneous swim course (R-600-302), (2).
4. Timer PC or tablet interface device must be supplied with necessary software to time and score swimming in compliance with the appropriate governing organization(s) - World Aquatics, USA SWIMMING, NCAA, and NFHS.
5. Configuration of racecourses must be through graphical user interface. It is unacceptable that race configurations need specific cable connections to system connections such as wall plates defining a specific end of a course.

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6. The user interface must display complete race status. The interface must be capable of functioning as miniature scoreboard displaying information simultaneously for active lanes including lane number, current length in race or final place, split or finish time, relay judging status indicator, and backup time and backup button status.
  7. Timer must automatically flag timing discrepancies (in the user interface, on the results printouts and in stored memory) greater than a user defined interval between touch pad and backup times.
  8. Swim Timing System input/output ports must include:
    - a. Must accept inputs for up to 4 courses of up to 20 lanes each for a serial in-deck wiring installation and must be able to time them simultaneously.
    - b. Must accept on-deck cable harness inputs for up to 20 lanes near end and/or far end.
    - c. Must communicate with meet management peripheral software on a two-way “handshake” basis, enabling the meet manager’s resident computer to query the timer’s memory via the network at any time for any race results.
    - d. Must provide backup time via push button provided on a per lane basis should swimmer fail to trigger touch pad or touch pad fail to register. The timer must be capable of accepting up to three backup button times per lane.
    - e. Must automatically compare the touch pad hit of an incoming swimmer with the starting swimmer’s time of departure from the optional relay-judging platform. Results display both “plus” and “minus” takeoff times and can be printed and stored in race memory.
  9. Accuracy of the Swim Timing System:
    - a. Must time to a user-selectable resolution from 1 second to .001 second. It must take starts and finishes from the near end and/or far end of the pool. It must accept inputs from the start system; touch pads, up to three manual button backup times per lane, and relay judging platforms.
    - b. Must be able to evaluate and report multiple states of timing component input condition, ranging from excellent to failure. It is unacceptable that only two states such as on or off are reported.
    - c. Must have touch pad delay feature with ability to program delays from 1 to 99 seconds.
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- d. Must permit the operator to correct for an erroneous touch by adding/subtracting a touch pad hit to correct the lengths completed. The interface must not permit the operator to finish a race in any lane; timers including such a function are unacceptable because they permit the possibility of cheating.
  - e. Later recall of stored race data must allow for a re-run of a given race including changes in user decisions.
10. Swim Timing System Detection:
- a. Must be capable of detecting timing components such as pushbuttons, touchpads, RJP's in an in-deck system.
  - b. Must be capable of reporting corrosion in the in-deck wiring installation.
11. Swim Timing System must run off a 12-volt power supply connected to a standard 110/240 VAC outlet and will automatically switch to (and display on screen of connected interface device) internal battery power source, in case of line power failure without affecting the continuity and accuracy of the timing system.
12. Swim Timing System must interface to single-line and multi-line scoreboard and must post immediate results to scoreboard in "Lane" or "Place" order (user selectable). The timer must also have the capability to pull race results from memory and post those results to the scoreboard in "Lane" or "Place" order (user selectable).
13. Swim Timing System must include internal clock calendar with self- sustaining battery to time/date stamp results.
14. Swim Timing System must meet acceptable safety standards. Must be UL approved, or equivalent.
15. Swim Timing System Storage and Internal Memory:
- a. System must store each and every timing input state change. It is not acceptable that state changes get discarded and are not available for later re-evaluation of a race.
  - b. Race data, including near and far end splits, must be stored to internal memory for later recall to facilitate meet management connectivity and printing. Printed reports must include cumulative and subtractive splits as well as relay judging times (when required).
16. Swim Timing System must have an Automatic Event Sequencer that is capable of holding both standard and user defined event sequences. The event order will be able to be
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downloaded from meet management software. The desired order is user selectable. EVENT SEQUENCES with appropriate race distance and race description for high school, college meets, and two “User Defined” meets to permit construction of custom meets, World Aquatics, USA SWIMMING, NCAA, and NFHS. When recalled from memory, race distance and descriptions are automatically selected for the operator.

17. Swim Timing System must have a user interface software that permits operation of essential functions including Lane Off/On, Finish Arm, Split Arm, & Print Results directly from the main screen to ensure speed and simplicity of operation during critical race times. The interface must permit the operator to edit a time when required or to disqualify a lane (DQ), automatically posting it to the scoreboard, and provide automatic re-ranking of results. Corrections generated by the operator (edit or disqualification) must be clearly identified on the results printouts.
18. Swim Timing System must include electronic beeper and LED signaling to indicate touchpad, backup button and RJP inputs. Timers which do not allow the user to configure (enable/disable) this feature are unacceptable.
19. Swim Timing System connectivity must include:
  - a. USB (Type A) port for peripheral attachment
  - b. USB (Type B) port for meet management connectivity.
  - c. USB (Type B) port for technical support computer connectivity
  - d. Ethernet port for network connectivity
  - e. 3 independent scoreboard output ports
  - f. Wireless 2.4GHz scoreboard connectivity
  - g. Connection for in-deck wiring and two connections for on-deck (near and far end) wiring.
  - h. Start system connection directly to timer.
  - i. External DC power port
20. Swim Timing System must be capable of updating internal software/firmware via Internet connection.
21. Swim Timing System software must have the ability to adjust the intensity of LED (numeric) scoreboard brightness.

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22. Timing manufacturer to provide cabling and connections to two existing video display boards.

