ST. TAMMANY PARISH
SCHOOL BOARD

SALMEN HIGH SCHOOL,
NEW PRESS BOX
SLIDELL, LOUISIANA

STPSB PROJECT NO. PO319

DAMMON ENGINEERING, INC.
554 OLD SPANISH TRAIL
SLIDELL, LOUISIANA 70458

May 19, 2022

TABLE OF CONTENTS

DIVISION 26 – ELECTRICAL

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 1A – ADVERTISEMENT FOR BIDS

Separate sealed bids will be received by the St. Tammany Parish School Board at the St. Tammany Parish School Board C.J. Schoen Administrative Complex, Reception Desk, 321 N. Theard, Covington, Louisiana 70433 for Salmen High School Press Box , STPSB Project No.PO319 on the _____ day of _____, 200__, at 2:00 p.m. (Time shall be established by the PBS clock at the Reception Desk at the above referenced address), at which time and place bids will be publicly opened and read aloud.

Complete Bidding Documents may be obtained from the Architect, Dammon Engineering, Inc., 554 Old Spanish Tr. Slidell, LA 70458; (985) 649-5832, upon payment of a deposit of $75.00 for each printed set of documents.

All bids must be accompanied by bid security equal to five percent (5%) of the sum of the base bid and all alternates, and must be in the form of a certified check, cashier's check or bid bond, as outlined in the Instructions to Bidders.

The Successful Bidder will be required to furnish a performance and payment bond, each in an amount equal to 100% of the contract amount.

No bid may be withdrawn except as provided for by law.

Bidders must meet the requirements of the State of Louisiana Contractor's Licensing Law, Louisiana Revised Statute 37:2150.1 through 2164, as amended.

Preference may be given to materials, supplies and provisions produced, manufactured or grown in Louisiana in accordance with law.

The Owner reserves the right, in accordance with law, to reject any and all bids.

A pre-bid conference will be held on the _____ day of _____, 20_____ at _____ am/pm at _____(address)_____. Bidders are strongly urged to attend and participate in the conference.

Bidders have the option to submit bids electronically in accordance with Louisiana Revised Statute 38:2212 A(1)(f)(i). Please find bid related materials and place electronic bids at www.centralbidding.com.

END OF SECTION IA

SECTION IB - INSTRUCTIONS TO BIDDERS

COMPLETION TIME:

The Bidder shall agree to fully complete the contract within Forty-Five (45) consecutive calendar days, refer to summary of work for phasing, subject to such extensions as may be granted in accordance with the Contract Documents and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

LIQUIDATED DAMAGES:

The Bidder shall agree to pay as Liquidated Damages the amount of Five Hundred Dollars ($500) for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the completion date stated on the "Notice to Proceed". Said sum shall in no event be construed to be a penalty; but only as damages fixed and agreed upon in advance.

CONSTRUCTION CLASSIFICATION:

Bids will be accepted from Contractors who are properly licensed for the classification of Building Construction (see La. R.S. 37:2156.2 for classifications).

ST. TAMMANY PARISH SCHOOL BOARD

Table of Sections

SECTION 1

DEFINITIONS

1.1 "Alternate Bid" (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in project scope or materials or methods of construction described in the Bidding Documents is accepted by the Owner.

1.2 "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described as the base, to which work may be added or deducted for sums stated in any Alternate Bid.

1.3 "Bid" is a complete and properly signed Uniform Public Work Bid Form to do the Work or designated portion thereof for the sums stipulated therein supported by data called for by the Bidding Documents and subject to the requirements of the Contract Documents.

1.4 "Bidder" is one who submits a Bid for a prime contract with the Owner for the Work described in the proposed Contract Documents.

1.5 "Bidding Documents" include but are not limited to:

1.5.1 All definitions set forth in the General Conditions of the Contract.

1.5.2 "Addendum" or "Addenda" are written or graphic instruments issued by the Architect prior to the opening of bids which modify or interpret the Bidding Documents by additions, deletions, approvals, clarifications or corrections.

1.5.3 "Contract Documents" include all documents identified in the Agreement between the Successful Bidder and the Owner.

1.6 "Owner" is the St. Tammany Parish School Board.

1.7 "Sub-bidder" is one who submits a bid to a Bidder for a portion of the Work.

1.8 "Successful Bidder" means the lowest qualified responsible and responsive Bidder submitting a Bid and to whom the Owner makes an award.

1.9 "Unit Price" is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract Documents.

1.10 "Work" consists of the duties and obligations undertaken by the Bidder in accordance with the Contract Documents to complete the Project identified in the Contract Documents.

SECTION 2

BIDDER'S REPRESENTATION

2.1 Each Bidder by submitting a completed and signed Bid represents that:

2.1.1 He has read and understands the Bidding Documents and his Bid is made in accordance therewith.

2.1.2 He has examined and personally visited the site and the location of the proposed Work and has familiarized himself with the local conditions under which the Work is to be performed to include correlation of his personal observations with the requirements of the Contract Documents.

2.1.3 His Bid is based upon the materials, systems, equipment or other items and conditions described in the Bidding Documents without exception.

2.1.4 He is satisfied as to (1) the conditions to be encountered, (2) the character, quality, and scope of the proposed Work, (3) the quality and quantity of the materials to be furnished, and (4) the requirements of the Bid, the plans and specifications, and other Contract Documents.

2.1.5 He is fully qualified and licensed in accordance with La. R.S. 37:2150.1 through 37:2164 as amended, and under applicable state and local licensing requirements and he shall be responsible for determining that he and all Sub-bidders or prospective subcontractors are duly licensed in accordance with state and local authorities.

SECTION 3

BIDDING DOCUMENTS

3.1 COPIES

3.1.1 Prime bidders who are properly licensed by the Louisiana State Licensing Board for Contractors may obtain from the Architect (unless another issuing office is designated in the Advertisement for Bid) at least one set of complete Bidding Documents for the deposit, if any, stated in the Advertisement for Bid. Deposits for documents will be returned in accordance with law.

3.1.2 Bidding Documents will be issued in accordance with law.

3.1.3 Complete sets of Bidding Documents should be used in preparing bids; neither the Owner nor the Architect assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

3.1.4 The Owner or the Architect, in making copies of the Bidding Documents available on the above terms, do so only for the purpose of obtaining bids on the Work and do not confer a license for any other use.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 Bidders shall promptly notify the Architect of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.2.2 Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding upon the Owner and Bidders shall not rely upon such interpretations, corrections and changes.

3.3 SUBSTITUTIONS/PRIOR APPROVALS

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

3.3.2 No substitution will be considered unless written request for approval has been submitted by the Bidder and has been received by the Architect and Owner at least ten (10) calendar days prior to the date for receipt of bids. Each such request shall include the name of the manufacturer and distributor of the materials or equipment of the substitute and a complete description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the Bidder. The decision of the Owner concerning any substitute shall be final.

3.3.3 If the Owner approves any proposed substitution, such approval will be set forth in an Addendum. Bidder shall not rely upon approvals made in any other manner, whether oral or in writing.

3.4 ADDENDA

3.4.1 Addenda will be transmitted or delivered to all Bidders who have requested Bidding Documents in accordance with law.

3.4.2 Each Bidder should ascertain from the Architect prior to submitting a Bid that he has received all Addenda issued. All bids will be considered by the Owner as if the Bidder had received and considered all Addenda.

SECTION 4

BIDDING PROCEDURE

4.1 FORM AND STYLE

4.1.1 Bids should be submitted on the Uniform Public Work Bid Form provided by the Owner. The form can be removed from the project manual or specifications. A duplicate copy is also acceptable.

4.1.2 Information requested on the Uniform Public Work Bid Form should be filled in by typewriter or legible hand printing or writing in ink.

4.1.3 Where so indicated by the makeup of the Uniform Public Work Bid Form, prices should be expressed in both words and figures, and in case of discrepancy between the two, the amount expressed in words shall govern.

4.1.4 All requested alternates shall be Bid.

4.1.5 Bidder shall not qualify his Bid in any manner.

4.1.6 Each Bid shall state the name of the Bidder. Written evidence of the authority of the person signing the Bid, if required by law, should be attached to the bid. Bidders are instructed to carefully review the law and the Uniform Public Work Bid Form for requirements in submission of a bid.

4.1.7 Bidder shall certify that he is properly licensed and should show his license number on the Uniform Public Work Bid Form in the designated space and shall show his license number on the bid envelope. Failure of the Bidder to certify that he is licensed or to include the contractor's license number on the bid envelope may result in the Bid being automatically rejected, so marked, returned to the Bidder, and not read aloud in accordance with Louisiana Revised Statute 37:2163.

4.1.8 Bidders should attach or enclose with the signed Uniform Public Work Bid Form all other necessary documents, including but not limited to written proof as set forth in Section 4.1.6 and the Bid Security.

4.2 BID SECURITY

4.2.1 Bids may not be considered or accepted if the Bid is not accompanied by bid security in an amount of five percent (5%) of the Base Bid. The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or a bid bond written by a surety company licensed to do business in the state of Louisiana and qualified as required by the provisions of Louisiana Revised Statute 38:2218 and 38:2219. Any bond should be accompanied by the appropriate power of attorney with a valid effective date.

4.2.2 Bid security furnished by the Bidder should guarantee that the Bidder will, if awarded the Contract, perform according to the terms of his Bid and the Bidding Documents and will enter into the Contract with the Owner.

4.2.3 Should the Bidder fail to perform according to his Bid and the Bidding Documents, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

4.2.4 The Owner will have the right to retain the bid security of bidders until either (a) the Contract has been executed and Bonds have been furnished by the Bidder awarded the Contract, or (b) the time for the rejection of all Bids by the Owner has expired.

4.3 SUBMISSION OF BIDS

4.3.1 The signed Uniform Public Work Bid Form, the bid security, and any other documents to be submitted with the Uniform Public Work Bid Form should be enclosed in a sealed, opaque envelope. The envelope should be addressed to St. Tammany Parish School Board, 321 N. Theard, Covington, Louisiana 70433 and be plainly marked "BIDS ON CONSTRUCTION OF (Name of Project) TO BE OPENED (Date)" and include the Bidder's name, address, and **shall** include the Louisiana contractor's license number. If the Bid is sent by mail, the sealed envelope should be enclosed in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof.

4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bid, or any extension thereof made by Addendum. Bidders are responsible for timely delivery at the location designated for receipt of Bids. Delays in the U.S. Mail or any other agent or delivery service remain the responsibility of the Bidder. Bids received after the time and date for receipt of bids will be returned unopened.

4.4 MODIFICATION OR WITHDRAWAL OF BID

4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder except in accordance with law.

4.4.2 Prior to the time and date designated for receipt of Bids, Bids submitted early may be modified or withdrawn only by written notice to the party receiving Bids at the place and prior to the time designated for opening of Bids

4.4.3 Withdrawn Bids may be resubmitted up to the time designated for the opening of Bids.

4.4.4 Bid security should be in an amount sufficient for the Bid as modified or resubmitted.

SECTION 5

CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

5.1.1 Unless stated otherwise in the Advertisement for Bids, the properly identified Bids received on time will be opened publicly, will be read aloud, and an abstract of the amounts of the Base Bids and Alternates, if any, will be made available to Bidders.

5.2 REJECTION OF BIDS

5.2.1 The Owner shall have the right to reject any or all Bids in accordance with law.

5.3 ACCEPTANCE OF BID (AWARD)

5.3.1 The Owner shall award a contract to the lowest responsive and responsible Bidder provided the Bid has been submitted in accordance with law, and the Owner does not reject any or all Bids in accordance with law.

SECTION 6

SUBMISSIONS

6.1 If required by the Owner, the apparent low Bidder shall submit to the Architect and the Owner prior to award of the Contract, written documentation from any manufacturer that the manufacturer will issue the guarantee, such as a roof system guarantee, based on the specified system or equipment and include the name of the applicator acceptable to the manufacturer for installing the specified system and all requirements of the manufacturer which must be met in order for the guarantee to issue. The manufacturer shall be one that has received prior approval or is named in the specifications.

SECTION 7

PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

7.1 The successful Bidder shall furnish and pay for a performance bond and a statutory payment bond for public works, in accordance with the Contract Documents and Louisiana Revised Statute 38:2219 as amended.

7.2 The Bonds shall be issued in accordance with the provisions of Louisiana Revised Statute 38:2216 and 2219 as amended, except that they will be in the amount of one hundred percent of the Contract amount.

7.3 The Owner may record the executed Agreement and Bonds with the Clerk of Court for the Parish of St. Tammany.

SECTION 8

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

8.1 Unless otherwise provided in the Bidding Documents, the Agreement and bond forms for the Work will be written on the forms as attached in the Contract Documents. Within five (5) days after the proposed agreement is presented to the Successful Bidder for execution, the Successful Bidder and his surety must execute the Agreement.

SECTION 9

AFFIDAVIT OF COMPLIANCE WITH LOUISIANA REVISED STATUTES 38:2212.9, 2224 AND 2227

9.1 Each person submitting a Bid, prior to an award of the Contract to them, will be required to sign and execute an affidavit before a Notary Public in the form provided to the effect that Bidder is qualified in accordance with law to Bid on the Work and to undertake the Work, and Bidder has not colluded with any person, firm, or corporation in regard to any Bid submitted, all in accordance with law. The form of the affidavit is in the Bidding Documents.

SECTION 10

UNIT PRICES

10.1 Unit prices other than those requested in the Uniform Public Work Bid Form should not be submitted with any Bid.

10.2 Unit prices furnished by the Contractor in the form of a proposal shall not be construed as an authorization to perform work or expend monies. Any change in the Work must be authorized by a written change order and signed in accordance with the Contract Documents.

SECTION 11

RELIEF FROM BID MISTAKE

11.1 Bidders are advised to review the provisions of law, particularly Louisiana Revised Statute 38:2214 C and D, as amended from time to time, to support an application to withdraw a Bid.

11.2 In the event a Bidder, after opening of the bids, attempts to utilize the provisions of Louisiana Revised Statute 38:2214 C to attempt to withdraw its bid, the Owner will be the sole party to determine whether the alleged bid mistake is substantial.

SECTION 12

PRE-BID CONFERENCE

12.1 A pre-bid conference will be held at the time and place designated in the Advertisement for Bids. Bidders are strongly urged to attend and participate in the conference.

SECTION 13

COMPLETION TIME AND LIQUIDATED DAMAGES

13.1 The completion of the Work must be within the time stated in these Instructions to Bidders, subject to any extensions as may be granted in accordance with Contract Documents or the contractor shall pay the Liquidated Damages in the amount as stated in these Instructions to Bidders.

END OF SECTION IB
12/10/15

SECTION IC -PAYMENT OF TAXES

The Bidder is responsible for the payment of all applicable sales, use or other taxes relating to any materials or services to which such taxes are imposed arising from its Bid or the Contract.

END OF SECTION IC

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. Tammany Parish School Board
C.J. Schoen Administrative Complex
321 N. Theard St., Covington, LA 70433

BID FOR: Salmen High School
Press Box
STPSB Project No. PO319

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Dammon Engineering, Inc., 554 Old Spanish Tr. Slidell, LA 70458; (985) 649-5832 and dated: May 19, 2022

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____ Dollars ($ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____ Dollars ($ _____)

Alternate No. 2 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____ Dollars ($ _____)

Alternate No. 3 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____ Dollars ($_____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

_____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

**** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

SECTION IIA - AGREEMENT

SAMPLE

AGREEMENT BETWEEN
ST. TAMMANY PARISH SCHOOL BOARD
AND
_____

STATE OF LOUISIANA
PARISH OF ST. TAMMANY
CITY OF COVINGTON

AN AGREEMENT made and entered into this ____ day of _____, 2_____, by and between:

> **ST. TAMMANY PARISH SCHOOL BOARD**, located at 321 N. Theard, Covington, LA 70433 herein represented by _____, its **Superintendent** and **_____,** its **President,** duly authorized, hereinafter called "Owner", and
>
> _____, located at _____, a corporation organized and created under the laws of the State of _____, herein represented by _____, its _____, duly authorized by a resolution of the Board of Directors of said corporation, adopted at a meeting held on _____, a certified copy of which is annexed hereto for reference, hereinafter called "Contractor."

The said Contractor, has agreed, and does by these presents agree, for the consideration mentioned and contained herein, to furnish all labor and materials, tools, equipment, supplies, utilities, charged fees, permits and all other construction accessories and services required to build, construct and complete in a thorough and workmanlike manner: _____, in strict accordance with the Contract Documents prepared by_____ _____ for St. Tammany Parish School Board.

The Owner will pay and the Contractor will accept in full consideration for the performance of the contract, the sum of DOLLARS ($_____), which sum includes all taxes and represents the Base Bid plus Alternates _____ and subject to additions and deductions as provided in the Contract Documents.

The said Contract Documents, including by way of example and not of limitation, the Drawings, dated _____, the Specifications, dated _____, the Advertisement for Bids, Instructions to Bidders, Contractor's Bid Proposal Form, General Conditions, Supplementary Conditions, Special Conditions, Addenda number ___, dated _____, which impose duties and obligations upon appearers herein. All of the provisions contained in the aforementioned Contract Documents, and as further set forth below are contained herein by reference with the same force and effect as though said Contract Documents were herein set out in full. An enumeration of the Contract Documents is as follows:

Contractor agrees to complete fully all work included in this Agreement within _____(____) consecutive calendar days from the date of Notice to Proceed as issued by the Architect, subject to adjustments of the Contract Time as provided in the Contract Documents. Contractor shall be assessed Liquidated Damages, in the sum of _____ Dollars ($_____) for each consecutive calendar day which the Work is not complete beginning with the first day beyond the completion time stated above. Said sum shall in no event be construed to be a penalty; but only as damages fixed and agreed upon in advance.

Contractor agrees to do and perform each and every one of the obligations contained in and, in conformity with, the said Contract Documents.

In accordance with Louisiana Revised Statute 23:1061(A), the parties hereby agree that Owner is entitled to and does hereby adopt a statutory employment relationship with any person(s) employed by or under Contractor, including but not limited to all subcontractor or materialmen or supplier employees. Contractor and Owner do hereby acknowledge

that the work performed by Contractor is an integral part of or essential to the ability of Owner to carry out its constitutional and statutory duties to provide educational services. Contractor agrees to provide workers compensation insurance coverage as provided for in the Contract Documents and Supplementary Conditions and holds Owner harmless and indemnifies Owner in the event of any workers= compensation claim is asserted against Owner for any persons defined herein.

In consideration of the faithful and complete performance by the Contractor of all and singular the obligations by Contractor herein assumed, the ST. TAMMANY PARISH SCHOOL BOARD hereby agrees to pay unto the said Contractor, its successors, legal representatives and assigns, at the times and in the manner set forth in the specifications above referred to, the price for the work to be done under this contract, in accordance with the proposal of said Contractor, duly accepted by Owner.

Contractor by signing this contract consents and yields to the exclusive venue and jurisdiction of the Twenty-Second District Court for the Parish of St. Tammany, State of Louisiana, and does formally waive any and all claims of entitlement to removal of any case from this jurisdiction, including any removal of any claim to any Federal Court. Contractor waives any claim of lack of jurisdiction, on account of its residence elsewhere, in the event of a law suit filed under this contract or the bonds furnished for and on behalf of the Contractor at the time of the execution of this Agreement.

Contractor has separately furnished a performance bond and a labor and materials payment bond issued by _____ _____, this date to the Owner which bonds are furnished in accordance with the requirements of the Contract Documents and for recording in the Office of the Recorder of Mortgages in the Parish of St. Tammany.

THIS AGREEMENT is entered into as of the date first written above and is executed in at least five originals.

WITNESSES

_____

_____

ST. TAMMANY PARISH SCHOOL BOARD

By: _____
(NAME)
Superintendent

By: _____
(NAME)
President

WITNESSES

_____

_____

(CONTRACTOR)

By: _____
(NAME)
(Title)

12/10/15

SECTION IIB - PERFORMANCE BOND

SAMPLE
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that (insert full name and address or legal title of Contractor) ; as Principal, hereinafter called Contractor, and (insert full name and address or legal title of Surety), a corporation duly organized under the laws of the State of, and authorized to do business in the state of Louisiana, as Surety, hereinafter called Surety, are held and firmly bound unto **ST. TAMMANY PARISH SCHOOL BOARD, 321 N. Theard, Covington, Louisiana 70433**, as Obligee, hereinafter called Owner, in the amount
of Dollars ($) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written Agreement dated , entered into a Contract with Owner for (insert full name, address and description of project) , in accordance with the Drawings and Specifications prepared by (insert full name and address or legal title of Architect) , which Contract and Contract Documents referred to therein are and by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION of this obligation is such that, if the said Contractor shall promptly and faithfully perform all and singular the obligations assumed by said Contractor in the aforesaid Contract during the term of said Contract and any extension thereof that may be granted by the ST. TAMMANY PARISH SCHOOL BOARD, with or without notice to the Surety, and during the life of any term or condition, including but not limited to any guaranty required under the Contract, or by law, and shall also perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of modifications to the Surety being hereby waived; and shall fully secure and protect the said ST. TAMMANY PARISH SCHOOL BOARD, its legal successor and representative, from all liability in the premises, and from all loss or expense of any kind, including all costs of court and all attorney's fees made necessary or arising from the failure, refusal or neglect of the Contractor, to comply with the obligations assumed by Contractor, then this bond shall be null and void; otherwise, it shall remain in full force and effect.

Contractor and Surety do, by act of signing this Bond, consent and yield to the exclusive venue and jurisdiction of the Twenty-Second District Court for the Parish of St. Tammany, State of Louisiana and do formally waive fully and all claims of entitlement to removal of any case from this jurisdiction, including any removal of any claim to any Federal Court. Contractor and Surety waive any claim of lack of jurisdiction on account of their residence elsewhere, in the event of a law suit under the Contract or this Bond.

This Bond is furnished pursuant to the provisions of Louisiana Revised Statute 38:2216 and the only right of action which shall accrue on this Bond is solely to the benefit of the Obligee named herein and its successors or assigns, and no other person shall have any right of action based thereon.

Signed and Sealed this ____ day of _____, _____.

(SEAL)	**(SEAL)**
PRINCIPAL (CONTRACTOR)	**SURETY**

SECTION IIC - LABOR AND MATERIALS PAYMENT BOND

SAMPLE
LABOR AND MATERIALS PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that _____(insert full name and address or legal title of Contractor)___; as Principal, hereinafter called Contractor, and _____(insert full name and address or legal title of Surety)_____, a corporation duly organized under the laws of the State of _____, and authorized to do business in the state of Louisiana, as Surety, hereinafter called Surety, are held and firmly bound unto **ST. TAMMANY PARISH SCHOOL BOARD, 321 N. Theard, Covington, Louisiana 70433**, as Obligee, hereinafter called Owner, in the amount of _____ Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written Agreement dated _____,, entered into a Contract with Owner for (insert full name, address and description of project) _____, in accordance with the Drawings and Specifications prepared by _____(insert full name and address or legal title of Architect)_____, which Contract and Contract Documents referred to therein are and by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION of this obligation is such that, if the said Contractor shall well and faithfully and shall promptly pay all claimants as provided by law in LA R.S. 38:2242 and pay all wages of laborers, workmen, or mechanics, to be employed by Contractor for all work done or labor performed, or who may be employed by any sub-contractor; and shall promptly pay all furnishers of material supplied to Contractor, or by or to sub-contractors, and used in the construction, erection, alteration, installation, or repair called for by the aforesaid Contract; and shall promptly pay for all materials or supplies furnished to said Contractor, or by or to any sub-contractor, for use in machines used by the Contractor, or any sub-contractor, in the construction, erection, alteration, installation, or repair of the work specified in the aforesaid Contract; and shall fully secure and protect the ST. TAMMANY PARISH SCHOOL BOARD, its legal successor and representative, from all liability in the premises, and from all loss or expense of any kind, incurred by the Owner, including all costs of court and all attorney's fees made necessary or arising from the failure, refusal or neglect of the Contractor to comply with the obligations assumed by Contractor; and, likewise, shall deliver all such work to the said ST. TAMMANY PARISH SCHOOL BOARD free from all claims, liens and expenses, then this bond shall become null and void, otherwise, it shall remain in full force and effect.

Contractor and Surety do, by act of signing this Bond, consent and yield to the exclusive venue and jurisdiction of the Twenty-Second District Court for the Parish of St. Tammany, State of Louisiana and do formally waive fully and all claims of entitlement to removal of any case from this jurisdiction, including any removal of any claim to any Federal Court. Contractor and Surety waive any claim of lack of jurisdiction on account of their residence elsewhere, in the event of a law suit under the Contract or this Bond.

This is a statutory bond furnished pursuant to the provisions of Louisiana Revised Statute 38:2241 *et seq*. as amended or revised.

Signed and Sealed this _____ day of _____, _____.

_____(SEAL)	**_____(SEAL)**
PRINCIPAL (CONTRACTOR)	**SURETY**

12/10/15

SECTION IID - AFFIDAVIT OF COMPLIANCE WITH LOUISIANA REVISED STATUTES 38:2212.9, 38:2224 AND 38:2227

SAMPLE
AFFIDAVIT OF COMPLIANCE WITH LOUISIANA REVISED STATUTES 38:2212.9, 38:2224 AND 38:2227

STATE OF _____

PARISH/COUNTY OF_____ **PROJECT NO. _____**

NAME _____

LOCATION _____

AFFIDAVIT

BEFORE ME, the undersigned authority, duly commissioned and qualified within and for the state and parish aforesaid, personally came and appeared ___(name)_____representing ___(company)_____who, being by me first duly sworn deposed and said that he/she has read and signed this affidavit and he/she does hereby attest, under oath, as follows:

(1) That affiant and his/her firm employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract for the above-referenced project with the St. Tammany Parish School Board under which he will, if awarded the contract, receive or have received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant;

(2) That no part of the contract price to be received or received by affiant or his/her firm was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction of the public building or project were in the regular course of their duties for affiant;

(3) That neither affiant, nor any partner, incorporator, director, manager, officer, organizer, or member who has a minimum of ten percent ownership in the bidding entity, has been convicted of, or has entered a plea of guilty or nolo contendre to any crimes enumerated in Louisiana Revised Statute 38:2227, or equivalent federal crimes; and

(4) That neither affiant, nor any individual with an ownership interest of five percent or more in his/her firm has been convicted of, or has entered a plea of guilty or nolo contendre to any state felony crime or equivalent federal felony crime committed in the solicitation or execution of a contract or bid awarded under the laws governing public contracts as described in Louisiana Revised Statute 38:2212.8.

Bidder or representative to sign and type name below signature.

_____
Affiant

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ day of _____, 2_____.

_____
NOTARY PUBLIC

SECTION IIIB - SUPPLEMENTARY CONDITIONS

SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
ST. TAMMANY PARISH SCHOOL BOARD

The General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition, Articles 1 through 15 inclusive, is a part of this Contract, and is incorporated as fully as if herein set forth. For brevity, AIA Document A201 is also referred to in the Contract Documents as the "General Conditions".

The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction", AIA Document A201-2017. Where any portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1 - GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 In Paragraph 1.1.1 delete the last sentence of Subparagraph 1.1.1 of the General Conditions of the Contract for Construction and add the following: "The Contract Documents shall include the Bidding Documents as listed in the Instructions to Bidders and any modifications made thereto by addenda, The Contract Documents shall also include the required Completion Time set out in the Instructions to Bidders, and the Contractor agrees to the Liquidated Damages set out in the Instructions to Bidders and any other costs, damages, additional architect, engineer or consultant fees or attorney fees incurred by Owner resulting in whole or in part from Contractor's failure to complete the work timely in accordance with the Contract Documents."

§ 1.1.2 In the fourth sentence, after "(3)" delete the words "the Architect or". Also, at the end of this Subparagraph, add the following sentence: "Notwithstanding the foregoing, the Owner shall be considered a third party beneficiary of any contract or agreement between the Contractor and a Subcontractor."

§ 1.1.5 After the word "Documents" and before the word "showing", add the words "wherever located and whenever issued".

§ 1.1.7 After the word "include" and before the word "the", add the words ", without limitation, the Project Manual,".

Add the following Subparagraphs § 1.1.9 through § 1.1.15:

§ 1.1.9 The Project Manual

The Project Manual is a volume assembled for the Work that included the Bidding Documents, sample forms and affidavits, the bidding requirements, the Advertisement for Bids, the Instructions to Bidders, the Agreement, and the Conditions of the Contract and Specifications.

§ 1.1.10 Correction Period

The period of time in which the contractor shall, in accordance with Article 12, correct work failing to conform to the Contract Documents or if it is rejected, remove it and replace it with Work conforming to the Contract Documents.

§ 1.1.11 Approved

When the words "approved", "satisfactory", "proper", or "as directed" are used, approval by the Architect shall be understood.

§ 1.1.12 Addenda

Addenda are written or graphic instruments issued prior to the date of the opening of the bids and which modify or interpret the Bidding Documents, including the Drawings and Specifications, by additions, deletions, clarifications or corrections.

§ 1.1.13 Knowledge

The terms "knowledge", "recognize" and "discover", their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor or its Subcontractors know or should know, recognize or should recognize and discover or should discover in exercising the care, skill and diligence required by the Contract Documents, by the law, or by generally accepted construction principles.

§ 1.1.14 Persistently

The phrase "persistently fails" and other similar expressions, as used in reference to the Contractor shall be interpreted to mean any combination of acts or omissions which cause the Owner or the Architect to reasonably conclude that the Contractor will not complete the Work within the Contract Time, for the Contract Sum, or in substantial compliance with the requirements of the Contract Documents.

§ 1.1.15 Days

Unless otherwise specified, all references to days in the Contract Documents shall mean calendar days, and not business days.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 Add the following to Subparagraph 1.2.1:

In the event of a discrepancy in the Contract Documents, the more specific and more detailed requirement will take precedence over the general and less detailed requirement. In case of doubt, Contractor shall assume that Owner intends that the more complete method, system, or process is required. Any work, labor, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce a functionally complete Project or part thereof, will be supplied at no additional cost by the Contractor whether or not specifically stated in the Contract Documents. Reference to standard specifications, manuals, or codes of any technical society, organization, or association or to the laws or regulations of any governmental authority, whether such reference is specific or by implication shall mean the latest standard specifications, manual, code or laws or regulations in effect at the time of the opening of the bids (or the date of the Contract if no advertised bids), unless otherwise specifically stated. However, no provision of any standard specification, manual, or code shall be effective to change the duties or the responsibilities of the Owner, Contractor or Architect or any of their consultants, agents or employees from those set forth in the Contract Documents. The Architect, in case of a conflict, may interpret or construe the documents so as to obtain the most substantial and complete performance of the Work consistent with the Contract Documents and reasonably inferable therefrom and in the best interest of the Owner. The Owner may record a duplicate original of the Agreement and Bonds with the Clerk of Court for the Parish of St. Tammany.

§ 1.2.2 Add the following to Subparagraph 1.2.2:

The Contractor and each Subcontractor shall evaluate and satisfy themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation (1) the location, condition, layout and nature of the Project site and surrounding areas, (2) generally prevailing climatic conditions, (3) anticipated labor supply and costs, (4) availability and cost of materials, tools and equipment, (5) Owner's continued occupation and use of existing buildings throughout the school year, and (6) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the project site or any improvements located on the project site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or Contract Time in connection with any failure by the Contractor or any Subcontractor to comply with the requirements of this Subparagraph 1.2.2.

Add the following Subparagraphs to 1.2:

§ 1.2.4 Any reference to standards (such as ASTM - American Society for Testing and Materials), shall mean the latest edition of such standards published prior to the date of the Specifications, in accordance with the abbreviation referred to in the Technical Provisions. Where such a reference is made, the applicable standard is hereby made a part of the Specification which refers to it to the same extent as if written out in that specification in full.

§ 1.2.5 In the event of a conflict or discrepancy between scaled dimensions and given dimensions, given dimensions shall take precedence over scaled dimensions. Although the Drawings are drawn to scale, as indicated, and dimensions are given, in the case of remodeling or reconstruction work, or in fitting work to existing conditions, the Contractor shall work to measurements of existing construction.

§ 1.2.6 In the event the Contractor, who has declared to the Owner that he has read, reviewed and familiarized himself with the Contract Documents and work site, has any question or believes a discrepancy exists between the Contract Documents and the Drawings, or has any question concerning any provision in the Contract Documents or Drawings, the Contractor is obligated to bring the question or discrepancy to the attention of the Owner and Architect prior to commencement of any work. The Architect, in case

of such conflict, may interpret or construe the documents so as to obtain the most substantial and complete performance of the Work consistent with the Contract Documents and reasonably inferable therefrom, in the best interest of the Owner, for a functionally complete Project or Work or part thereof. The terms and conditions of this clause shall not relieve any party of any other obligation under the Contract Documents. The Contractor shall request any clarification in sufficient time to avoid delays and additional costs.

§ 1.2.7 Should the Contractor fail to timely request interpretations of questionable items in the Contract Documents prior to executing the Work, including as set forth in paragraph 3.2.1, neither the Owner nor the Architect will thereafter entertain any claim for additional costs or time.

§ 1.2.8 Where a discrepancy or inconsistency appears to exist between any of the Contract Documents regarding quantity or quality, or both, of labor and materials to be furnished for the Work, the greater quantity or higher quality shall govern and will be presumed to be included in the Contract Sum. When a general term or provision in the Contract Documents conflicts with a more specific term, the more specific term or provision in the Contract Documents governs.

§ 1.2.9 Where a given material is indicated on any of the Drawings, it is intended that such material be used throughout the length and height of walls, partitions, spandrels, panels, windows, lights, or in the assembly detail in which it occurs, for other similar locations throughout the building or Project, unless another material is indicated.

§ 1.2.10 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.

§ 1.2.11 Test boring or soils test information, if made accessible to the Contractor, is not warranted by the Owner as an accurate or approximate indication of sub-surface conditions, and no claims for extra cost or extension of time resulting from reliance by the Contractor on such information shall be allowed.

§ 1.2.12 At various sections of the Specifications, a subparagraph may identify related works specified elsewhere. Such subparagraph is to serve solely as a guideline and is not to be construed as a listing of all related work. The Contractor shall be solely responsible for complying with all requirements of the Contract Documents, regardless whether areas of related work are identified in a particular subparagraph. Should there be internal inconsistencies, the Contractor shall either seek clarification from the Architect, or base its bids and construction on the most expensive combination of quality and quantity of Work indicated.

§ 1.2.13 The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor or both do not sign all of the Contract Documents, the Architect shall identify such unsigned Documents upon request.

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

§ 1.5 Ownership and Use of Drawings, Specifications and Other Documents

§ 1.5.1 Add the following sentence at the end of section 1.5.1: "The limitation provided for herein shall in no way affect the Owner's right to use the Drawings, Specifications and other documents as provided for by law (see, La. R.S. 38:2317) or as specified by Owner."

ARTICLE 2 - OWNER

§ 2.1 Definition

Delete Subparagraph 2.1.2.

§ 2.2 Evidence of the Owner's Financial Arrangements

Delete Subparagraph 2.2.1.

Delete Subparagraph 2.2.2.

Delete Subparagraph 2.2.3.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 2.3.4 Delete the word "shall" and substitute the word "may", and delete the last sentence and substitute the following:

The Owner does not warrant, in any way, any survey that may be furnished. The Contractor shall exercise proper precautions relating to the safe performance of the work. The Contractor shall confirm and verify the location of each utility required for the Project and make further investigation of all structural, surface, and subsurface conditions including any soil borings of the site of the Project.

§ 2.3.6 Delete Subparagraph 2.3.6 and substitute the following:

The Contractor will be furnished, free of charge, up to ten (10) copies of the Drawings and Project Manual. Any additional copies will be furnished at the cost of reproduction, postage and handling.