23. Quantity Required: Two (2) base bid and One (1) alternate bid.

B. Software:

1. Basis of Design: Colorado Timing: GEN PACE CLOCK PROGRAM
2. Accessory software program shall turn multi-sport computer and multi-sport scoreboard into an effective training system and coaching tool.
3. Interface to HYTEK's "Workout Manager" software with direct download to computer timer.
4. Programmable workouts are saved into memory
5. Workouts display on multi-line scoreboard by lane.
6. START/STOP all lanes with one keystroke, or individually.
7. Quantity Required: As required.

C. In-Deck Plates (8-lane Configuration):

1. Basis of Design: Colorado Timing: TITANIUM SERIAL DECK PLATES – 1.5" CONDUIT (TDPI-D2).
2. Deck plates (8) required to permit plug-in connection for touchpads, A/B/C backup buttons, electronic relay judging, start light signal, start speakers, and a signal to start the timing device at each lane.
3. Each deck plate to be mounted flush with deck tile or horizontally with deck tile to smooth edges and prevent injury to swimmers.
4. Deck plate shall be made of material resistant to long term pool water exposure and shall be maintenance free other than normal power washing.
5. Deck plate shall have topography that protects connectors for touchpads, backup buttons, electronic relay judging, start light signal, and start speakers by directing splash water to flow off to limit electrolysis.
6. Connection to timer shall allow for pool setup without a wall plate.
7. Self-test capabilities to detect anomalies with connectors (corrosion/shorts).

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8. Contacts as exposed connectors, wet pluggable, and electrically passive if not connected.
  9. Detection of presence or absence of connected timer.
  10. Deck plates shall have recessed lettering that does not fade or get mechanically removed.
  11. Deck plate shall be intelligent and have diagnostic capabilities.
  12. Deck plate shall fit into the existing 4" x 4" x 6" pvc junction box.
  13. Quantity Required: One (1) complete system.

D. In-Deck Plates (Starting System):

1. Basis of Design: Colorado Timing: TITANIUM START SYSTEM DECK PLATES (TDPI-S2).
2. Start system deck plates (5) connects start system into in-deck system.
3. Connection to start system that must provide the following:
  - a. Inputs/outputs for start system and speaker.
  - b. Detection of presence or absence of speaker input or start system when connected to timer.
  - c. Diagnostic capabilities to detect anomalies with connectors (corrosion, shorts) and anomalies with the speaker or start system when connected to timer.
4. Must be maintenance free other than normal power washing.
5. Deck plate shall fit into the existing 4" x 4" x 6" pvc junction box.
6. Quantity Required: Five (5).

E. In-Deck Plates (Bulkhead Plate):

1. Basis of Design: Colorado Timing: TITANIUM BULKHEAD DECK PLATES (TDPI-BH4)
2. Bulkhead deck plates (3) connects in deck timing.
3. Connection to bulkhead that must provide the following:
  - a. Detection of presence or absence of connected bulkhead.
  - b. Self-test capabilities to detect compromised timing bus wire terminations.

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- c. Diagnostic capabilities to detect anomalies with connectors (corrosion, shorts).
  - 4. Must be maintenance free other than normal power washing.
  - 5. Deck plate shall fit into the existing 4" x 4" x 6" pvc junction box.
  - 6. Quantity Required: Three (3).
- F. Main System Wall Plate (located in existing scorer's room)
- 1. Basis of Design: Colorado Timing: TITANIUM SERIAL WALL PLATE CONNECTION ONLY - 1.5" CONDUIT (R-1004-0549)
  - 2. Wall plates must be provided as required in the quantities as shown on the drawings. Wall plates must be the termination point for connections between deck cables, timers, start system, and other wall plates.
  - 3. Wall plates must allow for the following connections depending on location and usage:
    - a. Connection to the timer.
    - b. Connectivity to timing courses and one scoreboard bus with one cable connection.
    - c. Diagnostic capabilities to detect anomalies with connectors (corrosion, shorts).
  - 4. Connection to a start system and must provide the following:
    - a. Inputs for start system and speaker.
    - b. Diagnostic capabilities to detect anomalies with connectors (corrosion, shorts) and anomalies with the speaker input or start system.
    - c. Detection of presence or absence of speaker input or start system.
  - 5. Connection to a scoreboard and must provide the following:
    - a. Detection of presence or absence of connected scoreboard.
    - b. Self-test capabilities to detect compromised timing bus wire terminations.
  - 6. Wall plate shall fit into the existing 12" x 12" x 6" wall box.
  - 7. Verify routing of conduit with timing manufacturer prior to installation.
  - 8. Quantity Required: One (1).

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G. Touch Pads:

1. Basis of Design: Colorado Timing: TP-72G and TP-96G
2. Touchpads shall be integrated to the timing system using in-deck wiring to a wall plate connection or on-deck cable harness.
3. Touchpads shall be constructed of an all-plastic exterior with only the electrical connector metal exposed. Stainless steel will not be acceptable in pool environment.
4. Touchpads shall have a uniform fine grit, non-abrasive surface that prevents swimmer slippage in any direction.
5. Touchpad markings shall have contrasting colors with a 2" black border and black end-wall cross pattern for portion covered by touchpads.
6. Touchpad brackets shall be custom made to fit the pool gutter system. Gutter/bulkhead dimensional drawings required upon placement of order.
7. Touchpad caddy for storing touchpads supplied shall be (1) CAP-TP-P and (1) CAD-TP96.
8. TP-GEN7-8 includes (1) 8-lane harness, (9) push buttons, (1) touchpad test meter and (1) vacuum pump. Provide additional push-buttons to meet the owner's requirements for 40 total.
9. Provide following cables: (1) 8-lane prime cable harness (CHSP-1-8), (2) 8-lane backup cable harnesses (CHSB-1-8), (1) 60m cable extension (CHSE-60).
10. Quantity Required:
  - a. Ten (10) of each pad size with the associated cables.
  - b. Forty (40) plungers with the associated cables.