§ 2.4 Owner's Right to Stop the Work

Add the following sentence to the end of section 2.4:

Stoppage of the Work by the Owner pursuant to this Subsection shall not result in a claim by the Contractor for delay or for any extension to the Contract Time.

§ 2.5 Owner's Right to Carry Out the Work

Delete the entire section and add the following:

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order may be issued by the Owner deducting from payments then or thereafter due the Contractor the reasonable cost of additional services made necessary by such default, neglect or failure. The Owner may also claim any such costs as an offset to payment alleged to be due to Contractor. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

Add the following subparagraphs §2.6 and §2.7:

§ 2.6 Owner's Right to Audit

The Contractor shall keep full and accurate records of all costs incurred and items invoiced in connection with the Work and shall keep and maintain all records related to this Project, for a period of five (5) years after Final Payment, or five (5) years after any Grant close-out, whichever is longer. The Contractor shall require the same of its subcontractors, suppliers, or any entity involved in the Project or Work. Such records of the Contractor and its subcontractors shall be open to audit by the Owner and/or its authorized representatives, and by the Legislative Auditor for the State of Louisiana, during the performance of the Work and during the referenced five (5) year period.

§ 2.7 Contract Administration

The Owner has retained the Architect, Engineer, or other design professionals to design the Project. Such professional(s) has the responsibility to administer the Contract for Construction, including inspection by himself and his consultants. No responsibility for services contracted to the Architect, Engineer, or Contractor shall be shared by the Owner.

ARTICLE 3 - CONTRACTOR

§3.1.2 Add the following words to the end of subsection § 3.1.2 after the words "Contract Documents," but prior to the period:

"and in accordance with any industry or quality standards"

§ 3.1.3 Add the following sentence to the end of subsection § 3.1.3:

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Quality control (i.e. ensuring compliance with the Contract Documents) is the responsibility of the Contractor. Testing, observations and or inspections performed or provided by the Owner are for quality assurance (i.e. confirming compliance with the Contract Documents) purposes and are solely for the benefit of the Owner.

Add the following subsections § 3.1.4 through § 3.1.7:

§ 3.1.4 The Contractor stipulates and agrees that the Owner has no duty to discover any design errors or omissions in the Drawings, Plans, Specifications, and other Documents and has no duty to notify Contractor of the same The Contractor acknowledges that the Owner does not warrant the adequacy and accuracy of any Drawings, Plans, Specifications or other Documents.

§ 3.1.5 The Contractor must establish to the satisfaction of the Architect the reliability and responsibility of the Subcontractors to furnish and perform the Work described in the sections of the Specifications pertaining to the Subcontractor's respective trades. See Section 5.2 for the procedures regarding Subcontractors.

§ 3.1.6 The Contractor or its designated representative shall attend all periodic construction meetings scheduled by the Architect when its presence is required and any meeting with the School Board when its presence is required.

§ 3.1.7 The Contractor is solely responsible for providing a safe place for the performance of the Work. Contractor shall comply with the provisions of the Louisiana Underground Utilities and Facilities Damage Prevention law, R.S. 40:1749.11 *et seq*., as amended prior to proceeding with any portion of the Work that may require excavation including but not limited to pile driving, digging, auguring, boring, backfilling, dredging, compressing, plowing-in, trenching, ditching, tunneling, land leveling, grading and or mechanical probing. Damage to any existing underground utilities by the Contractor shall be repaired at the Contractor's sole cost and expense. Such damage must be reported immediately to the Architect and the Owner. The Contractor shall undertake to make such further investigations, including without limitation, all structural, surface and subsurface conditions, including soil borings and otherwise of the Project site, regardless of whether or not shown in the Contract Documents.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.2 In the second-to-last sentence. change the word "promptly" to the words "immediately". Add the following after the last sentence,

However, Contractor shall plan ahead in performing work on the Project, and any request for information submitted by the Contractor to the Architect or its engineers, consultants or agents, must be submitted at the monthly construction meeting. The Contractor will not be entitled to a response by the Architect or its engineers or agents to the request for information until the monthly meeting following the monthly meeting at which the request for information was submitted. Nothing shall preclude the Architect or its engineers, consultants or agents from responding in a more timely fashion.

§ 3.2.4 Delete the last sentence of Subparagraph 3.2.4, and replace with the following:

Before ordering any materials or proceeding with the Work, Contractor and Subcontractors shall verify measurements at the Project site and shall be responsible for the correctness of the measurements.

Add the following subparagraphs § 3.2.5 through § 3.2.7 to Article 3.2:

§ 3.2.5 The exactness of grades, elevations, dimensions, or locations given on any drawings issued by the Architect, or the work installed by other contractors, is not warranted or guaranteed by the Architect or its consultants or engineers or the Owner or its consultants or engineers.

§ 3.2.6 The Contractor shall satisfy itself as to the accuracy of all grades, elevations, dimensions and locations. In all cases of interconnection of its Work with existing or other work, the Contractor shall verify at the site all dimensions relating to such existing or other work. Any errors due to the Contractor's failure to so verify all such grades, elevations, dimensions or locations shall be promptly corrected by the Contractor without any additional cost to the Owner.

§ 3.2.7 The mechanical and electrical drawings are diagrammatic only, and are not intended to show the exact physical locations or configurations of work. Such work shall be installed to clear all obstructions, permit proper clearances for the work of other trades, and present an orderly appearance where exposed. Exact locations of fixtures and outlets, and of all other devices visible in finished spaces, shall be obtained from the Architect before the work is roughed in; work installed without such information from the Architect shall be relocated at the Contractor's expense.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 After the second sentence, Delete all words to the end of subparagraph 3.3.1.

§ 3.3.2 Delete subparagraph 3.3.2 and the new subparagraph 3.3.2 shall read:

The Contractor and its surety shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and any entity or other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors. All contracts entered between Contractor and its Subcontractors shall provide that Owner is a third party beneficiary of any contract or agreement between Contractor and its Subcontractors.

Add the following Subparagraphs § 3.3.4 through §3.3.9 to § 3.3:

§ 3.3.4 The Contractor is the coordinator and expediter of the total construction process and all of its parts, in accordance with the Contract Documents. The Contractor shall properly and effectively coordinate the timing, scheduling and routing of all Work performed by all trades and subcontractors. The Contractor shall provide sufficient supervisory staff in the field to enable efficient and expeditious handling of all matters. There shall be a Project Manager assigned by the Contractor in its home office, as well as in the field.

§ 3.3.5 The Contractor shall take all precautions necessary to prevent loss or damage caused by vandalism, theft, burglary, pilferage, or unexplained disappearance of property of the Owner, whether or not forming part of the Work, located within those areas of the Project to which the Contractor has access. The Contractor shall have full responsibility for the security of such property of the Owner for any such loss, damage, or injury, except such as may be directly caused by agents or employees of the Owner.

§ 3.3.6 The Contractor shall retain a competent registered professional engineer or registered land surveyor, acceptable to the Owner and Architect, who shall establish the exterior lines and required elevations of all buildings and structures to be erected on the site and shall establish sufficient lines and grades for the construction of associated work including, but not limited to, roads, utilities, and site grading. The engineer or land surveyor shall certify the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries.

§ 3.3.7 The Contractor shall establish the building grades, lines, levels, column, wall and partition lines required by the various Subcontractors in laying out their work.

§ 3.3.8 Before ordering any material or performing any work, Contractor shall verify dimensions and check conditions to ensure that they properly reflect those on the Drawings. Any inconsistency shall be brought to the attention of the Architect. If discrepancies occur between ordered material and actual conditions, of which the Architect was not notified beforehand, costs to correct such discrepancies shall be borne by the Contractor.

§ 3.3.9 On trench excavations more than five feet in depth, the Contractor shall bear sole responsibility for design and execution of acceptable trenching and shoring procedures in accordance with State regulations and OSHA 29 CFR 1926, Subpart P, Inspection Procedures for Enforcing the Excavation Standards. Contractor shall engage the services of a qualified engineer, licensed to practice in the state where the Project is located, to prepare detailed plans and specifications directing Contractor in safe execution of trenching and shoring.

§ 3.4 Labor and Materials

Add the following sentence to the end of Subparagraph 3.4.1:

§ 3.4.1 The word "provide" including derivatives shall mean to properly fabricate, complete, transport, deliver, install, erect, construct, test and furnish all labor, materials, equipment, apparatus, appurtenance, and all items and expenses necessary to properly complete the work in accordance with the terms of the Contract Documents and specifications, and ready for operation or use under the terms of the Specifications.

§ 3.4.2 Delete the words "with a Change Order" and substitute "with the procedures outlined herein."

Add the following Subparagraphs § 3.4.2.1 through § 3.4.2.6 after Subparagraph § 3.4.2:

§ 3.4.2.1 The Contractor may furnish equal brand products or equipment other than those specified in the Contract Documents, provided the Contractor submits for prior approval a particular product other than a product specified in the Contract Documents no later than ten (10) calendar days prior to the date for the opening of the bids and the Architect issues an addendum providing approval of the product or equipment submitted. The name of a certain brand, make, manufacturer or definite specification is to denote

the quality standard of the article desired; sets forth the general style, type, character; and is regarded merely as a standard. However, a Contractor must furnish the certain brand or particular brand set forth in the Contract Documents or a product approved prior to the bid opening.

§ 3.4.2.2 The term "or approved equal" is not necessarily limited to the physical or technical properties of the product or material but encompasses the finish, color, texture and other pertinent qualities in like regard. Failure to satisfy in any one respect may result in rejection of substitute products.

§ 3.4.2.3 If, after execution of the Contract and prior to submittal of applicable shop drawings, the Contractor desires to submit an alternate product in lieu of what has been specified or shown in the Contract Documents, the Contractor may do so in writing and set forth the following:

§ 3.4.2.3.1 Reasons the substitution is necessary to include a full explanation of the proposed substitution and submittal of all supporting data including technical information, catalogue cuts, warranties, test results, installation, instructions, operating procedures, and other like information necessary for complete evaluation of the substitution.

§ 3.4.2.3.2 The adjustment, if any, in the time of completion of the Contract and the construction schedule in the event a substitution is acceptable.

§ 3.4.2.3.3 An affidavit stating that the Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified by the Architect.

§ 3.4.2.4 Proposals for substitutions shall be submitted to the Architect with a copy to the Owner in sufficient time to allow the Architect no less than ten (10) working days for review. No substitutions will be considered or allowed without the Contractor's submittal of complete substantiating data and information as stated herein.

§ 3.4.2.5 Substitutions or alternates submitted in accordance with Subparagraph above may be rejected without explanation and will be considered only under one or more of the following conditions:

§ 3.4.2.5.1 Required for compliance with interpretation of code requirements or insurance regulations then existing;

§ 3.4.2.5.2 Unavailability of specified products, through no fault of the Contractor;

§ 3.4.2.5.3 Subsequent information discloses inability of specified products to perform properly or to fit in designated space; or

§ 3.4.2.5.4 Manufacturers/fabricator refuses to certify or guarantee performance of specified product as required.

§ 3.4.2.6 Any additional cost, or any loss or damage arising from the substitution of any product, material or equipment for those originally specified, including costs of changes of all other work affected by the substitution, shall be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner or the Architect.

Add the following to Subparagraph § 3.4.3:

For a Project site that includes a school in session with children present in or adjacent to the Project, the Contractor's employees and its Subcontractors' employees may be subject to a criminal background check as set forth in La. R.S. 17:15 and La. R.S. 15:587.1, upon the request of the Owner. Any unfit person based on a background check shall be immediately removed from the Project site. The Contractor's employees, and all other persons including all Subcontractors, Sub-subcontractors and suppliers carrying out any work on the Project site required by the Contract Documents, shall wear appropriate identification on their shirt always when on the Project site. The Owner shall not be responsible or liable to Contractor or any subcontractor for any additional costs, expenses, losses, claims or damages incurred by Contractor or Subcontractor as a result of any removal of an unfit person or compliance with this section.

Add the following Subparagraph § 3.4.4 after Subparagraph § 3.4.3:

§ 3.4.4 The Contractor shall only employ labor on the Project or in connection with the Work capable of working harmoniously with all trades, crafts and any other individuals associated with the Project. The Contractor shall also use its best efforts to minimize the likelihood of any strike, work stoppage or any other labor disturbance.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Add the following Subparagraph § 3.4.5 after Subparagraph § 3.4.4:

Building materials, including but not limited to, all drywall materials to be incorporated into the Work shall either be certified, in writing, by the manufacturer to be asbestos free or be inspected and tested by accredited testing laboratories and certified to be free of asbestos content in accordance with the applicable federal standards, including but not limited to the Asbestos Hazard Emergency Response Act (AHERA) and the Toxic Substance Control Act (TSCA). The word "asbestos" means the Asbestiform, Tremolite, and Actinolite. Copies of test reports shall be furnished to the Architect and the Owner's representative. Material discovered to contain asbestos shall be removed immediately at the Contractor's sole cost and expense using current standards of the Louisiana Department of Environmental Quality (DEQ). Drywall materials must be free of any volatile chemicals that have identified emissions of sulfurous gases.

§ 3.5 Warranty

§ 3.5.1 Add the following:

The Contractor's warranty includes any and all specific warranties set forth in the Contract Documents and all warranties provided by law including, but not limited to any actions or claims that may be asserted as provided in La. R. S. 38:2189. Nothing herein or otherwise provided in the Contract Documents shall limit, in any way, all warranties allowed by law.

§ 3.5.2 Add the following sentence to the end of Subparagraph § 3.5.2:

Any warranty provided in paragraph 3.5.1 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

Add the following Subparagraph § 3.5.3 to § 3.5:

§ 3.5.3 The Contractor shall secure any and all written warranties or guarantees referred to in respective Specifications Sections. As a condition precedent to its right of final payment, Contractor shall deliver to the Architect for review and transmittal to Owner two copies of all manufacturer's warranties or guarantees, operational manuals and instructions, service contracts and other warranties or guarantees as required. The Contractor shall require each Subcontractor to execute a satisfactory written warranty or guarantee in which the Contractor and the Owner are named as beneficiaries.

§ 3.7 Permits, Fees and Notices

Delete Subparagraph 3.7.1 and add in its place the following:

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work. In addition, the Contractor shall secure certificates of inspection, use, occupancy, permits and licenses with all such certifications to be delivered when the Contractor considers the Work substantially complete under paragraph 9.8 hereof in order to allow the Owner to accept the Project upon substantial completion as provided for in Louisiana Revised Statute 38:2241.1.

§ 3.7.3 Change the word "appropriate" to "full". Add the following phrase at the end of the last sentence in Subparagraph § 3.7.3 after the word correction "and any damages sustained by the Owner".

§ 3.7.4 Concealed or Unknown Conditions

Change the notification requirement from fourteen (14) days to forty-eight (48) hours.

Add the following to Subparagraph 3.7.4:

It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall immediately notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification, unless such laws, statutes, ordinances, building codes, rules and regulations bear upon the performance of the Work.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 3.9 Superintendent

Add the following sentence at the end of Paragraph 3.9.3.

"Any personnel change to the Superintendent or Project Manager must be reviewed and approved by the Owner. Resumes and references of the proposed new Superintendent or Project Manager must be submitted to the Owner. If the Superintendent or Project Manager is not performing his or her responsibilities properly, then, at the request of the Owner, the Contractor shall replace the Superintendent or Project Manager."

§ 3.10 Contractor's Construction Schedules

Delete Subparagraph 3.10.1 and in its place substitute the following:

§ 3.10.1 The Contractor shall prepare and submit within thirty (30) calendar days of the date of the Notice to Proceed, or such other time as requested by the Owner or Architect, for the Owner's and Architect's information, review and acceptance, a Construction Schedule in both native and paper form.

(1) Unless otherwise specified, the Construction Schedule required shall be a detailed precedence-style critical path method (CPM) or other format satisfactory to the Owner and Architect which shall, at a minimum, provide a graphic representation of all activities and events that will occur during the performance of the Work; identify each phase of construction and occupancy, provide logic of the construction schedule, set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents, and identify tasks that are on the critical path of construction. The date of Commencement to begin the Work is the date set forth in the Contract or such other date as may be established in a Notice to Proceed. The schedule must show a completion of the Work within the Contract Time. A schedule showing early completion dates will not be accepted without written acceptance of the Owner. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The Schedule may be used as a means of determining the Contractor's progress in performance of the Work, but neither the Contractor by providing the schedule to the Architect and Owner, nor its acceptance or use by the Architect or Owner, acts in any way to relieve the Contractor of any of the Contractor's obligations under the Contract. All float is owned by the Owner. The schedule shall include a network analysis to identify those tasks that will lengthen the Project completion date.

(2) If not accepted, the Construction Schedule shall be promptly revised by the Contractor in accordance with the recommendation of the Owner or Architect and resubmitted for acceptance. The Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the Owner and Architect of any delays or potential delays. In addition, the Contractor shall provide an updated Construction Schedule to reflect actual conditions with each Application for Payment or if requested by either the Owner or the Architect. In the event the progress report indicates any delays, the Contractor shall take corrective measures necessary to expedite the progress of the construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment and facilities, and (3) other similar measures. Any such measures are solely for the purpose of ensuring the Contractor's compliance with the Contract Time allowed by the Contract Documents. The Contractor shall not be entitled to any adjustment in the Contract Sum in connection with such measures. In no event shall any progress report constitute an adjustment in the Contract Time or the Contract Sum unless such an adjustment is agreed to by the Owner and authorized pursuant to a written Change Order.