H. Starting Horns:

1. Basis of Design: Colorado Timing: CHAMPION ELITE START SYSTEM(SSE)
2. Swim Timing Start System must be provided to start the automatic Swim Timing System. The start system must be capable of driving up to 20 (45ohm) individual lane/block speakers mounted under the starting blocks or (2) underwater/aux speakers (up to 8ohm ea), the relay judging platform strobe lights and deck side start indicators, with microphone.

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3. System shall use wired microphone and shall have a volume control, including base and treble.
  4. Each Start system shall have a sturdy, all metal, non-corrosive enclosure with feet. The start system should include a backstroke flagpole mount (START-FPM-2).
  5. The system shall have external connections for additional external visual indicator strobe light(s) (EVI's), speaker output, start output and Speedlights.
  6. The system shall run off 2 internal gel cell batteries. The internal batteries will automatically be recharged while the starter is plugged in to the external power supply. Under typical operation the batteries should last more than 15 hours, and typically recharge in ~2.5 hours.
  7. System shall have an LED showing the battery status (green, yellow, red) when the internal batteries are starting to get low on power. Battery status percentage shall be displayed on the LCD screen.
  8. Start system must be compatible with CTS underwater speaker system (SP-UND).
  9. Start system must have standard CTS start tone and alternate start tone.
  10. Loudness of start tones and under block speakers shall be configurable by the end user for optimal use both indoors and outdoors.
  11. The intensity of the onboard strobe and EVIs shall be configurable by the end user for optimal use both indoors and outdoors.
  12. System shall include a backlit and transfective LCD screen that provides easy navigation and onboard help menus.
  13. Start system shall include a visual start signaling system (VSS) option to provide a clear visual start sequence for all athletes. Visual functionality includes: Call to block (EVI blinks red), Step up (EVI steady red), Take Your Marks (EVI steady yellow), Start (EVI flashes green or white). VSS must be controllable via user operated pushbutton device separate from starter microphone.
  14. System shall include a training mode that provides both a pre-recorded and customizable "Take Your Marks" message and start signaling with a variable interval between starts. Time interval between "Take your marks" and start signal must include random delay. The training mode shall be configurable by the user to include VSS signaling.
  15. Start system must be FCC compliant and safety listed, UL or equivalent.

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16. Start system shall be able to be updated by customer.

17. Provide (1) flagpole mount (EVI-FPM) per speaker assembly.

18. Quantity Required: Three (3).

I. Auxiliary Speakers:

1. Basis of Design: Colorado Timing: AUXILIARY SPEAKERS (R-SP-125)

2. Auxiliary speakers (3) shall be 40-watt 8ohm. Auxiliary speakers' output level shall be fully adjustable.

3. Provide (1) flagpole mount (EVI-FPM) per speaker assembly.

4. Quantity Required: Three (3).

J. External Strobe Light for the hearing impaired:

1. Basis of Design: Colorado Timing: EXTSTROBE+

2. Provide (1) flagpole mount (EVI-FPM) per speaker assembly.

3. Quantity Required: One (1).

K. Handheld Diving Scorers (wireless preferred)

1. Basis of Design: Colorado Timing: JUDGE SPLIT DIVING SCORING SYSTEM (JSYS-11)

2. Diving Scoring System shall utilize scoreboard to display diving scores and results without modification from swimming configuration.

3. Diving Scoring System Software shall:

a. Diving Scoring System Software shall support standard and synchronized scoring.

b. Accept seven judges' input scores and compute award based upon proper formulas for seven judges. Software shall be operable with either remote judges' terminals or manual input of flash card scores.

c. System must provide connectivity for three Judges to be located on side of the diving well and four judges located on the opposite side of the diving well.

d. System must be expandable to use up to eleven judges scoring terminals.

- 
- e. Permit display of the lead diver number, current diver number, dive number, degree of difficulty, judges' scores and diver's calculated award and total score.
  - f. Permit entry of all diving data into non-volatile memory for storage or receive data from meet management computer without additional modifications. Data shall include diver number, round number, dive number, and position. Degree of difficulty shall be automatically calculated based upon dive number per current FINA/USD/NCAA/High School regulations. Dive degree of difficulty can also be manually input.
  - g. Automatically recall the diver with round number, dive number and DD using minimal keystrokes. Systems which require live entry of dive information are unacceptable.
  - h. Permit storage of diver's point totals and provide ranking of the divers at the end of each round.
  - i. Permit editing of judges' scores if required by meet officials.
  - j. Provide an output for computer data handling of diving events.
  - k. Permit two point deduction from the judges' scores and zero points for a failed dive. Such changes shall be clearly shown on the printout.
  - l. Printout shall provide preliminary data, diver ranking by rounds, and results of individual dives with judges' scores.
  - m. Judges' terminals shall be housed in sealed, water-resistant, shockproof housing.
  - n. The terminals shall provide a signal to inform the judge that the diving console has requested a score. Signal shall cease when an appropriate score is transmitted. They shall also allow each judge to input a score with a minimum of keystrokes, review that score via a built-in LCD display, and correct a score if needed before transmitting to the Judging Software.
  - o. The Software shall provide a switchable mode for sending data to the scoreboard display.
    - 1) Mode- Automatic- In this mode the software must send the judges scoring information to the display with no software operator interaction.
    - 2) Mode- Hold for Authorization – In this mode the software must receive authorization from a referee terminal or an assistant referee terminal prior to sending the scoring data to the display.
-