(3) Contractor agrees that failure of the Contractor to provide a network analysis to identify any task on the critical path may be a basis for the refusal by the Owner to grant any additional time to complete the project, or may be a basis to reduce or deny any Claim by Contractor for additional cost. In the event that Contractor makes any Claim or demand for adjustment in the contract sum, additional cost or damages associated with any delay in completing the Project, regardless of the cause of any such delay or the type of delay claim, Contractor agrees to provide to the Owner complete and unredacted copies of any and all documents pertaining to Contractor's original bid for the Project, including any and all notes in connection with preparation of the bid, all estimate worksheets or similar items, all quotations from Subcontractors and suppliers, all contracts with Subcontractors and any and all final estimate tally sheets. In the event of any claim for equitable adjustment delay or damages for delay by Contractor, whether made directly by Contractor or an attempt as a pass-through claim by a Subcontractor, Contractor waives, without any reservation, any and all claims of privilege pertaining to any bid documents or contract documents, or other similar documents in its Project file and hereby acknowledges and agrees with Owner that there shall be no claim or defense to production of these documents that any of these documents are proprietary in nature, in defense of releasing said information to the Owner or to any other interested party. Whether as a result of any claim or otherwise as requested by Owner or Architect, Contractor shall provide to Owner and Architect, on written request by either

Owner or Architect, the identity of the computer software utilized for preparation and production of any CPM Schedule. Further, on written request by either the Owner or Architect, the Contractor shall provide to the Owner and Architect, monthly computer processing of all computer-produced CPM Schedules and time/cost schedules and reports generated from monthly Project updates, a hard copy listing of all Project schedule changes, and associated data, made at the update and an electronic file of this data, including an electronic file of any and all data associated with the project and CPM schedule pertaining to the project. Upon request by the Owner or Architect, Contractor shall export all underlying data pertaining to an CPM Schedule, any schedule update or any other information pertaining to the CPM Schedule. These reports and this information shall be submitted with and substantively support the Contractor's monthly payment request. The Architect, through or in coordination with the Owner, shall identify the different report formats that the Contractor shall provide based upon the monthly schedule updates, This provision applies to claims of Subcontractors being made to or against the Contractor, and Contractor is required to and shall ensure that this contractual provision is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise.

(4) Any revision or update to the schedule will be subject to the written approval of the Owner.

§ 3.10.3 Change the words, "perform the Work in general accordance with" to read "conform to". Also add the following to the end of Subsection § 3.10.3, "If the work is not on schedule as determined by the Architect and the Contractor fails to take action to correct, then the Contractor shall be deemed in default and the progress of the Work shall be deemed unsatisfactory. Such default may be considered ground for termination by Owner for cause in accordance with Section 14.2."

Add Subparagraph 3.10.4:

§ 3.10.4 The Owner shall have the right to direct a postponement or rescheduling of any date or time for the performance of any part of the Work that may interfere with the operation of the Owner's premises. The Contractor shall, upon the Owner's request, reschedule any portion of the Work affecting the Owner's operation of the premises during the hours when the premises are not in operation. Any postponement, rescheduling or performance of the Work under this Paragraph may be grounds for an extension of the Contract Time, if allowed under Subparagraph 8.3.1, and an adjustment in the Contract Sum if:

(1) The performance of the Work was properly scheduled by the Contractor in compliance with the requirements of the Contract Documents; and

(2) Such rescheduling or postponement is required for the convenience of the Owner and such rescheduling or postponement is shown by Contractor at the time of the postponement or rescheduling to be a matter that affects the critical path of construction.

§ 3.11 Documents and Samples at the Site

After the first sentence, add:

Contractor shall prepare and update as-built drawings on a monthly basis.

In the last sentence, after the word "Work", add the words "and prior to final payment. These as-built documents shall also be provided to the Owner in AutoCAD, Revit, PDF or other readable format as applicable and as requested by the Owner"

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.7 Add the following sentence to the end of Subparagraph § 3.12.7:

Should the Contractor, subcontractor or sub-subcontractor install, construct, erect or perform any portion of the Work without approval of any required submittal, the Contractor shall bear the cost, responsibility and delay for removal, replacement and/or correction of any and all items, materials and/or labor necessitated by the Contractor's performance of said Work prior to receipt of the Architect's approval.

§ 3.12.9 Delete the last sentence.

§ 3.12.10 Delete Subparagraphs § 3.12.10 and, in its place, substitute the following:

When professional certification of performance criteria of materials, systems, or equipment is required by the Contract Documents, the Contractor shall provide the person or party providing the certification with full information on the relevant performance requirements and on the materials, systems, or equipment that are expected to operate or be utilized at the Project site. The certification shall be based upon performance under the operating conditions generally prevailing or expected at the

Project site. The Architect shall be entitled to rely upon the accuracy and completeness of such certificates.

Add the following Subparagraphs to § 3.12:

§ 3.12.11 All shop drawings for any architectural, structural, mechanical or electrical work must be submitted to and approved by the Architect. The Contractor represents and warrants that all shop drawings shall be prepared by persons and entities possessing the expertise and experience in the trade for which the shop drawing is prepared and, if required by the Architect or applicable law, by a licensed engineer. Any shop drawing that indicates insufficient study of drawings and specifications, illegible portions, or gross errors, will be rejected outright and Owner will require that the Contractor resubmit such drawing in a manner consistent with the information contained in the Contract Documents. Such rejections, if any, shall not constitute a reason for granting Contractor additional time to perform the work involved and shall not be a basis for any additional payment to Contractor.

§ 3.12.12 Faxed copies of shop drawings will not be accepted.

§ 3.13 Use of Site

Delete Subparagraph § 3.13.1 and substitute the following:

§ 3.13.1 The right of possession of the premises and the improvements made thereon by the Contractor shall remain at all times the property of the Owner. The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents. The Contractor shall confine its apparatus, the storage of materials and the operations of its workmen to limits indicated by law, ordinances, the work limit line and staging area as shown on Site Plan, and areas made available by the Owner, and shall not unreasonably encumber the premises with its materials or equipment. Only materials and equipment which are to be used directly in the Work shall be brought and stored on the Project site by the Contractor. Protection of construction materials and equipment stored at the Project site from weather, theft, damage and all other causes is solely the responsibility of the Contractor.

Add the following Subparagraphs § 3.13.2 through § 3.13.5 to § 3.13:

§ 3.13.2 The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the Project site without the prior written consent of the Owner, which consent may be withheld in the sole discretion of the Owner.

§ 3.13.3 Contractor shall ensure that the Work, at all times, is performed in the manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. All public areas adjacent to the site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions. Contractor shall use its best efforts to not interfere with the occupancy of (1) any area and buildings adjacent to the site of the Work or (2) the building in the event of partial occupancy.

§ 3.13.4 Without the prior written approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances and parking areas other than those designated by the Owner.

§ 3.13.5 The Contractor shall repair at its own expense any damage from operations under its supervision or direction caused to Owner's property and facilities on the site and access routes thereto.

§ 3.15 Cleaning UP

§ 3.15.2 Add the following to the beginning of Subparagraph 3.15.2:

The Contractor shall clean up the project site and work performed as provided in the Contract Documents.

§ 3.17 Royalties, Patents and Copyrights

Delete Subparagraph 3.17 and in its place add the following:

The 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 of the Work of any invention, design, process, product or device which is the subject of patent rights, trademarks, copy rights, trade secrets or proprietary information held by others. Contractor shall indemnify and hold harmless Owner and Architect and anyone directly or indirectly employed or contracted by either of them from and against all claims, damages, losses and expenses, including attorneys' fees and court and/or arbitration costs, arising out of any infringement of patent rights, trademarks, copy rights, trade secrets or proprietary information 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 and shall defend all such claims in connection with any alleged infringement of such rights. This indemnification obligation is not limited to but in addition to the insurance obligations of the performance bond required in connection with this Agreement. For an asbestos or lead abatement project, the provisions of this Subparagraph will apply concerning any process for the removal of asbestos or lead containing materials.

§ 3.18 Indemnification

Add Subparagraph § 3.18.3 to § 3.18.

§ 3.18.3 The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, the Architect's consultants, and agents and employees of any of them provided such giving or failure to give is the primary cause of the injury or damage.

Add Subparagraphs § 3.19 through § 3.22.4, as follows:

§ 3.19 Log of Changes

The Contractor shall maintain a current log of all Request for Information (RFI's), Change Proposal Requests (CPRs), Change Orders and Construction Change Directives at the site of the Project and shall provide the Owner and Architect said logs monthly, not later than the tenth (10^{th}) day of the following month.

§ 3.20 Failure to Perform Work

Contractor shall be liable to the Owner for all costs or damages that the Owner incurs as result of the Contractor's failure to perform the Work, or any part thereof, in accordance with Contract Documents. Contractor's failure to perform shall include, but not be limited to, the failure of its subcontractors and/or suppliers of any tier to perform. The Contractor's liability to the Owner shall include, but not be limited to (1) the increase costs of performance, including services of the Architect and other consultants, resulting from the Contractor's failure to comply with the Contract Documents; (2) costs of removal of defective or noncompliant work; (3) costs of corrective or warranty work; (4) liability to third parties caused by Contractor's failure to perform the Work or any part thereof; (5) re-procurement costs; (6) attorney fees and related costs, including costs incurred in enforcing Owner's rights under the Contract Documents; and (7) liquidated and/or stipulated damages.

§ 3.21 Liens

§ 3.21.1 The term "lien" as used in this Section 3.21 and in Article 9 of these General Conditions and in Article 5 of the Agreement Between Owner and Contractor, AIA A101, refers to "claims' as provided in La. R.S. 38:2242, which authorizes "claimants" who perform work, labor, or provide materials or supplies for a public work to file "claims" with the governing authority. The term "lien" is used in the referenced sections instead of the word "claim" solely to avoid confusion with the "Claims" that may be filed by the Contractor and/or Owner pursuant to the Contract Documents, as provided in Article 15 of these General Conditions.

§ 3.21.2 In the event a Lien is filed by anyone in relation to the Work, the Owner shall have the right (1) to require the Contractor to furnish to the Owner a release of a Lien or claim that has been recorded by the person or entity filing the claim; (2) to require the Contractor to discharge the Lien by posting a bond with the Clerk of Court for the Parish of St. Tammany within five (5) calendar days of notice by the Owner to the Contractor; (3) obtain a Notice of Cancellation Certificate for each filed lien; and/or (4) to retain out of any payment due or thereafter to become due an amount sufficient to indemnify the Owner against any Lien or claim of a Lien, including bond premiums and attorney fees, and to apply the same in such manner as Owner deems necessary to satisfy such claims and Liens.

§ 3.21.3 In the event such Lien is not discharged, the Contractor at its sole cost and expense, including attorney's fees, shall hold harmless and defend the Owner of and from any and all claims, lawsuits, causes of actions and demands of any person or entity asserting or claiming any right as a result of any Lien or claim, recorded or unrecorded, against the Contract Funds or the Owner's property. In the event such Lien is not discharged, the Contractor shall be deemed in default and the Owner shall have the right to terminate the Contract for said default. The Owner shall also have the right, but not the obligation, to bond said Lien(s), and Contractor shall be responsible for all costs incurred as a result thereof, including but not limited to, bond premiums and attorney fees.

§ 3.21.4 Prior to the receipt of any partial payment, or of Final Payment, Contractor shall provide the Owner a partial release or a final release, as appropriate, of all Liens and claims of any persons furnishing labor and/or materials to the Work, Contractor shall not

receive Final Payment before providing to the Owner satisfactory evidence (i.e. clear lien certificate) that there are no other Liens or claims whatsoever outstanding against the Work or Contract.

§ 3.22 Work in Existing Facilities

§ 3.22.1 The Contractor shall not perform Work in existing buildings that will interfere with normal school operations, teaching or normal traffic flow or produce excessive noise without twenty-four (24) hours written notice to the Owner's representative and then only with their concurrence. Security of the Owner's property may require the services of a guard during the nights or weekends if required by the nature of the Work at no additional cost to the Owner.

§ 3.22.2 All means of egress shall always be maintained during school occupancy to comply with exit requirements in the NFPA 101 Life Safety Code.

§ 3.22.3 The Contractor shall not allow traffic or operations to encumber school vehicle or pedestrian traffic during school hours to include before school and after school programs or events. Space for parking of Contractor's personnel and subcontractors is designated in the Contract Documents or as otherwise approved by the Owner.

§ 3.22.4 Any Work required of the Contractor before the opening of the school after summer vacation, caused by the failure of the Contractor to meet his Contract completion date, will be performed as stated above at no additional expense to the Owner. This includes overtime Work after normal school hours, during work days and on weekends, when required to accomplish the Work necessary to maintain the construction schedule. This provision does not prohibit operation during normal work hours when prior arrangements have been completed with the Architect and the Owner.

ARTICLE 4 - ARCHITECT

§ 4.1 Architect

Delete Subparagraph 4.1.1 and substitute the following:

§ 4.1.1 "The term Architect, when used in the Contract Documents, shall mean the prime Designer (Architect, Engineer, or Landscape Architect), or his authorized representative, lawfully licensed to practice architecture, engineering or landscape architecture in the State of Louisiana, identified as such in the Agreement, and is referred to throughout the Contract Documents as if singular in number."

Delete Subparagraph 4.1.2.

§ 4.2 Administration of the Contract

§ 4.2.1 Add the following to the end of Subparagraph 4.2.1:

The Architect shall remain an Owner's representative from time to time during the one-year period for correction of Work described in Section 12.2.2.1. The Owner may request the Architect's assistance and review at any time during the five (5) year warranty period as allowed by La. R.S. 38:2189. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 In the first sentence, delete the words "at intervals appropriate to the stage of construction" and replace with "at least weekly and at other times as requested by the Owner and at intervals appropriate to the stage of construction."

§ 4.2.3 In the last sentence, delete "The Architect", and replace with "The Architect and the Owner".

§ 4.2.5 Between the words "Architect's" and "evaluations", add the words "observations of the progress of the work and".

§ 4.2.8 In the first sentence, after the word "Work", add the words "that do not involve changes in the Contract Sum or the Contract Time".

§ 4.2.10 Add the following sentence to the end of Subsection 4.2.10:
"There will be no restriction of the Owner having a Representative."

ARTICLE 5 - SUBCONTRACTORS

§ 5.1 Add the following sentence to the end of Subparagraph 5.1.1:

As applicable based upon the value of the Work, subcontractors shall be duly licensed in accordance with La. R.S. 37:2150, *et seq*. and local laws.

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

Delete the first sentence of Subparagraph 5.2.1 and substitute the following:

Unless otherwise required by the Contract Documents, the Contractor shall furnish at the Pre-Construction Conference, to the Owner and Architect, in writing, the names of the persons or entities, including those who furnish materials or equipment, proposed for each of the portions of the Work.

Also add the following sentence to the end of Subparagraph 5.2.1, "No Contractor payments shall be made until the information is received."

Delete Subparagraph 5.2.2 and substitute the following:

§ 5.2.2 The Contractor shall be solely responsible for selection and performance of all Subcontractors. The Contractor shall not be entitled to claims for additional time and/or increase in the Contract Sum due to a problem with performance or non-performance of a Subcontractor. The Contractor shall be totally and solely responsible for any lost time or extra expense incurred due to a Subcontractor's and/or Material Supplier's failure to perform. Under no circumstances shall the Owner or Architect be required to mitigate the Contractor's losses or reimburse the Contractor for losses caused by its Subcontractors and/or Material Suppliers.

Add the following sentence to the beginning of Subparagraph 5.2.3:

§ 5.2.3 The Contractor shall notify the Owner when a Subcontractor is to be changed and substituted with another Subcontractor.

§ 5.3 Subcontractual Relations

Delete Subparagraph 5.3.1 and in its place substitute the following:

§ 5.3.1 All Work performed for Contractor by a Subcontractor or a sub-subcontractor will be pursuant to an appropriate agreement between Contractor and Subcontractor or Subcontractor and sub-subcontractor which specifically binds the Subcontractor or sub-subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the Owner and Architect and contains applicable waiver of subrogation provisions, and which makes the Owner a third party beneficiary of any such agreement. Nothing in these Contract Documents shall provide, in favor of any person or organization other than the Contractor, a right of action against the Owner. No provision in law that requires a portion of this Contract to be severed as between Owner and Contractor shall require that any such provision be severed from the contract or agreement between Contractor and Subcontractor, and any such provision shall remain in force and effect as between Contractor and Subcontractor.

§ 5.4 Contingent Assignment of Subcontracts

Delete Subparagraph 5.4.1 and substitute in its place the following:

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

1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor in writing; and

2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

Delete Subparagraph 5.4.2 and substitute in its place the following:

§ 5.4.2 Each subcontract shall specifically provide that the Owner shall only be responsible to the Subcontractor in the event of the exercise of an assignment for those obligations of the Contractor that accrue subsequent to the Owner's exercise of any rights under this conditional assignment.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Delete the last sentence of Subparagraph 5.4.3 and replace with the following:

"In the event of assignment, the original Contractor shall be responsible for any additional costs incurred by the Owner as a result of the assignment."

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1.3 Add the following sentence to the end of Subparagraph 6.1.3:

The Contractor shall anticipate the Work of the Owner or other Contractors may delay, disrupt, or interfere with the Work and the progress schedule and Contractor shall do all cutting, fitting and patching of the Work required to make its several parts come together properly in a manner that will not endanger any Work of others by cutting, excavating or otherwise altering their Work without the written consent of the Owner.

§ 6.1.4 Delete Subparagraph 6.1.4, and replace with the following:

The Owner may furnish materials or equipment to the Project site to be incorporated into the Work. For any Owner furnished equipment or materials to be incorporated into the Work, the Contractor shall perform such tasks as are necessary to coordinate and install the Owner furnished materials and/or equipment to make the Work functionally complete. If the Contractor contends that such Owner furnished materials or equipment constitutes an extra to the Work outside the requirements of the Contract Documents, the Contractor may request a change order for direct field costs incurred in installing such Owner furnished materials or equipment in accordance with the procedure set forth in Article 7.

§ 6.2 Mutual Responsibility

§ 6.2.3 Delete the second sentence.

§ 6.2.4 In the last line, change the words "in Section 10.2.5" to read "elsewhere in the Contract Documents."

Delete Subparagraph 6.2.5.

ARTICLE 7 - CHANGES IN THE WORK

§ 7.1 General

Delete Subparagraph 7.1.1 and substitute the following:

§ 7.1.1 Changes in the Work may be accomplished after execution of the Agreement and Bonds and without invalidating the Contract and Bonds, by Change Order, Constructive Change Directive or order for a minor change in the Work provided such changes are within the scope of the Contract Documents and subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. Any change outside the scope of the Contract Documents in excess of the minimum threshold set forth in La. R.S. 38:2212 shall be let out for public bid as provided by Louisiana Revised Statute 38:2212. Approval of any Change Order is subject to compliance with law and the Owner's policies on Change Orders.