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4. Remote judging terminal and interface shall be as follows:
    - a. Interface hub shall plug into the PC via USB 2.0 or greater
    - b. Judges terminals shall include a quick release mating connector for connection to the Diving Cable Breakout Box.
    - c. Judges' terminals shall include rugged communications cable to connect to the diving interface box. Cable should be removable for easy cost effective replacement of the cable.
    - d. Judges' terminals shall utilize sealed keyboards with a 128x64 Pixel Backlit LCD display suitable for indoor and sunlight readability.
    - e. Judges terminal LCD must be capable of displaying Divers Name.
    - f. Judges terminal LCD must be capable of displaying Divers Team or Country Name.
    - g. Judges terminal LCD must be capable of displaying scores of other judges once the scores have been accepted.
    - h. Judges terminal LCD must be capable of displaying Dive and Dive Degree of Difficulty
    - i. Judges terminal LCD must be capable of displaying the Terminal Number so they can be easily identified to the judge
    - j. Judges terminals shall include a request change button to notify the software that the judges input is requesting permission to correct the submitted score.
    - k. Judges terminals must be able to be assigned as a Referee's terminal or Assistant Referee's terminal allowing the device to control when the judging data is transmitted to the scoreboard display.
    - l. JSYS-11 system includes: (11) judging terminals, (1) interface hub box, (2) cable breakout boxes and all associated cables. Provide (1) spare dive judge terminal (JSYS-1). Software to be installed on Windows laptop furnished under this section (see above).
  5. Quantity Required: One (1) complete system consisting of no less than 10 judges' terminals.

## 2.04 CONTROL COMPUTER

### A. Laptop

- 
1. Operating System: Windows® 11 Pro
  2. Processor: Intel® Core™ i5
  3. Memory: 16 GB RAM
  4. Hard Drive: 500 GB
  5. Form Factor: Dell Latitude 5510 or better.
  6. Laptop may be removed from the control location so content can be created and modified elsewhere. When the laptop is reconnected to the rack, updated content is synced in a matter of minutes.
  7. Quantity Required: Two (2).

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. During bidding process, the pool timing supplier and electrical contactor shall coordinate the scope of work being provided by each entity to ensure all required work is included in the bid amount. No additional compensation will be made for lack of coordination during the bidding process.
- B. System supplier is responsible to verify that existing mounting surface is ready to receive the display. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings.
- C. Modifications to existing and new conduit, cables and outlet boxes to be provided and installed by the electrical contractor.
  1. Electrical contractor shall be responsible for selective demolition of existing electrical infrastructure that is not utilized for the new system.
- D. Modifications to existing and new signal raceways, conduit and boxes to be provided by the electrical contractor. Electrical contractor is responsible for installing a pull string and/or pulling signal wire between the field devices, control wall plate, and the existing video displays.
  1. Provide boxes, cover plates and jacks as required to meet control specification requirements.
  2. System supplier shall be responsible for terminating all cabling.

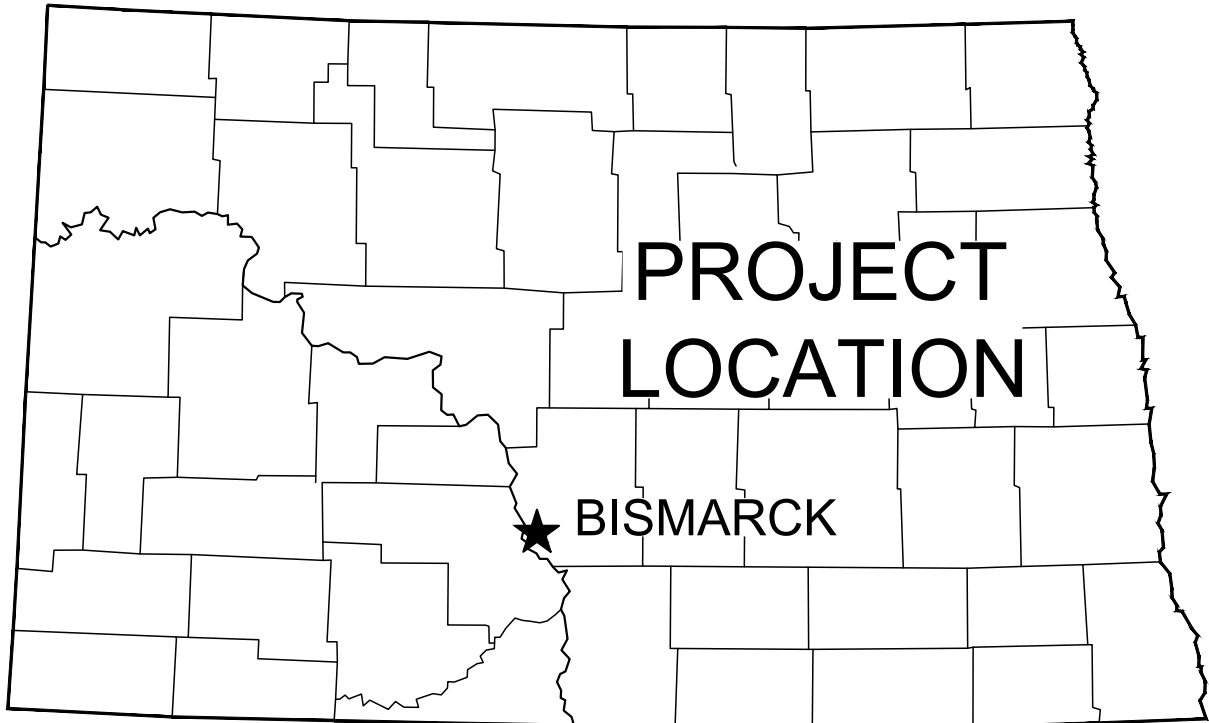
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- E. System supplier to provide all required video display system control and communications cabling between equipment rack locations as shown on the plans and display locations.
  - F. System supplier to integrate the new aquatic timing system and two existing Daktronics video board into new control software and verify proper operation.
  - G. System supplier to provide all necessary tools, lifts, etc as required for installation and include these costs in their bid amount.
  - H. Manufacturer must supply all required signal conversion hardware to allow for direct wire control of electronic display.