Add the following Subparagraphs 7.1.4 through 7.1.7:

§ 7.1.4 Any change pertaining to the Work which is not required to be put out for public bid, shall be negotiated in the best interest of the Owner or let out for public bid. When the change is negotiated, the change order in accordance with law, shall be fully documented and itemized as to the Contractor's cost, including material quantities, material costs, taxes, insurance, wages, employee benefits, other related costs, profit and overhead. When unit prices are contained in the initial Contract, no deviations shall be allowed in computing negotiated changes. The Contractor shall provide and deliver to the Architect the above information including any application for extension in the Contract Time, within ten (10) days after being notified to prepare a Change Order.

§ 7.1.5 No order, oral statement, or direction of Architect, Owner or Owner's Program Manager shall be treated as a Change Order nor shall it entitle Contractor to an adjustment to the Contract Sum or the Contract Time. Requests for Information (RFI) are not changes to the Contract Documents and do not change the Contract Sum or Contract Time.

§7.1.6 Unit prices shall be inclusive of all costs including mark-up for overhead and profit and shall be applied to units or measure as defined in the Contract Documents for each category of Work, if any.

§ 7.1.7 Whenever the total cost of the changes in the Work exceed ten percent (10%) of the original Contract Sum, the Contractor shall obtain the consent of surety providing the performance and payment bonds to ensure coverage for the additional Work.

§ 7.2 Change Orders

Add the following Subparagraph 7.2.2:

§ 7.2.2 A Change Order must comply with the requirements of La. R.S 38:2212(A)(4)-(7). Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the Contract Time. In the event a Change Order increases the Contract Sum, Contractor shall include the Work covered by such Change Orders in Applications for Payment.

§ 7.3 Construction Change Directives

Change Subparagraph 7.3.4 as follows:

In the first sentence, delete the words, "an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount " and substitute "an allowance for overhead and profit in accordance with clauses 7.3.11.1 through 7.3.11.6 below."

Add the following to the end of Subparagraph 7.3.8:

Any credit to the Owner shall be the sum of the materials and labor costs and sub-contract costs.

Delete Subparagraph 7.3.9.

Add the following Subparagraphs 7.3.11 through 7.3.14to 7.3.

§ 7.3.11 In Subparagraph 7.3.6, the allowance for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:

.1 For the Contractor, for Work performed by the Contractor's own forces, up to fifteen (15%) percent of the cost.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor, up to ten (10%) percent of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-subcontractor involved, for Work performed by the Subcontractor's or Sub-subcontractor's own forces, up to fifteen (15%) percent of the cost.

.4 For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractor's, up to ten (10%) percent of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.6.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accomplished by a complete itemization of costs including labor, materials and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. In no case will a change be approved without such itemization if itemization is required by law.

§ 7.3.12 Any credit to the Owner resulting from a change in the Work shall be the sum of:

.1 Contractor's material, equipment costs not incurred, labor cost and other sums not actually expended.

.2 Subcontractor's and/or Sub-subcontractor's material, equipment costs not incurred, labor cost and other sums not actually expended.

§ 7.3.13 In any Change Order, no allowance or itemization of costs shall be allowed for salaries or other compensation of the Contractor's personnel at the Contractor's principal office and branch offices; any part of the Contractor's capital expenses, including interest; overhead and general expenses of any kind not included above in cost of the work; cost of supervision not specifically required by the Change Order; and costs due to negligence, including but not limited to correction of defective or nonconforming work.

§ 7.3.14 In order to facilitate the determination of amounts due for changes in the Work, the Contractor shall submit information pertaining to the Contractors' overhead costs, bond premiums, insurance rates, and equipment rates at the Pre-Construction Conference or as otherwise agreed to by the Owner. The Contractor shall require of any Subcontractor desiring to submit a Change request to submit similar information, which shall be provided to the Architect and the Owner's representative with the request for change. The information shall be provided in a written document and the Chief Financial Officer ("CFO") of the Contractor or Subcontractor (or another officer if no CFO) shall certify its accuracy under oath and sign such notarized certification.

ARTICLE 8 - TIME

§ 8.1 Definitions

Delete Subparagraph 8.1.2 and substitute the following:

§ 8.1.2 A Notice to Proceed shall designate a date for commencement of the Contract Time established in the Contract Documents. The date shall not be postponed by the failure of the Contractor or of persons or entities for whom the Contractor is responsible to act. A written Notice to Proceed shall be issued by the Architect when directed by the Owner.

Add the following Subparagraph 8.1.5:

§ 8.1.5 The Contract Time shall not be changed by the submission of a schedule that shows an early completion date unless specifically authorized by Change Order.

§ 8.2 Progress and Completion

Add the following after the first sentence of Subparagraph 8.2.1:

"Substantial Completion of the Work must be accomplished within the time stated in the Agreement between Owner and Contractor, subject to such extensions as may be agreed to via contract modification."

§ 8.3 Delays and Extension of Time

§ 8.3.1 In Subparagraph 8.3.1 in the first sentence after the words "owner pending" delete the words "mediation and binding dispute resolution" and add the word "litigation" and delete the remainder of the last sentence after "extended by for such reasonable time as the Architect may determine" and add the following:

"to the extent such delay prevents the Contractor from achieving substantial completion within the Contract Time as evidenced by the critical path of the schedule and if performance of the Work is not, was not, or would not have been delayed by any other cause for which the Contractor is not entitled to an extension in the Contract Time under the Contract Documents. The Contractor further acknowledges and agrees that adjustments in the Contract Time will be permitted for a delay only to the extent such delay (1) is not caused or could not have been anticipated by the Contractor, (2) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay, (3) is of a duration not less than one (1) day, and (4) affects the critical path of the progress of the Work."

Add the following Subparagraph 8.3.1.1:

§ 8.3.1.1 An extension of Contract Time, to the extent allowed under Paragraph 8.3, shall be the sole remedy of the Contractor for any (1) delay in the commencement of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity, unless a delay is caused by acts of the Owner which interfere with the Contractor's performance of the Work and only to the extent that such acts continue after the Contractor furnishes the Owner and Architect with written notice of such interference. In no event shall the Contractor be entitled any indirect cost, consequential damages, lost opportunity cost, impact damages or other similar claims. The Owner's exercise of any of its rights or remedies under the Contract Documents such as ordering changes in the Work, suspension, or correction of the Work, shall not be construed as an act of interference with the Contractor's performance of the Work.

Add the following Subparagraph 8.3.4 to 8.3:

§ 8.3.4 If the Contractor submits a progress report indicating, or otherwise expresses an intention to achieve, completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Add the following paragraph 8.4 to Article 8:

§ 8.4 Liquidated Damages

§ 8.4.1 Time is of the essence in completing the Work, and, in the event of delay on the part of the Contractor in completing the Work as specified beyond the date set forth in the Contract Documents as adjusted by Change Orders, it is distinctly understood and agreed that a deduction shall be made from the Contract Sum at a rate as stated in the Instructions to Bidders plus any compensation for the Architect's services and expenses made necessary for each and every day of delay until the Work is complete. This is not a penalty but agreed upon liquidated damages for delay. The calculations shall be for each and every calendar day exclusive of the day within which completion was required and up to and including the date of completion of the Work as determined by the Architect and Owner. The expiration of the time stipulated without the work having been completed shall in itself constitute a default without the necessity of any notice being given to the Contractor or its Surety. The Contractor and its Surety agree that the above mentioned sums shall be deducted at any time in the sole discretion of the Owner from the Contract Sum by means of a written adjustment executed by the Owner without the Contractor's signature, it specifically having been agreed upon in advance as a measure of damage to the Owner on account of the Contractor's delay. Nothing herein shall preclude Owner from claiming any other damages for loss sustained as a result of Contractor's delay in completing the Project.

ARTICLE 9 - PAYMENTS AND COMPLETION

§ 9.2 Schedule of Values

Add the following Subparagraph 9.2.1 to Paragraph 9.2:

§ 9.2.1 The Contractor and each Subcontractor shall prepare a trade payment breakdown for the Work for which each is responsible, such breakdown being submitted on the AIA Application for Payment Form or other form approved by the Architect and Owner. The form shall be divided in detail sufficient to exhibit all areas of the Work and phases of the Work if applicable, by convenient units, by amounts identified for warranties and close out documentation, and shall be updated as required by either the Owner or Architect as necessary to reflect (1) description of the Work listing labor and materials separately, (2) total value, (3) percent of the Work completed to date, (4) value of Work completed to date, (5) percent of the previous amount billed, (6) previous amount billed, (7) current percent completed, and (8) value of Work completed to date. Any breakdown which fails to provide sufficient detail may be rejected. If a trade breakdown is initially approved and subsequently used but is found later to be improper for any reason, sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve, exclusive of the normal retainage, to complete the Work. The schedule shall be coordinated with Subparagraph 3.10 if requested by the Owner.

§ 9.3 Applications for Payment

Delete Subparagraph 9.3.1 and clauses 9.3.1.1 and 9.3.1.2 and substitute the following:

§ 9.3.1 On or about the 1st day of each month, the Contractor shall, unless otherwise agreed to in writing by the Owner, submit to the Architect an Application for Payment Form, through the last day of each month, supported by any additional data substantiating the Contractor's right to payment as the Owner or the Architect may require. Application for Payment shall be submitted on or about the first of each month which application shall represent a consistent billing cycle of not less than 30 days for the value of labor and materials incorporated into the work and of materials, suitably stored, at the site, less normal retainage allowed in accordance with Louisiana Revised Statute 38:2248. The normal retainage shall not be due the Contractor until after substantial completion and expiration of the forty-five day lien period and submission to the Architect of a clear lien certificate and invoice for retainage. Contractor waives and relinquishes any claim for payment, whether to the Owner or otherwise, not submitted within the twenty-one (21) day time period set out in Article 15. In no event shall Contractor be allowed to bring a claim or lawsuit against the Owner for any payment if a Sworn Statement of Claim has not been filed with the Clerk of Court for St. Tammany Parish within forty-five (45) days of substantial completion of the project. Nothing herein shall preclude payment to Contractor for work performed on punch list items after substantial completion or for sums due for retainage.

Delete Subparagraph 9.3.2 and substitute the following:

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

interest and shall include applicable insurance, storage, and transportation to the site for such materials and equipment stored off the site.

At the end of Subparagraph 9.3.3, add the following sentence:

The Contractor further warrants that upon submittal of an application for payment, all work that entitles the Contractor to payment has been completed in accordance with the Contract Documents and specifications, and Contractor acknowledges that, in no event, shall payment be due for work that has not been performed.

Add new Subparagraph 9.3.4 as follows:

§ 9.3.4 Contractor expressly undertakes to defend the Owner and indemnify and hold it harmless, at the Contractor's sole expense including payment of all attorney's fees incurred by the Owner, against any actions, lawsuits, or proceedings brought against the Owner as a result of any claim or lien filed against the Contract funds, the Work, the site of any of the Work, the Project site and any improvements thereon, or for payments due them from the Contractor. The Contractor hereby agrees to indemnify and hold Owner harmless against any lawsuit, claim or lien and agrees to pay any judgment or claim or lien resulting from any such actions, lawsuits or proceedings, including attorney's fees, costs and interest. Contractor further agrees to pay to the Owner all costs, including attorney fees, incurred by Owner as a result of Contractor's failure or refusal to make payment to any Subcontractor, lienholder or claimant. This includes payment to the Owner for all costs, including attorney fees, incurred in the event that Owner is required to institute any concursus proceeding in connection with payment of any of the Contract Sum due or allegedly due.

Add the following Subparagraph 9.3.5 as follows:

§ 9.3.5 The Owner may release any funds withheld due to a lien or affidavit of a claim if the Contractor obtains security acceptable to the Owner or a lien bond which is (1) issued by a surety acceptable to the Owner, (2) in form and substance satisfactory to the Owner and the Clerk of Court and (3) an amount of not less than 125% of such lien claim or affidavit of claim or as provided by law. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or other obligations under Paragraph 9.3, including, without limitation, the duty to defend and indemnify the Owner. The cost of any premiums incurred in connection with any such bonds and securities shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Sum.

§ 9.5 Decisions To Withhold Cerficiation

Delete "or" at the end of Subparagraph 9.5.1.6 and add the following Supplementary Subparagraphs 9.5.1.8 through 9.5.1.15 after the words "Contract Documents" at the end of Subparagraph 9.5.1.7:

§ 9.5.1.8 Completed Work has been damaged which requires correction or replacement;

§ 9.5.1.9 Correction of defective Work by Owner or completion of the Work by the Owner;

§ 9.5.1.10 Belief or knowledge by the Architect of an occurrence of an event justifying termination for cause;

§ 9.5.1.11 Failure to complete the punch list within the 45 day lien period;

§ 9.5.1.12 The value of the Punch List (see Section 9.8.5) of incomplete or items to be corrected exceeds the balance remaining of the Contract sum including the amount allotted for the retainage;

§ 9.5.1.13 **I**f the Project is behind schedule, failure to submit a written plan indicating action by the Contractor to regain the time schedule for completion of the Work within Contract Time;

§ 9.5.1.14 Improperly completed or inadequately documented/supported Application for Payment. The omission of any required documents from the Application for Payment, including but not limited to lien waivers, all documents required herein, all documents required in the Division 01 Specifications of the Contract Documents, and all documents required elsewhere such as an approved Construction Schedule or lack of approved Schedule of Values in the Contract Documents, shall result in its rejection; or

§ 9.5.1.15 Rejection of any part of the Work by any governmental authority having jurisdiction over the Project.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 9.6 Progress Payments

In Subparagraph 9.6.1, after the word "Documents" delete the words "and shall so notify the Architect" and add the following:

"provided, however, Owner may refuse to make payment of the amount recommended by the Architect and the Owner may withhold from any payment an amount based on:

.1 The Owner's estimate of the value of any claims made against the Owner on account of the Contractor's Work:

.2 The Owner's estimate of the value of any claim it has asserted against the Contractor;

.3 125% of the amount of any lien or affidavit of claim that has been filed in the Mortgage Records for the Parish in which the Project is located in connection with the Work; or

.4 Other items such as liquidated damages, additional architect fees or attorney fees or costs which allow the Owner to withhold or set-off against any amount recommended by the Architect."

Add the following to the end of Subparagraph 9.6.2:

"La. R.S. 9:2784(A) and (C) require a Contractor or Subcontractor to make payment due to each subcontractor and supplier within fourteen (14) consecutive days of receipt of payment from the Owner. If not paid, a penalty in the amount of one half of 1% per day is due, up to a maximum of fifteen percent (15%) from the expiration date until paid. The Contractor or Subcontractor, whichever is applicable, is solely responsible for the payment of any penalty."

Delete Subparagraphs 9.6.3, 9.6.4, and 9.6.5 from Article 9.6.

Delete Subparagraph 9.6.7, and replace with the following:

"If the Owner receives any claim of non-payment from a subcontractor, sub-subcontractor, material or equipment supplier, or the like, arising out of the Contract, the Owner shall deduct 125% of such claim from any payment otherwise due the Contractor. The Contractor, or any interested party, may deposit security with the Recorder of Mortgages of the Parish where the Work is being performed in accordance with La. R.S. .38:2242.2 to guarantee payment of the claim. When the Owner receives sufficient proof of such guarantee from the Recorder of Mortgages and/or Clerk of Court, the deducted amount will be added back to the Contract Sum at the next payment."

§ 9.7 Failure of Payment

Delete Article 9.7.

§ 9.8 Substantial Completion

Delete Subparagraph 9.8.1 and substitute the following:

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. Upon the recommendation of the Architect to the Owner that the Project is complete or substantially complete, the Owner at a public meeting may approve the Certificate of Substantial Completion and direct its recordation in the mortgage records of the Clerk of Court of St. Tammany Parish. The Contractor shall at his expense record the certificate of Substantial Completion and provide the recordation information to the Architect and Owner. The time for the Correction Period shall begin on the date the acceptance is filed and recorded in the Mortgage Records.

The Architect shall determine if the Project is Substantially Complete in accordance with this Article 9.8. Unless otherwise agreed to by the Owner and Architect, in addition to the requirements of the first sentence of this Article 9.8.1, the following conditions must also be satisfied before the Work will be considered Substantially Complete:

.1 Where roofing work is part of the Contract, the Owner must receive the executed Roofing Contractor's and Roofing Manufacturer's guarantees or the Contractor must provide information sufficient to the Owner that no outstanding issues exist that would prohibit the Roofing Manufacturer from issuing any warranty/guarantees required by the Contract Documents;

.2 All required occupancy permits must have been issued and copies delivered to the Owner;
.3 All Project systems included in the Work must be operational as designed;
.4 All operations and maintenance data specified has been submitted and approved, including the provision of draft as-built drawings for training purposes;
.5 The Owner's personnel must have completed any required training in the Project's operations systems;
.6 All finishes required by the Contract Documents must be in place;
.7 The only remaining work must be minor in nature so that the Owner can occupy the building/construction and the Contractor's completion of that minor remaining work will not interfere with nor hamper the Owner's normal business operations;
.8 The Contractor must certify in writing that all remaining Work will be completed within forty-five (45) consecutive calendar days, unless the Owner consents to a different time, following the date of Substantial Completion. Any remaining Work required to be performed after the date of Substantial Completion at a school that is operating and open shall be done in a manner and during times that do not interfere with school operations, at no additional cost to Owner. Owner shall have the right to direct Contractor to perform said Work, at no additional cost during non-operating hours of the school, including nights and weekends.
.9 All warranties to be effective as of the date of substantial completion fully signed and dated.

Delete Subparagraph 9.8.3 and substitute the following:

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. A prerequisite to the Work being accepted as substantially complete, is the Owner's receipt of the executed Roofing Contractor's and Roofing Manufacturer's guarantees or other documentation acceptable by the Owner, where roofing work is part of the Contract. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, the Contractor shall, before acceptance of the Work as substantially complete, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. In no event shall acceptance of the work, or a part thereof, as substantially complete, constitute a right of Contractor to payment under the Contract for work not yet performed by the Contractor and Contractor agrees that no such sum shall be due until completion of that work.

Delete Subparagraph 9.8.4 and substitute the following:

§ 9.8.4 The Certificate of Substantial Completion from the Architect shall include as an attachment the list of minor corrective items (punch list) to be completed by the Contractor, together with the estimated cost of hiring third parties to complete such minor corrective items. In addition, the Certificate of Substantial Completion shall designate that the Contractor shall complete the list of minor corrective items within forty-five (45) days of the date of the Owner's acceptance of the Certificate. At the end of the forty-five (45) day period, without further notice to Contractor, the Owner shall have the option of either completing the items identified on the list of minor corrective items (punch list) and retaining the cost of the work done, including any additional architect fees from the Contract Sum, or calling on the Surety to complete the minor corrective items under the performance bond and/or labor and material payment bond. Additionally, if the Contractor fails to complete all Punch List items within this forty-five-day period, through no fault of the Owner or the Architect, then the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification of the Surety by the Owner, the Surety has not completed the Punch List, through no fault of the Architect or Owner, the Owner may, at his option, contract with an outside party to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract Sum. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future Owner contracts. If the Surety fails to complete the Punch List within the stipulated time period, the Owner may choose to not accept bonds submitted from the Surety in the future.

Delete Subparagraph 9.8.5 and substitute the following:

§ 9.8.5 Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work unless otherwise agreed to in writing by the Owner and Contractor. Unless otherwise agreed to in writing by the Owner and Contractor, security, maintenance, heat, utilities, damage to the Work not covered by the punch list, and insurance shall become the Owner's responsibility on the Date of Substantial Completion.

§ 9.9 Partial Occupancy or Use

Add the following Subparagraphs to Subparagraph 9.9.1:

§ 9.9.1.1 Occupancy by the Owner shall not be construed by the Contractor as being an acceptance of that part of the Project to be occupied.

§ 9.9.1.2 Occupancy by the Owner shall not be deemed to constitute a waiver of existing claims on behalf of the Owner or Contractor against each other.

§ 9.9.1.3 If the Project consists of more than one building, and one of the buildings is to be occupied, the Owner, prior to occupancy of that building, shall secure permanent property insurance on the building to be occupied, as well as any necessary permits that may be required for use and occupancy.

§ 9.9.1.4 Use and occupancy by the Owner prior to Project acceptance shall not relieve the Contractor of the responsibility to maintain all insurance and bonds required of the Contractor under the Contract Documents until the entire Project is completed and accepted by the Owner.

§ 9.10 Final Completion and Final Payment

Add to Subparagraph 9.10.1, after the first sentence, the following:

If the Architect does not find the Work acceptable under the Contract Documents after the first review of punch list items subsequent to substantial completion, the Architect shall make one additional inspection; if the Work is still not acceptable, the Architect, and each of the Architect=s principal consultants, shall be paid $125.00/hour for their time at the project site, for each additional inspection, to be withheld from the unpaid funds remaining in the Contract Sum. The payment shall be made by the Owner and deducted from the construction contract funds. Should the Contract Sum be insufficient to cover the costs of these payments, both the Contractor and Surety shall be liable to the Owner for these costs.

Add to Subparagraph 9.10.2 the following at the end of the first sentence:

, (7)A Certificate from the Clerk of Court for the Parish of St. Tammany which shall be dated at least forty-six (46) days subsequent to the date of recordation in the same office of the acceptance of substantial completion for the Owner and to the effect that no liens or claims for labor or materials have been recorded against the Project, (8) all warranties and guarantees required under or pursuant to the Contract Documents, which shall be submitted by the Architect to the Owner for acceptance as part of the final Application for Payment, (9) all operation manuals and training of Owner's staff in the operation of mechanical, electrical, heating and air conditioning systems, and (10) reproducible drawings (as-builts) accepted by the Architect.

Delete Subparagraph 9.10.4.

Add the following Paragraph 9.11 to Article 9:

§ 9.11 Liquidated Damages

§ 9.11.1 The Contractor and the Contractor's Surety, if any, shall be liable for and shall pay the Owner the sums stipulated in Subparagraph 8.4.1 and as set forth in the Instructions to Bidders as liquidated damages for each calendar day of delay until the Work is determined to be complete by the Architect and Owner and sums for additional Architect fees incurred by the Owner or charged to the Owner as set forth in the Contract Documents.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

§ 10.2 Safety of Persons and Property

Add the following Subparagraphs to Article 10.2.1:

.4 the indoor air quality of buildings where the Owner's students, teachers, employees and visitors are present; and
.5 the exhaust systems and existing fresh air intake devices to prevent dust or fume caused by the Work to enter such systems.

Add to Subparagraph 10.2.2, in the first sentence, between the words "bearing on" and "safety", add the words, "the health and".

Delete, in Subparagraph 10.2.5, the words, "directly or indirectly".

Add, at the end of Subparagraph 10.2.6, the following sentence:

"The Contractor shall immediately make an oral report to the Architect and the Owner and promptly provide a written report to the Architect and the Owner about all accidents arising out of or in connection with the Work that cause death, personal injury, interrupt utility services or property damage."

In the first sentence of Subparagraph 10.2.8, revise "21 days" to "3 days". Also add the following sentence at the end of the Subsection:

"This notice does not replace or supplant the shorter notice required by Section 10.2.6 above."

Add Subparagraph 10.2.9:

§ 10.2.9 Any fines levied against the Owner due to the Contractor's (or its subcontractor's) failure to comply with OSHA standards or other Federal, State, and local regulations shall be paid by the Contractor. If any such fines are not promptly paid, then the amount of the fine may be withheld by the Owner from payment to the Contractor.

Add Subparagraph 10.2.10:

§ 10.2.10 The Contractor is solely responsible for the security of all equipment, tools or other property of the Contractor, its Subcontractors and its suppliers at the Project site to include any loss or damage due to theft or vandalism. The Contractor shall provide for any security at the site.

§ 10.3 Hazardous Materials

Add to Subparagraph 10.3.1, in the first sentence, after "(PCB)" add "or lead-based paint". Also, add the following to the end of Subparagraph 10.3.1:

Mold is not considered to be hazardous for the purposes of this Section; however, the Contractor should notify the Owner and Architect of the presence of suspect, visible mold on building components, in writing, in any affected area of a Project. The Owner is responsible to assess any area of a Project where mold is observed. The Owner will provide for remediation of mold in any affected area of a Project. The Owner will advise the Architect and Contractor upon completion of the remediation of any affected area due to the presence of mold in an area. There are no clear standards set regarding exposure levels for mold since mold is generally present everywhere. The presence of mold in an area of a Project does not affect the remaining areas of a Project and the Contractor shall continue with work in all unaffected areas of a Project. If visible mold is present on any components installed by the Contractor or under the control of the Contractor, then the Contractor shall properly clean or replace those components in accordance with the Owner's environmental consultant's recommendations, at no additional cost to the Owner.

Delete Subparagraph 10.3.2 and substitute the following:

§ 10.3.2 In the event the Contractor encounters on the site material reasonably believed to be hazardous and which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected only and report the condition to the Owner and Architect in writing. Work shall continue in unaffected areas. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is a hazardous material or substance and has not been rendered harmless. The Work in the affected area shall be resumed immediately following the occurrence of any one of the following events (1) the Owner causes remedial Work to be performed which results in the absence of the hazardous material or substance, (2) the Owner and the Contactor by written agreement, decide to resume performance of the Work, or (3) the Work may safely and lawfully proceed as evidenced by a written report to both the Owner and Contractor which is prepared by an environmental engineer or consultant. In no event, however, shall the Owner have any responsibility for any hazardous substance or material that is brought to the project site by the Contractor, any Subcontractor, any materialmen or supplier, or any entity for whom any of them is responsible. The Contractor agrees not to use any fill or other materials to be incorporated into the Work which are hazardous, toxic or comprised of any items that are hazardous or toxic.

Delete Subparagraph 10.3.3.

Delete Subparagraph 10.3.4 and replace as follows:

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site.

Delete Subparagraph 10.3.6 and replace with the following:

§ 10.3.6 The Contractor shall assume that all paint components in the Owner's buildings built prior to 1980 contain lead-based paint, unless a report has been provided to indicate that areas being disturbed do not contain lead-based paint. The Contractor shall be responsible for all specialized cleanup of lead-based paint dust, paint chips, etc. generated by the Contractor's Work.

Add Subparagraph 10.3.7, as follows:

§ 10.3.7 The Contractor shall be responsible for the protection of its worker, subcontractors, and suppliers in accordance with OSHA exposure regulations.

§ 10.4 Emergencies

Delete Subparagraph 10.4 and substitute the following:

In an emergency affecting the safety of persons or property, the Contractor shall notify the Owner and Architect immediately of the emergency, simultaneously acting at his discretion to prevent damage, injury, or loss.

ARTICLE 11 – INSURANCE AND BONDS

Delete Article 11 in its entirety and replace with the following:

§ 11.1 Contractor's Liability Insurance

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

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

§ 11.1.2 The insurance required by Section 11.1. l shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Section 11.l shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the- Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Section 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by tl1e Contractor with reasonable promptness in accordance with the Contractor's information and belief.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 11.1.4 The following general requirements to apply to all insurance required under ARTICLE 11:

§ 11.1.4.1 General Conditions

a. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, his agents, representatives, employees and subcontractors. The cost of such insurance shall be included in the Contractor's bid.

b. Insurance provided by the Contractor shall be with a reliable company with an A.M. Best's rating of no less than A-, acceptable to and approved by the Owner, and authorized to do business in Louisiana. This requirement will be waived for workers' compensation coverage only for those companies who participate in the State of Louisiana Workers' Compensation Assigned Risk Pool.

c. The Owner and Architect must be included as additional insured on the general liability policy.

d. All Workers Compensation policies must be endorsed with a waiver of subrogation.

e. Each policy shall contain a provision signed by the agent of the company stipulating that the policy will not be canceled without thirty (30) days prior written notice to the Owner.

f. Any and all policy deductibles shall be paid by the Contractor.

g. All certificates of insurance shall be delivered to the Owner within ten days of the award of the Contract by the Owner. Bidders in submitting a proposal agree to submit certified copies of their insurance policies to the Owner for review.

h. Claims made policies are not acceptable to the Owner and cannot be used to comply with insurance requirements of this Contract.

§ 11.1.4.2 All policies and certificates of insurance of the Contractor/Subcontractor shall contain the following clauses:

11.1.4.2.1 The Contractor/Subcontractor's insurers will have no right of recovery or subrogation against the Owner, it being the intention of the parties that the insurance policies shall protect both parties, and Owner's insurance, if any, will not be utilized to cover any loss.

11.1.4.2.2 The Owner shall be named as an additional insured by the Contractor (ISO Forms CG 20 10, Current form approved for use in Louisiana).

11.1.4.2.3 The insurance companies issuing the policy or policies shall have no recourse against the Owner for payment of any premiums or for assessments under any form of policy.

11.1.4.2.4 Any and all deductibles in the insurance policies shall be assumed by and be at the sole risk of the Contractor whether a claim is made against the Owner or its agents or employees.

11.1.4.2.5 Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees and volunteers; or the Contractor's bond shall guarantee payment of losses and related investigations, claim administration and defense expenses.

11.1.4.2.6 This provision applies to Contractor and Subcontractors, and Contractor is required to and shall ensure that contractual provisions providing waiver of subrogation and any other provision relating to insurance is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise.

§ 11.1.5 Insurance

The Contractor/Subcontractor, prior to commencing work, shall provide at his own expense, proof of the following insurance coverages required by the contract to the Owner by insurance companies authorized in the State of Louisiana. Insurance is to be placed with insurers with an A. M. Best's rating of no less than A-. This rating requirement will be waived for the workers' compensation coverage and policies written through Lloyds of London or Institute of London Underwriter (ILU) companies.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Thirty days prior notice of cancellation shall be given to the Owner by registered mail, return receipt requested, on all of the required coverage provided to the Owner. All notices will name the Contractor/ Subcontractor and identify the contract number.

Insurance coverage specified in the GENERAL CONDITIONS (AIA Document A 201, 1997 Edition) to be provided by the Contractor, and any other insurance described below shall be furnished with the following minimum limits:

§ 11.1.5.1 Workers' Compensation - Statutory - in compliance with the Compensation Law of the State. Exception: Employers liability to be $1,000,000 when work is to be over water and involves maritime exposures.

§ 11.1.5.2 Commercial General Liability Insurance with a combined single limit per occurrence for bodily injury and property damage. Insurance Services Office Commercial General Liability coverage ("occurrence") form CG 0001. (Current form approved for use in Louisiana.) "Claims Made" form is unacceptable. The "occurrence form" shall not have a "sunset clause". This insurance shall include coverage for bodily injury and property damage, and indicate on the Certificate of Insurance which of the seven (7) coverages required below are not included in the policy, if any:

1. Premises B Operations;
2. Broad Form Contractual Liability;
3. Products and Completed Operations
4. Use of Contractors and Subcontractors;
5. Personal Injury;
6. Broad Form Property Damage
7. Explosion, Collapse and underground (XCU) Coverage

NOTE: On the certification of insurance, under the description of operations, the following wording is required: THE AGGREGATE LOSS LIMIT APPLIES TO EACH PROJECT, or a copy of ISO form CG2503 (Current form approved for use in Louisiana) shall be submitted.

Combined Single Limit (CSL) - Amount of Insurance Required

Type of Construction	**Projects Under $100,000**	**Projects $100,001 - $1,000,000**	**Projects $1,000,000 -$10,000,000**	**Projects Over $10,000,000**
New Buildings:				
-Each Occurrence/ Minimum Limit	$500,000	$1,000,000	$3,000,000	$4,000,000
-Aggregate (Applicable to this Contract ONLY)	$500,000	$1,000,000	$3,000,000	$8,000,000
Renovations: ***The building(s) value for this Project is: $***_____				
-Each Occurrence/ Minimum Limit	$500,000*** (Depends On Building Value)	$1,000,000*** (Depends On Building Value)	$3,000,000*** (Depends On Building Value)	$5,000,000
-Aggregate (Applicable to this Contract ONLY)	$500,000*** (Depends On Building Value)	$1,000,000*** (Depends On Building Value)	$3,000,000*** (Depends On Building Value)	$5,000,000

****While the minimum combined single limit of $500,000 is required for all renovations, the value of a building shall be multiplied by 10% and insurance requirements will be increased at $1,000,000 intervals and rounded to the nearest $1,000,000. Example: Renovation on $33,000,000 building would require $3,000,000 minimum combined single limit of coverage. Maximum limit required is $5,000,000.00 regardless of building value.*

§ 11.1.5.3 Business Automobile Liability Insurance with a combined single limit of $1,000,000 per occurrence for bodily injury and property damage, unless otherwise indicated. Insurance Services Office form number CA 0001 covering Automobile Liability (Current form approved for use in Louisiana.) The policy shall provide coverage for owned, hired, and non-owned coverage. If an automobile is to be utilized in the execution of this Contract and the vendor/contractor does not own a vehicle, then proof of hired and non-owned coverage is sufficient. This insurance shall include for bodily injury and property damage the following coverages:

1. Owned automobiles;
2. Hired automobiles;
3. Non-owned automobiles.
4. Medical Payments: $5,000.00 minimum

§ 11.1.5.4 An Umbrella Policy may be used to meet minimum requirements.

§ 11.1.6 All property losses shall be made payable to and adjusted with the Owner.

§ 11.1.7 All policies of insurance or declarations of coverage amounts and types shall be approved by the Owner prior to the inception of any work.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 11.1.8 Other insurance required is as follows:

§ 11.1.8.1 Owner's Protective Liability Insurance shall be furnished by the Contractor and naming the St. Tammany Parish School Board as the Insured.

	Projects Under $100,000	Projects $100,001 - $1,000,000	Projects Over $1,000,000
CSL – Each Occurrence	$500,000	$1,000,000	$3,000,000

§ 11.1.8.2 Asbestos Abatement Liability - *(required when asbestos abatement is included in the work)*

The contractor or subcontractor who will be doing the asbestos abatement as outlined in this contract shall obtain and maintain such liability coverage for the asbestos abatement hazard and exposure with minimum limits of $1,000,000 per occurrence for the duration of the project. The policy shall name the St. Tammany Parish School Board as an additional insured for the project. The policy shall be written on an "occurrence" form without a sunset clause. Claims-made coverage is unacceptable. The insurance company shall have an A.M. Best rating of at least A-:VI or better or written through Lloyds of London or Institute of London Underwriter (ILU) companies.

§ 11.1.9 If, at any time, any of the said policies shall be or become unsatisfactory to the Owner, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to the Owner, the Contractor/Subcontractor shall promptly obtain a new policy, submit the same to the Owner for approval and submit a certificate thereof as hereinabove provided.

Upon failure of the Contractor/Subcontractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Owner, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor/Subcontractor to take out and/or to maintain or the taking out and/or maintenance of any required insurance, shall not relieve the Contractor/Subcontractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor/Subcontractor concerning indemnification. The Owner reserves the right to require complete, certified copies of all required insurance policies, at any time. Should Contractor fail to obtain any insurance required under this Contract then the Owner is entitled to a reduction in the Contract sum for what insurance would reasonably have cost the Contractor.

§ 11.1.10 Risks and Indemnifications Assumed by the Contractor. Neither the acceptance of the Completed Work nor payment therefore shall release the Contractor/Subcontractor from his obligations from the insurance requirements or indemnification agreement.

§ 11.1.10.1 Additional insurance may be required on an individual basis for extra hazardous contracts and specific service agreements. If such additional insurance is required for a specific contract, that requirement will be described in the "Special Conditions" of the contract specifications.

§ 11.1.10.2 If any of the Property and Casualty insurance requirements are not complied with at their renewal dates, payments to the Contractor/Subcontractor will be withheld until those requirements have been met, or at the option of the Owner, the Owner may pay the Renewal Premium and withhold such payments from any monies due the Contractor/Subcontractor.