### 3.02 COMMISSIONING AND OWNER INSTRUCTION

- A. System Supplier shall provide complete testing of all aspects of video display system to ensure proper operation prior to Owner training and Substantial Completion.
- B. System Supplier to provide Owner training on system operation and maintenance. This training shall consist of the following:
  - 1. Initial system training to consist of instruction on set up and operation of all system software, components and controls. A walk-thru shall be performed to locate, identify, and explain function of all system components and discuss maintenance/replacement of system components.
  - 2. Provide onsite product operation and programming assistance to setup display content and instruct Owner's staff on programming.
- C. System Supplier shall provide the electrical contractor a separate price to provide onsite supervision during the electrical installation.

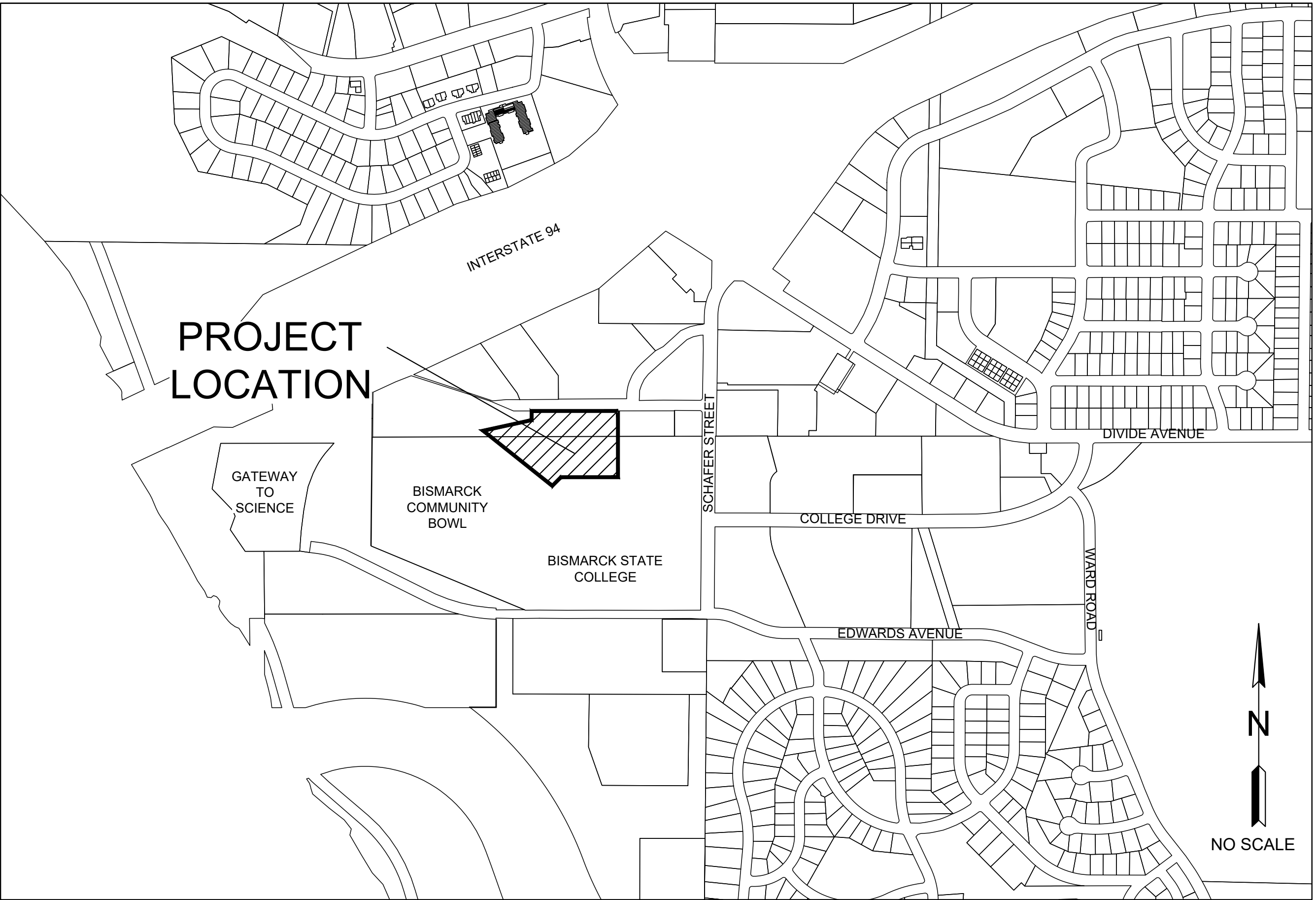
### END OF SECTION

CONSTRUCTION DOCUMENTS FOR  
BSC AQUATIC AND WELLNESS CENTER  
POOL TIMING SYSTEM REPLACEMENT  
BISMARCK, NORTH DAKOTA



NORTH DAKOTA  
STATE LOCATION MAP

**DRAWING INDEX:**  
T1 - PROJECT COVER SHEET  
E1 - ELECTRICAL DEMOLITION PLAN  
E2 - ELECTRICAL PLAN



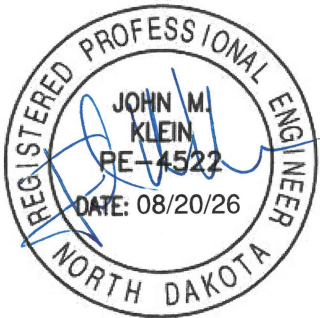
LOCATION MAP

APEX PROJECT NUMBER: 25.184.0295  
AUGUST 20, 2026

CERTIFICATIONS

I hereby certify that the attached plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of North Dakota.