§ 11.1.10.3 All property losses shall be made payable to and adjusted with the Owner.

§ 11.1.10.4 All policies and certificates of insurance shall be approved by the Owner prior to the inception of any work.

§ 11.1.10.5 If at any time any of the foregoing policies shall be or become unsatisfactory to the Owner, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to the Owner, the Contractor/Subcontractor shall, upon notice to that effect from the Owner, promptly obtain a new policy, submit the same to the Owner for approval and submit a certificate thereof as hereinabove provided. Upon failure of the Contractor/Subcontractor to furnish, deliver and maintain such insurance as above provided, this Contract, at the election of the Owner, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor/Subcontractor to take out and/or maintain or the taking out and/or maintenance of any required insurance, shall not relieve the Contractor/Subcontractor from any liability under the Contract, nor shall the insurance requirements be construed to conflict with or otherwise limit the obligations of the Contractor/Subcontractor concerning indemnification. The Owner reserves the right to require complete, certified copies of all required insurance policies, at any time.

§ 11.1.11 Subcontractors

Contractor shall be responsible for ensuring that subcontractors have insurance to protect the Owner and Contractor from liability for any and all claims arising out of the Work performed on the Project and shall ensure that the Contractor and each subcontractor waives any

claim for subrogation against the Owner, including any claims for subrogation of workers' compensation carriers or self-insurers of workers' compensation. To the extent that Contractor fails to comply with this provision, or if any claims is made by any subcontractor, or any person or entity performing work on the Project for the Contractor or subcontractor, Contractor agrees to defend, indemnify and hold the Owner harmless from any and all claims brought against the Owner, or its agents or employees, arising out of the Project. This includes the agreement that the Owner be paid all attorney fees and costs associated with any claim in defense of the Owner or its agents or employees. The Contractor is required to and shall ensure that this contractual provision is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise.

§ 11.1.12 Certificate of Insurance

Contractor shall furnish the Owner with certificates of insurance affecting coverage required by this clause. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates of insurance must also contain the following in the "Description of Operations" section:

If the Contractor is a General Contractor, then so state.

If the Contractor is a specialty contractor, then so state and provide the list of specialties for which the contractor is insured.

The certificates are to be received and approved by the Owner before work commences. The Owner reserves the right to require complete, certified copies of all required insurance policies, at any time.

§ 11.2 Owner's Liability Insurance
§ 11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 Project Management Protective Liability Insurance
§ 11.3.1 Optionally, the Owner may require the Contractor to purchase and maintain Project Management Protective Liability insurance from the Contractor's usual sources as primary coverage for the Owner's, Contractor's and Architect's vicarious liability for construction operations under the Contract. Unless otherwise required by the Contract Documents, the Owner shall reimburse the Contractor by increasing the Contract Sum to pay the cost of purchasing and maintaining such optional insurance coverage, and the Contractor shall not be responsible for purchasing any other liability insurance on behalf of the Owner. The minimum limits of liability purchased with such coverage shall be equal to the aggregate of the limits required for Contractor's Liability Insurance under Sections 11.1.2 through 11.1.5.

§ 11.4 Property Insurance
§ 11.4.1 The contractor shall provide builder's risk insurance to protect the Owner, the Contractor and Subcontractors for loss with coverage in an amount equal to the sum of the Contract award. The policy shall insure against all risk of loss or damage. The Contractor shall be responsible for any deductible on any policy of insurance if a claim is made under the policy. Builder's risk insurance shall name the Owner as an additional insured.

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

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

Delete Section 11.2, including Subparagraphs 11.2.1, 11.2.2 and 11.2.3.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

Add the following to the end of Subparagraph 12.1.1 "or Contract Sum."

§ 12.2 Correction of Work

Add the following to the end of Subparagraph 12.2.1:

If prior to the date of Substantial Completion, the Contractor, a Subcontractor or anyone for whom either is responsible uses

or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing and other building systems, machinery, equipment or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

Delete Subparagraph 12.2.2.1 and substitute the following:

§ 12.2.2.1 If, within one year after the date of the recordation of the certificate of Substantial Completion or Acceptance in the mortgage records for the Parish of St. Tammany, the Work or any portion thereof is found by the Architect or Owner not to be in accordance with the requirements of the Contract Documents, the Contractor, at no additional cost to the Owner, shall correct such Work or if it is rejected by the Owner or Architect, remove such Work from the site and replace it with Work in accordance with the Contract Documents. If circumstances exist, including, but not limited to an emergency, the Owner may have any such Work corrected or removed and replaced. In such event, the Contractor shall reimburse the Owner for all costs and damages, including compensation for the Architect's services and expenses made necessary thereby. This period of correction of one year shall be extended as to respective portions of the Work performed after the date of the filing of the Certificate of Substantial Completion. This obligation under this subparagraph 12.2.2 shall survive acceptance of the Work under the Contract Documents and termination of the Agreement. The Architect shall give written notice promptly after the discovery of any condition of nonconforming work. Further, this obligation is in addition to and does not limit any general warranty provided by law or specified in the Contract Documents. Nothing in this Subparagraph shall be construed to limit any warranty or contract provision in favor of the Owner, and any time for the Owner to bring a claim or lawsuit for breach of contract or warranty shall accrue in accordance with law. Failure on the part of the Contractor to correct Work required to be corrected pursuant to this provision within a reasonable time shall constitute default on the part of the Contractor, and may constitute grounds for the Owner to reject future bids submitted by the Contractor on the grounds of non-responsibility.

Delete Subparagraph 12.2.2.3.

Add to Subparagraph 12.2.5 the following:

Further, nothing contained in this Paragraph 12.2 shall limit, in any manner, any provisions of law establishing a longer time period within which the Owner can seek to enforce obligations of the Contractor or its Subcontractors.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

Delete from Subparagraph 13.1 "place where the Project is located" and insert the words "State of Louisiana".

Add the following Subparagraph 13.1.2 to 13.1:

The Contractor and its Surety consent to and yield to the exclusive venue and jurisdiction of the 22nd Judicial District Court for the Parish of St. Tammany and waive any and all claims of entitlement to removal of any case from this jurisdiction, including any removal of any claim to any Federal Court.

§ 13.2 Successors and Assigns

Delete from Subparagraph 13.2.1, in the second sentence, the words, "Except as provided in Section 13.2.2" and the words, "as a whole".

Delete Subparagraph 13.2.2.

§ 13.3 Rights and Remedies

Add the following Subparagraph 13.3.3:

§ 13.3.3 Nothing contained in the Contract Documents shall create a contractual relationship or any cause of action in favor of a third party against the Owner.

§ 13.5 Interest

Delete Subparagraph 13.5 and substitute the following:

SECTION IIIB - SUPPLEMENTARY CONDITIONS

§ 13.5 No interest is due by the Owner for any late payment.

Add the following Subparagraphs 13.6 through 13.12

§ 13.6 Work Continuation and Payment

Unless otherwise agreed in writing, the Contractor shall carry on the Work, maintain the Schedule of the Work pending any claim or lawsuit, and, if so, the Owner shall continue to make payments in accordance with the provisions of the Contract Documents except as to any item in dispute.

§ 13.7 Arbitration

All references within the Contract Documents referring to or including provisions for arbitration are stricken, deleted and deemed void. No provision shall be construed as authorizing or including provisions for arbitration. However, the parties may, subsequent to any dispute, agree to arbitration to settle a dispute.

§ 13.8 Attorney's Fees

§ 13.8.1 If as a result of any action or lawsuit filed by the Contractor or any of its Subcontractors against the Owner it is necessary for the Owner to retain an attorney to represent the Owner, the Contractor shall pay all legal fees and associated costs incurred by the Owner, if the Owner is the prevailing party on any claim or lawsuit brought by Contractor or any of its Subcontractors, whether Owner prevails on all or a portion of any claim or lawsuit.

§ 13.8.2 In the event it is necessary for Owner to retain an attorney or to file suit or any claim, demand or defense as a result of a breach by the Contractor of any of the Contractor's obligations in the Contract Documents or pursuant to law, including, but not limited, failing to comply with the provisions of the plans and specifications or failing to perform in a good and workmanlike manner, or failing to perform its work timely, or any other breaches of the Contractor's obligations, the Contractor shall pay to Owner and will be deemed liable for any and all attorney's fees and associated costs, and court costs incurred by Owner. This includes, but is not limited to, payment of attorney fees and costs associated with Owner being required to institute any concursus type proceeding or other proceeding that may be required by law.

§ 13.8.3 If as a result of any action or lawsuit filed by the Contractor or any of its Subcontractors against the Architect and its Consulting Engineers, a Geotechnical Engineer, or any person or entity acting on behalf of the Owner, it is necessary for the Architect and its Consulting Engineers, a Geotechnical Engineer, or any person or entity acting on behalf of the Owner to retain an attorney to represent the Architect and its Consulting Engineers, a Geotechnical Engineer, or any person or entity acting on behalf of the Owner, the Contractor or any of its Subcontractors shall pay all legal fees and associated costs incurred by the Architect and its Consulting Engineers, a Geotechnical Engineer, or any person or entity acting on behalf of the Owner if any of them are a prevailing party on any claim or lawsuit brought by Contractor or any of its Consulting Engineers, in proportion and to the extent the Architect and its Consulting Engineers, a Geotechnical Engineer, or any person or entity acting on behalf of the Owner is the prevailing party.

§ 13.9 Preconstruction Conference

No later than fifteen (15) days after the date of the Notice to Proceed, a conference will be held to review the Contractor's schedule and Schedule of Values submitted to the Architect together with a review of the Contractor's plans for proceeding with the Work and such other items as may be designated by the Architect. The meeting will be convened by the Architect with a representative of the Owner and the Project representatives of the Contractor. The mere approval of the Schedule of Values by the Owner or Architect shall not be a basis for calculation of amounts due on any claim made by Contractor. The Contractor shall submit to the Architect and the Owner's representative prior to or at the preconstruction meeting the following: (1) list of major Subcontractors and their phone numbers, (2) a list of Subcontractors' Superintendent and Project Manager with 24 hour phone numbers, (3) (CPM) Construction Progress Schedule both in the written and electronic formats (both native and pdf) submittal schedule, and (4) Schedule of Values.

§ 13.10 Project Meetings

Monthly Project Meetings will be held at which the Architect, Owner's representative, and Project Representative, if any, shall be present. The Contractor and the primary Subcontractors shall also be represented. The Contractor is responsible to prepare the minutes of the meeting and to distribute them to all parties within five (5) days of the date of the monthly Project Meeting.

§ 13.11 The Contractor shall comply with the provisions of La. R.S. 38:2212.10(C) and continue during the term of this contract to utilize a status verification system to verify the legal status of all new employees in the State of Louisiana or as otherwise required under the statute and to require all subcontractors to verify compliance with La. R.S. 38:2212.10(C).

§ 13.12 The Owner and its duly authorized representatives shall have access to any books, documents, papers and records, including electronic records of Contractor, its subcontractors and all lower tier subcontractors in order to verify that the requirements of this Article have been met. The Contractor shall require the same of all of its subcontractors, and shall include an identical provision in all of its subcontracts, and shall require all subcontractors to require the same of all of their subcontractors.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

Delete Paragraphs 14.1 and 14.1.1 and all subparagraphs of 14.1.1

Delete from Subparagraph 14.1.3 the words "14.1.1 or"

§ 14.2 Termination by the Owner for Cause

Add the following Subparagraphs to 14.2.1:

.5 becomes insolvent, seeking relief in bankruptcy, is placed in bankruptcy involuntarily, or makes a general assignment for the benefit of the creditors and fails to provide adequate assurances, the adequacy of which the Owner will be the sole judge, of the Contractor's future performance in accordance with the requirements of the Contract Documents;

.6 disregards the authority of the Architect or the Owner;

.7 loses charge of the property of the Contractor resulting in a trustee, receiver, custodian or agent appointed under applicable law or under contract;

.8 breaches any warranty made by the Contractor under or required pursuant to the Contract Documents; or

.9 fails after commencement of the Work to proceed continuously with the construction and completion of the Work for more than ten (10) working days, except as permitted under the Contract Documents.

.10 Failure to complete the punch list within the lien period as provided in 9.8.2.

Delete from Subparagraph 14.2.2, the words ", upon certification by the Architect that sufficient cause exists to justify such action"

Delete from Subparagraph 14.2.2.3 the last sentence commencing with the word "Upon" and ending with "Work".

Add the following sentence to Subparagraph 14.2.3:

Termination by the Owner shall not suspend assessment of liquidated damages against the Contractor or surety.

Add the following Subparagraph 14.2.5:

§ 14.2.5 If an agreed sum of liquidated damages has been established or payment of additional fees and expenses, architect or otherwise, has been agreed by Contractor, termination by the Owner under this Article will not relieve the Contractor and surety of their obligations under the liquidated damages provisions or for payment of additional fees and expenses provisions (i.e. including without limitation additional architect or design service fees) and the Contractor and/or surety shall be liable to the Owner for per diem liquidated damages or any such other damages or expenses agreed to by Contractor.

Add the following Subparagraph 14.2.6:

§ 14.2.6 In the event that the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1 and it is later determined that said termination for cause was improper, unwarranted, or otherwise invalid, then the provisions of Subparagraph 14.4, TERMINATION BY THE OWNER FOR CONVENIENCE, shall apply. The Contract shall be deemed TERMINATED BY THE OWNER FOR CONVENIENCE from the day of the original Notice of Termination by the Owner for Cause.

§ 14.3 Suspension by the Owner for Convenience

Delete Subparagraph 14.3.2.

§ 14.4 Termination by the Owner for Convenience

Delete from Subparagraph 14.4.3, the words "; and costs incurred by reason of the termination, including cost attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement."

ARTICLE 15 – CLAIMS AND DISPUTES

§ 15.1 Claims and Disputes

§ 15.1.1 In the first sentence, before the word "demand", add the word "written". Also, add the following sentence to the end of Subparagraph 15.1.1:

> "Comments made at progress meetings, walk-throughs, inspections, in emails, voicemails, and other communications do not meet the requirement of notice of a claim."

§ 15.1.3 Notice of Claims

Delete Subparagraph 15.1.3 and replace with the following:

§ 15.1.3.1 Claims by any Claimant, the Contractor or any Subcontractor or sub-subcontractor must be made within twenty-one (21) calendar days after occurrence of the event giving rise to such Claim; provided, however, that Contractor shall use its best efforts to furnish the Architect and the other party or Owner, as expeditiously as possible, with notice of any Claim including, and without limitation, those in connection with concealed or unknown conditions, once such Claim is recognized and shall cooperate with the Architect and the Owner and shall make every effort to mitigate the alleged or potential damages, delay or other adverse consequences arising out of the condition which is the cause of such Claim. Claims must be made by written notice and in no event will any claim be accepted or considered if not made within this twenty-one (21) calendar day time limit. An additional Claim made after the initial Claim has been implemented by Change Order will not be considered unless submitted in a timely manner as set out in this sub-paragraph. Any notice of claim must clearly identify the alleged cause and the nature of the claim to include data and information then available to the claimant which will facilitate proper verification and evaluation of the claim. This provision on claims applies to claims of Subcontractors being made to or against the Contractor, and Contractor is required to and shall ensure that this contractual provision is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise. Neither Contractor nor any Subcontractor shall have any claim or right of action to bring a claim against Owner to recover costs of damages, or obtain equitable adjustment of the Contract for delays in performing the Contract unless any such Claim is submitted to the Architect and the Owner within the time limits stated herein.

15.1.3.2 If conditions are encountered at the site that are (1) subsurface or otherwise concealed conditions which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party immediately after observance and prior to the conditions are disturbed. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of the Work, will recommend an equitable adjustment to the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the Contract terms is justified, the Architect shall so notify the Owner and the Contractor in writing, stating the reasons. Claims by either party in opposition to the Architect's determination must be made in accordance with Section 15.1.3.1. If the Owner and Contractor cannot agree on an adjustment to the Contract Sum or the Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to further proceedings pursuant to this Section's dispute resolution procedures. No adjustment in the Contract Time or Contract Sum shall be permitted, however, in connection with a concealed or unknown condition which is not submitted by the Contractor or Subcontractor, in writing to the Architect and Owner, within the time period set out in this Subparagraph 15.1.3, and which does not differ materially from those conditions disclosed or which reasonably should have been disclosed by the Contractor's (1) prior inspections, tests, reviews and preconstruction services for the Project, or (2) inspections, tests, reviews and preconstruction services which the Contractor had the opportunity to make or should have performed in connection with the Project.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 In Subparagraph 15.1.4.1, delete the words Aor as provided in Section 9.7 and Article 14".

§ 15.1.5 Claims for Additional Cost

Add the following language to Subparagraph 15.1.5:

No change in the Work, whether by way of alteration or addition to the Work, shall be the basis of an addition to the Contract Sum or a change in the Contract Time unless and until such alteration or addition has been authorized by a Change Order executed and issued in accordance with and in strict compliance with the requirements of the Contract Documents.

Any claim by the Contractor for increased cost for delay shall be asserted in accordance with the delays provided in Subparagraph 4.3.2 unless the time is extended in writing by the Owner. No course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alteration or addition to the Work, shall be the basis for any claim to an increase in the Contract Sum or change in the Contract Time. No claim for additional cost shall be allowed due to a problem with the performance or non-performance of a subcontractor.