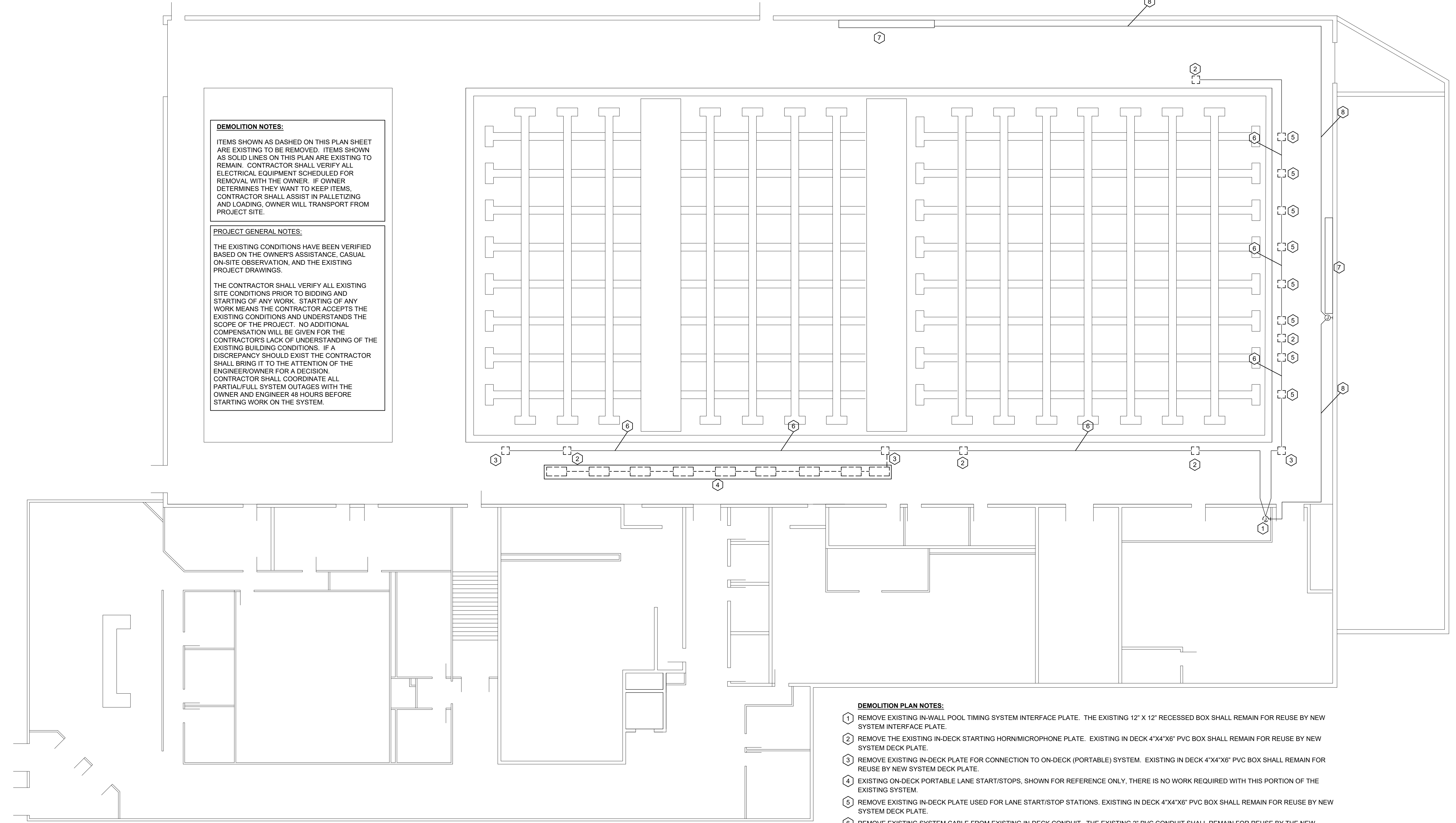
John M. Klein /s/  
John M. Klein, PE  
Date 08/20/2026 Lic. No. 4522



This document was originally issued and sealed by John M. Klein, Registration Number PE - 4522 on 08/20/2026. The original document is stored at Apex Engineering Group, 600 South 2nd Street - Suite 145, Bismarck, ND 58504 .

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**DEMOLITION NOTES:**

ITEMS SHOWN AS DASHED ON THIS PLAN SHEET ARE EXISTING TO BE REMOVED. ITEMS SHOWN AS SOLID LINES ON THIS PLAN ARE EXISTING TO REMAIN. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT SCHEDULED FOR REMOVAL WITH THE OWNER. IF OWNER DETERMINES THEY WANT TO KEEP ITEMS, CONTRACTOR SHALL ASSIST IN PALLETIZING AND LOADING, OWNER WILL TRANSPORT FROM PROJECT SITE.

**PROJECT GENERAL NOTES:**

THE EXISTING CONDITIONS HAVE BEEN VERIFIED BASED ON THE OWNER'S ASSISTANCE, CASUAL ON-SITE OBSERVATION, AND THE EXISTING PROJECT DRAWINGS.

THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO BIDDING AND STARTING OF ANY WORK. STARTING OF ANY WORK MEANS THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND UNDERSTANDS THE SCOPE OF THE PROJECT. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR THE CONTRACTOR'S LACK OF UNDERSTANDING OF THE EXISTING BUILDING CONDITIONS. IF A DISCREPANCY SHOULD EXIST THE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE ENGINEER/OWNER FOR A DECISION. CONTRACTOR SHALL COORDINATE ALL PARTIAL/FULL SYSTEM OUTAGES WITH THE OWNER AND ENGINEER 48 HOURS BEFORE STARTING WORK ON THE SYSTEM.

**DEMOLITION PLAN NOTES:**

- 1 REMOVE EXISTING IN-WALL POOL TIMING SYSTEM INTERFACE PLATE. THE EXISTING 12" X 12" RECESSED BOX SHALL REMAIN FOR REUSE BY NEW SYSTEM INTERFACE PLATE.
- 2 REMOVE THE EXISTING IN-DECK STARTING HORN/MICROPHONE PLATE. EXISTING IN DECK 4"x4"x6" PVC BOX SHALL REMAIN FOR REUSE BY NEW SYSTEM DECK PLATE.
- 3 REMOVE EXISTING IN-DECK PLATE FOR CONNECTION TO ON-DECK (PORTABLE) SYSTEM. EXISTING IN DECK 4"x4"x6" PVC BOX SHALL REMAIN FOR REUSE BY NEW SYSTEM DECK PLATE.
- 4 EXISTING ON-DECK PORTABLE LANE START/STOPS, SHOWN FOR REFERENCE ONLY, THERE IS NO WORK REQUIRED WITH THIS PORTION OF THE EXISTING SYSTEM.
- 5 REMOVE EXISTING IN-DECK PLATE USED FOR LANE START/STOP STATIONS. EXISTING IN DECK 4"x4"x6" PVC BOX SHALL REMAIN FOR REUSE BY NEW SYSTEM DECK PLATE.
- 6 REMOVE EXISTING SYSTEM CABLE FROM EXISTING IN-DECK CONDUIT. THE EXISTING 2" PVC CONDUIT SHALL REMAIN FOR REUSE BY THE NEW SYSTEM. TYPICAL OF ALL IN-DECK CONDUIT.
- 7 THE EXISTING DAKTRONICS' VIDEO BOARD TO REMAIN.
- 8 EXISTING MULTI-MODE FIBER OPTIC CABLE IN CONDUIT TO REMAIN.

**1 ELECTRICAL DEMOLITION PLAN**

3/32" = 1' - 0"



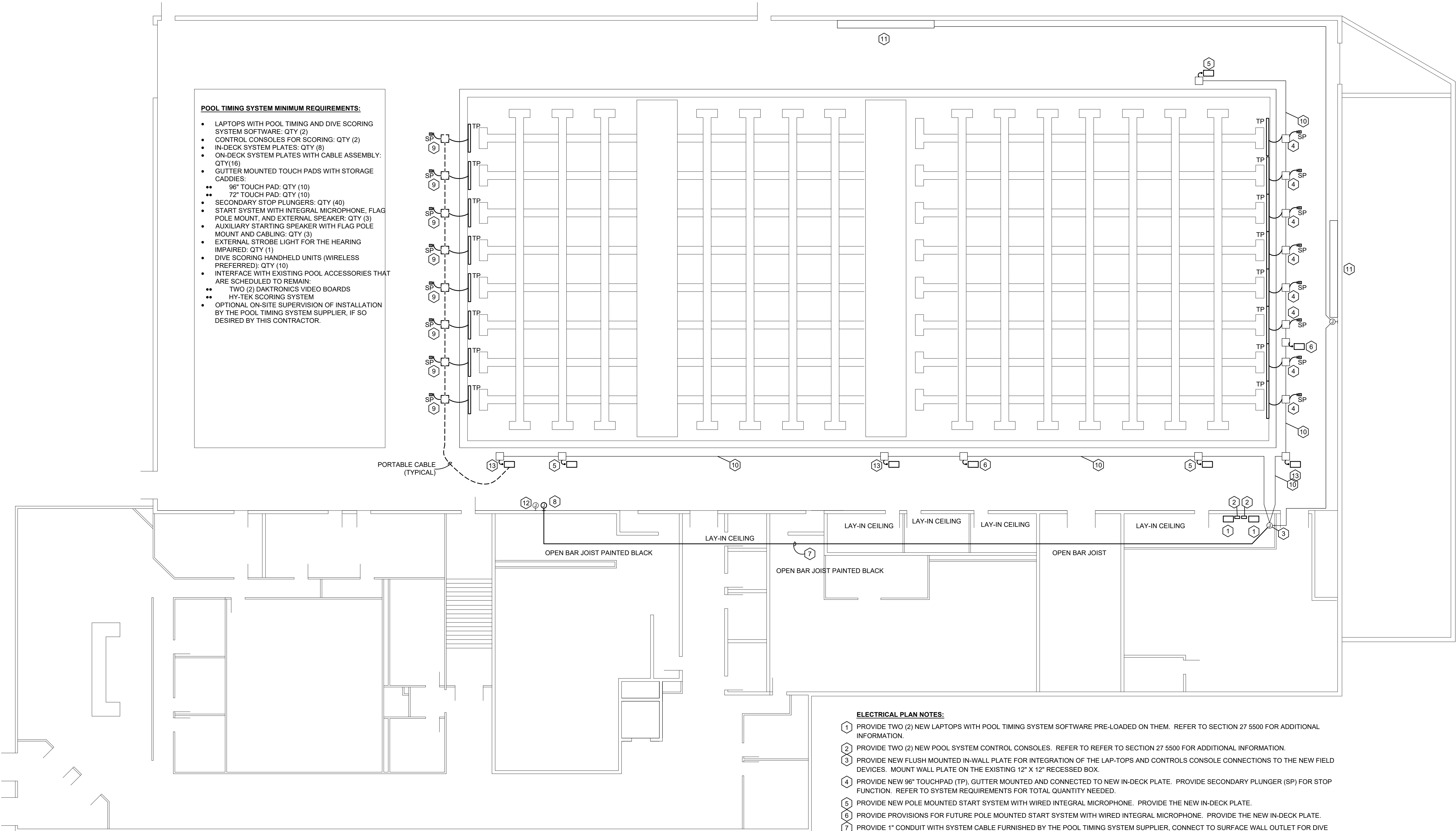
Date: 08/20/2026  
Drawn By: BPN  
Checked By: WMG/JMK  
Project #: 25.184.0295

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**BSC AQUATIC AND WELLNESS CENTER  
POOL TIMING SYSTEM REPLACEMENT  
BISMARCK PARKS AND RECREATION  
BISMARCK, NORTH DAKOTA**

**ELECTRICAL  
DEMOLITION PLAN**

Sheet:  
**E1**



- POOL TIMING SYSTEM MINIMUM REQUIREMENTS:**
- LAPTOPS WITH POOL TIMING AND DIVE SCORING SYSTEM SOFTWARE: QTY (2)
  - CONTROL CONSOLES FOR SCORING: QTY (2)
  - IN-DECK SYSTEM PLATES: QTY (8)
  - ON-DECK SYSTEM PLATES WITH CABLE ASSEMBLY: QTY(16)
  - GUTTER MOUNTED TOUCH PADS WITH STORAGE CADDIES:
    - 96" TOUCH PAD: QTY (10)
    - 72" TOUCH PAD: QTY (10)
  - SECONDARY STOP PLUNGERS: QTY (40)
  - START SYSTEM WITH INTEGRAL MICROPHONE, FLAG POLE MOUNT, AND EXTERNAL SPEAKER: QTY (3)
  - AUXILIARY STARTING SPEAKER WITH FLAG POLE MOUNT AND CABLING: QTY (3)
  - EXTERNAL STROBE LIGHT FOR THE HEARING IMPAIRED: QTY (1)
  - DIVE SCORING HANDHELD UNITS (WIRELESS PREFERRED): QTY (10)
  - INTERFACE WITH EXISTING POOL ACCESSORIES THAT ARE SCHEDULED TO REMAIN:
    - TWO (2) DAKTRONICS VIDEO BOARDS
    - HY-TEK SCORING SYSTEM
  - OPTIONAL ON-SITE SUPERVISION OF INSTALLATION BY THE POOL TIMING SYSTEM SUPPLIER, IF SO DESIRED BY THIS CONTRACTOR.

- ELECTRICAL PLAN NOTES:**
- 1 PROVIDE TWO (2) NEW LAPTOPS WITH POOL TIMING SYSTEM SOFTWARE PRE-LOADED ON THEM. REFER TO SECTION 27 5500 FOR ADDITIONAL INFORMATION.
  - 2 PROVIDE TWO (2) NEW POOL SYSTEM CONTROL CONSOLES. REFER TO REFER TO SECTION 27 5500 FOR ADDITIONAL INFORMATION.
  - 3 PROVIDE NEW FLUSH MOUNTED IN-WALL PLATE FOR INTEGRATION OF THE LAP-TOPS AND CONTROLS CONSOLE CONNECTIONS TO THE NEW FIELD DEVICES. MOUNT WALL PLATE ON THE EXISTING 12" X 12" RECESSED BOX.
  - 4 PROVIDE NEW 96" TOUCHPAD (TP), GUTTER MOUNTED AND CONNECTED TO NEW IN-DECK PLATE. PROVIDE SECONDARY PLUNGER (SP) FOR STOP FUNCTION. REFER TO SYSTEM REQUIREMENTS FOR TOTAL QUANTITY NEEDED.
  - 5 PROVIDE NEW POLE MOUNTED START SYSTEM WITH WIRED INTEGRAL MICROPHONE. PROVIDE THE NEW IN-DECK PLATE.
  - 6 PROVIDE PROVISIONS FOR FUTURE POLE MOUNTED START SYSTEM WITH WIRED INTEGRAL MICROPHONE. PROVIDE THE NEW IN-DECK PLATE.
  - 7 PROVIDE 1" CONDUIT WITH SYSTEM CABLE FURNISHED BY THE POOL TIMING SYSTEM SUPPLIER. CONNECT TO SURFACE WALL OUTLET FOR DIVE JUDGING SYSTEM. ROUTE CONDUIT ABOVE THE ACCESSIBLE AND INACCESSIBLE CEILING SPACES OF THE ADJACENT ROOMS TO GET TO THIS LOCATION.
  - 8 PROVIDE NEW SYSTEM OUTLET FOR THE NEW DIVE JUDGING SYSTEM. WALL BOX SHALL BE TWO-GANG WITH A DEPTH AS DIRECTED BY THE SYSTEM SUPPLIER. COORDINATE LOCATION WITH THE OWNER AND SYSTEM SUPPLIER.
  - 9 PROVIDE NEW 72" TOUCHPAD (TP), GUTTER MOUNTED AND CONNECTED TO NEW ON-DECK PLATE. PROVIDE SECONDARY PLUNGER (SP) FOR STOP FUNCTION. REFER TO SYSTEM REQUIREMENTS FOR TOTAL QUANTITY NEEDED.
  - 10 THIS CONTRACTOR SHALL INSTALL NEW SYSTEM CABLES AS NEEDED WITHIN EXISTING 2" PVC CONDUIT. TYPICAL OF ALL SHOWN.
  - 11 INTEGRATE THE NEW POOL TIMING SYSTEM WITH THE EXISTING DAKTRONICS VIDEO BOARDS. THE EXISTING BOARDS ARE CONNECTED TO THE OLD TIMING SYSTEM WITH MULTI-MODE FIBER OPTIC CABLE.
  - 12 EXISTING ETHERNET CONNECTION FOR THE NEW DIVE SCORING SYSTEM.
  - 13 PROVIDE NEW SYSTEM PLATE FOR CONNECTION OF THE ON-DECK BULKHEAD (PORTABLE) SYSTEM.

**1 ELECTRICAL PROPOSED PLAN**  
3/32" = 1' - 0"