No claim shall be valid unless so made. In the event that Contractor makes any claim or demand for adjustment in the contract sum, additional cost or damages associated with any delay in completing the Project, regardless of the cause of any such delay or the type of delay claim, Contractor agrees to provide to the Owner complete and unredacted copies of any and all documents pertaining to Contractor's original bid for the Project, including any and all notes in connection with preparation of the bid, all estimate worksheets or similar items, all quotations from subcontractors and suppliers, all contracts with Subcontractors and any and all final estimate tally sheets. Whether as a result of any claim or otherwise as requested by Owner or Architect, Contractor shall provide to Owner and Architect, on written request by either Owner or Architect, the identity of the computer software utilized for preparation and production of any CPM Schedule. Further, on written request by either the Owner or Architect, the Contractor shall provide to the Owner and Architect, monthly computer processing of all computer-produced CPM Schedules and time/cost schedules and reports generated from monthly Project updates, a hard copy listing of all Project schedule changes, and associated data, made at the update and an electronic file of this data, including an electronic file of any and all data associated with the project and CPM schedule pertaining to the project. Upon request by the Owner or Architect, Contractor shall export all underlying data pertaining to an CPM Schedule, any schedule update or any other information pertaining to the CPM Schedule. These reports and this information shall be submitted with and substantively support the Contractor's monthly payment request. The Architect, through or in coordination with the Owner, shall identify the different report formats that the Contractor shall provide based upon the monthly schedule updates, In the event of any claim for adjustment or damages for delay by Contractor, whether made directly by Contractor or as a pass through claim by a Subcontractor, Contractor waives, without any reservation, any and all claims of privilege pertaining to any bid documents or contract documents, or other similar documents in its Project file and hereby acknowledges and agrees with Owner that there shall be no claim or defense to production of these documents that any of these documents are proprietary in nature, in defense of releasing said information to the Owner or to any other interested party. This provision applies to claims of Subcontractors being made to or against the Contractor, and Contractor is required to and shall ensure that this contractual provision is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise.

§ 15.1.6 Claims for Additional Time

Delete Subparagraph 15.1.6.2 and substitute the following:

If adverse weather conditions are the basis for a claim for additional time, the Contractor shall document that weather conditions had an adverse effect on the scheduled construction. An increase in the contract time due to weather shall not be cause for an increase in the contract sum.

Add the following Subparagraphs 15.1.6.3 through 15.1.6.5:

§ 15.1.6.3 The following are considered reasonably anticipated days of adverse weather on a monthly basis:

January	11 days	May	5 days	September	4 days
February	10 days	June	6 days	October	3 days
March	8 days	July	6 days	November	5 days
April	7 days	August	5 days	December	8 days

The Contractor's request will be considered only for the scheduled work days over the above stated allowable number of days. The Contract is on a calendar basis. In no case shall an increase in the Contract Time due to weather be a cause for an increase in the Contract Sum. The time stipulated for Substantial Completion of the Work is to include the anticipated delays due to normal adverse weather conditions for the months encompassed in the Project duration which number of days are stated above. Contractor shall not be allowed to make a Claim for Additional Time due to weather delays until all such weather delays exceed the TOTAL reasonable anticipated adverse weather delays for the entire contract duration stated above.

§ 15.1.6.4 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given to the Architect and Owner. No claim for additional time shall be allowed due to a problem with the performance or non-performance of a subcontractor.

§ 15.1.6.5 No Claim for additional time made for whatever cause will be approved unless and until the Contractor demonstrates to the satisfaction of the Owner that the Completion Time for the Work has itself been adversely affected by the actions, events, or circumstances cited in the claim. The mere fact that some portion of the Work may be affected is not sufficient to establish an entitlement to an extension to the Contract Time. The baseline against which any such Claim for additional time will be judged will be the Approved Project Schedule, updated and revised as required by the Contract Documents. The granting by the Owner of additional time for completion of the Work on the Project shall not be a basis for an increase in the Contract Sum and shall not be a basis for Contractor to make a Claim for adjustment in the Contract Sum or to seek damages for delay in completion of the Project. This provision also applies to claims of Subcontractors being made to or against the Contractor, and Contractor is required to and shall ensure that this contractual provision is incorporated in any and all subcontracts entered with Subcontractors, whether by reference to this agreement or otherwise.

§ 15.1.7 Waiver of Claims for Consequential Damages

Add the following at the end of Paragraph 15.1.7: "This waiver of Claims for Consequential Damages by the Contractor includes any and all damages that are sought by Contractor against Owner. The only Claims that are not waived by the Contractor are those for damages for delay or for equitable adjustment to the Contract Sum that the law may provide cannot be waived."

§ 15.2 Initial Decision

Delete Subparagraph 15.2.1 and substitute the following:

§ 15.2.1 Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided in Section 15.2 if the Claimant recognizes the Claim prior to the date of final payment. A decision by the Architect, as provided in Subparagraph 15.2.5, shall be required as a condition precedent to litigation of a Claim between the Contractor and Owner as to all such matters arising prior to the date final payment is due, regardless of (1) whether such matters relate to execution and progress of the Work or (2) the extent to which the Work has been completed. The decision by the Architect in response to a Claim shall not be a condition precedent litigation in the event (1) the position of Architect is vacant, (2) the Architect has not received evidence or has failed to render a decision within agreed time limits, (3) the Architect has failed to take action required under Subparagraph 15.2.5 within 30 days after the Claim is made, (4) 45 days have passed after the Claim has been referred to the Architect or (5) the Claim relates to a mechanic's lien.

Delete Subparagraph 15.2.2 and substitute the following:

§ 15.2.2 The Architect will review Claims and take one or more of the following preliminary actions within ten days of receipt of a Claim: (1) request additional supporting data from the Claimant, (2) submit a schedule to the parties indicating when the Architect expects to take action, (3) reject the Claim in whole or in part, stating reasons for rejection, or (5) suggest a compromise. An Architect's failure to take any such action shall not be used as a basis for liability on the part of the Owner, and shall not be considered as a basis for approval of any such Claim.

Delete Subparagraph 15.2.3 and substitute the following:

§ 15.2.3 If a Claim has been resolved, the Architect will prepare or obtain appropriate documentation.

Delete Subparagraph 15.2.4 and substitute the following:

§ 15.2.4 If a Claim has not been resolved, the party making the Claim shall, within ten calendar days after the Architect's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the architect, (2) modify the initial Claim or (3) notify the Architect that the initial Claim stands.

Delete Subparagraph 15.2.5 and substitute the following:

§ 15.2.5 If a Claim has not been resolved after consideration of the foregoing and if further evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within seven days, which decision shall be final and binding on the parties, but subject to litigation. Upon expiration of such time period, the Architect will render to the parties the Architect's written decision relative to the Claim, including any recommended change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Architect or the Owner may, but are not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

SECTION IIIB - SUPPLEMENTARY CONDITIONS

Delete Subparagraphs 15.2.6 through 15.2.8.

§ 15.3 Mediation - Delete Article 15.3

§ 15.4 Arbitration - Delete Article 15.4

ARTICLE 16 - EQUAL OPPORTUNITY EMPLOYMENT

Add the following Subparagraphs 16.1 and 16.2:

§ 16.1 The Contractor and all subcontractors shall not discriminate against any employee or applicant for employment in accordance with Louisiana Revised Statute 23:301, *et seq.* or any other applicable law, including but not limited to Louisiana Revised Statute 23:332 and Louisiana Revised Statute 23:334.

§ 16.2 The Contractor and all subcontractors shall, in all solicitations or advertisement for employment placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, or age.

END OF SECTION IIIB

Revised 18 June, 2020

SECTION IIIC - CHANGE ORDER

CHANGE ORDER NO: _____

PROJECT: _____ DATE: _____

PROJECT NO: _____ CONTRACT DATE: _____

JOB NO: _____

TO: CONTRACTOR: _____
(Name and Address)

_____

_____

You are directed to make the following change in this contract: (attach itemized breakdown to show cost including materials quantities, material costs, taxes, insurance, employee benefits, other related costs, profit and overhead):

NOT VALID UNTIL SIGNED BY OWNER AND CONTRACTOR

The Original Contract Sum	$ _____
Net Change by previous Change Orders	$ _____
Contract Sum Prior to this Change	$ _____
Contract Sum will be (increased) (decreased) (unchanged) by this Change	$ _____
New Contract Sum including this Change	$ _____
Contract Time will be (increased) (decreased) (unchanged) by	_____ days
Revised Contract Completion Date as of the date of this Change Order is	_____

Change Order is:

RECOMMENDED:	ACCEPTED:	APPROVED:
_____	_____	St. Tammany Parish School Board
(Architect)	(Contractor)	(Owner)
By: _____	By: _____	By: _____
_____	_____	Frank J. Jabbia
(Typed name)	(Typed name)	(Typed name)
Date: _____	Date: _____	Date: _____

DIVISION 1

GENERAL REQUIREMENTS

DAMMON ENGINEERING, INC.
554 OLD SPANISH TRAIL
SLIDELL, LOUISIANA 70458
Phone: 985-649-5832
www.dammonengineering.com
info@dammonengineering.com

SECTION 01 10 00 – SUMMARY OF WORK

1.GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Coordination with occupants.
4. Work restrictions.
5. Specification and drawing conventions.
6. Miscellaneous provisions.

1.2 PROJECT INFORMATION

A. Project Identification: **Salmen High School,**
New Press Box
STPSB Project No. PO319

B. Project Location: **Salmen High School**
300 Spartan Dr.
Slidell, LA 70458

C. Owner: **St. Tammany Parish School Board**
C.J. Schoen Administrative Complex
321 N. Theard
Covington, Louisiana 70433

1. Owner's Representative: **MS. Cameron Tipton**

D. Architect: **Dammon Engineering, Inc.**
Brian Mistich, Chief Engineer
554 Old Spanish Trail
Slidell, LA 70458

1. Contact: **Chuck Dammon**
(985) 649-5832

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. This project is to replace the existing Press Box.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy site and existing and adjacent building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.

1.5 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to immediate vicinity of buildings under construction.

B. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

C. Provide access to and from site as required by law and by Owner:

1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
2. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Existing building spaces may not be used for storage.

E. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner. Limit conduct of especially noisy exterior work to the hours of hours allowed by Parish of St Tammany Ordinance.

F. Controlled Substances: Use of tobacco products and other controlled substances is not permitted on Project site.

G. Utility Outages and Shutdown:

1. Limit disruption of utility services to hours the building is unoccupied.
2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
3. Prevent accidental disruption of utility services to other facilities.

1.6 WORK SEQUENCE

A. On-site construction operations for this project must take place during the number of days specified in contract. Construct Work shall be separated into two phases as follows:

1. Phase I – (Administrative Activities) A written Notice to Proceed (NTP) will be issued by the Architect, once the Contract has been awarded, for all “pre-demolition” activities including but not limited to submittal review/processing, material procurement,

on-site nondestructive measuring and staging/storing of materials. Note: this NTP does not allow demolition or disruptive work. The duration of Phase I will end upon issuance of Phase 2 NTP and will not count toward the number of days specified in contract to complete the project.

2. Phase 2 – (Demolition & Construction) A written Notice to Proceed (NTP) will be issued by the Architect, for all Demolition & Construction activities such that all work in the Original Contract Documents can be completed prior to the opening of the 2023-2024 school year. Contractors are urged to have all materials approved and on site prior to this NTP to minimize delays. See Completion Time and Liquidated Damages in the INSTRUCTIONS TO THE BIDDERS for the number of allowed consecutive construction days and amount of liquidated damages to be assessed when the project is not complete within the allowed consecutive construction days.

3. If work is not completed by July 29th, 2024, the remaining work shall be performed when school is not in session (nights/weekends). No work will be performed when school buildings are occupied. Liquidated damages will continue to accumulate for days during which school buildings are occupied.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

2. PRODUCTS (Not Used)

3. EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on "Engineer's Supplemental Instructions."

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within the time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
    e. Quotation Form: Use forms provided by Owner.

B. Contractor-Initiated Work Change Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Work Change Proposal Request Form: Use form provided by Designer.

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Designer will issue a Change Order for signatures of Owner and Contractor on form included in Project Specification.

1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA form G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination drawings.
2. Requests for Information (RFIs).
3. Project meetings.

1.2 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.3 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entities performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner through Designer and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Project closeout activities.
6. Startup and adjustment of systems.

1.5 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will not accept RFIs submitted to Architect by other entities controlled by Contractor. Any such RFI submittals will be reported to the Contractor by the Architect.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.

13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. RFI Forms: AIA Document G716.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven (7) working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned, with Architect informing Contractor of “no action”:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 26 00 "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within ten (10) days of receipt of the RFI response.

E. On receipt of Architect's action, immediately distribute the RFI response to affected parties. Review response and notify Architect within seven (7) days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.6 PROJECT MEETING

A. Preconstruction Conference: Designer will schedule and conduct a preconstruction conference at Project site before starting construction, at a time convenient to Owner and Contractor.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Contractor shall furnish to the Architect and Owner at the Preconstruction Conference:
   a. The Schedule of Values.
   b. List of Subcontractors.
   c. Information listed in Paragraph 7.1 of the Supplementary Conditions.
   d. The Construction Schedule.

3. Agenda: Discuss items of significance that could affect progress, including the following:

   a. Designation of key personnel and their duties.
   b. Change Orders.
   c. Invoice Procedures.
   d. Prior Approval.
   e. Testing Lab, Procedures for testing and inspecting.
   f. Project Sign.
   g. Meetings.
   h. General Correspondence.
   i. Shop Drawings.
   j. Procedure for keeping Record Documents.
   k. Security.
   l. User's occupancy requirements.
   m. Location of staging areas and use of the premises.
   n. Parking availability.
   o. Location and type of temporary facilities and utilities.
   p. Responsibility for temporary facilities and controls.
   q. Office, work, and storage areas.
   r. Equipment deliveries.
   s. Outages/Interruptions of Services.
   t. Work restrictions.
   u. Working hours.
   v. Progress cleaning.
   w. Safety and First Aid.
   x. Use of any Asbestos Containing materials is prohibited.
   y. Pre-Closeout Conference.

4. Minutes: Designer will record and distribute meeting minutes.

B. Preinstallation Conferences: Designer will conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Review of mockups.
    i. Possible conflicts.
    j. Compatibility problems.
    k. Time schedules.
    l. Weather limitations.
    m. Manufacturer's written instructions.
    n. Warranty requirements.
    o. Compatibility of materials.
    p. Acceptability of substrates.
    q. Temporary facilities and controls.
    r. Space and access limitations.
    s. Regulations of authorities having jurisdiction.
    t. Testing and inspecting requirements.
    u. Installation procedures.
    v. Coordination with other work.
    w. Required performance results.
    x. Protection of adjacent work.
    y. Protection of construction and personnel.

3. Designer will record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Designer will distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

C. Progress Meetings: Designer will conduct progress meetings at Project site at monthly intervals.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

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

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

    b. Review present and future needs of each entity present, including the following:

        1) Interface requirements.
        2) Sequence of operations.
        3) Status of submittals.
        4) Deliveries.
        5) Off-site fabrication.
        6) Access.
        7) Site utilization.
        8) Temporary facilities and controls.
        9) Progress cleaning.
        10) Quality and work standards.
        11) Status of correction of deficient items.
        12) Field observations.
        13) Status of RFIs.
        14) Status of proposal requests.
        15) Pending changes.
        16) Status of Change Orders.
        17) Pending claims and disputes.
        18) Documentation of information for payment requests.

3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

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

D. Pre-Closeout Conference: Designer will schedule and conduct a pre-closeout conference at the project site when construction is 75% to 85% complete.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors. Participants at the

conference shall be familiar with Project and authorized to conclude matters relating to the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.

1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.

    a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
    b. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow fifteen (15) work days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow fifteen (15) work days for review of each resubmittal.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Architect**,** containing the following information:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.

g. Category and type of submittal.
h. Submittal purpose and description.
i. Specification Section number and title.
j. Specification paragraph number or drawing designation and generic name for each of multiple items.
k. Drawing number and detail references, as appropriate.
l. Location(s) where product is to be installed, as appropriate.
m. Related physical samples submitted directly.
n. Indication of full or partial submittal.
o. Transmittal number, numbered consecutively.
p. Submittal and transmittal distribution record.
q. Other necessary identification.
r. Remarks.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:

a. Project name.
b. Number and title of appropriate Specification Section.
c. Manufacturer name.
d. Product name.

E. Options: Identify options requiring selection by Architect.

F. Deviations: Identify deviations from the Contract Documents on submittals, deviations will not be allowed if it changes “type.”

G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect’s action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Submit electronic submittals via email as PDF electronic files.

a. Architect will return annotated PDF file. Annotate and retain one copy of file as an electronic Project record document file. Digital photographic documentation will not be returned. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.

2. Mark each submittal to show which products and options are applicable.

3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.
c. Standard color charts.
d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.
h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.
b. Printed performance curves.
c. Operational range diagrams.
d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in the following format:

    a. PDF Electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.
    f. Relationship and attachment to adjoining construction clearly indicated.
    g. Seal and signature of professional Architect if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.

3. Submit Shop Drawings in the following format:

    a. PDF Electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.

2. Identification: Attach label on unexposed side of Samples that includes the following:

    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of applicable Specification Section.

3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.

4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit two (2) full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit three (3) sets of Samples. Architect will retain two (2) Sample sets; remainder will be returned.

        1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Submit product schedule in the following format:

    a. PDF Electronic file.

F. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."

G. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."

H. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

I. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

J. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

K. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

L. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

M. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

N. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

O. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

P. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them to Contractor without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

END OF SECTION 01 33 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.2 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to Architect, testing agencies, and authorities having jurisdiction.

B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.3 INFORMATIONAL SUBMITTALS

A. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

1.4 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's Recommendation of Acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

2.2 MATERIALS

A. Construction: Commercial grade chain link fence. Fencing shall have visual screening fabric.

B. Provide 6-foot-high fence around construction site; equip with vehicular and pedestrian gates with locks. For exterior work being completed outside of summer holiday hours fencing is required to restrict public and student access. During summer holiday hours fencing are not required except where required by law or at contractor's option.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, User, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Recommendation of Acceptance, restore these facilities to condition existing before initial use.

C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

D. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

3.2 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Recommendation of Acceptance inspection. Remove before Recommendation of Acceptance. Personnel remaining after Recommendation of Acceptance will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 73 00 "Execution."

E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

E. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

1. Extent of Fence: As indicated on Drawings.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.

F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

G. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

H. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

I. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.

1. Prohibit smoking on site.

3.4 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than date of Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.

   At time of Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

1.2 QUALITY ASSURANCE

A. Contractor shall be responsible for any damage to School Board's property resulting from any exercise of the rights herein granted, including but not limited to soil erosion, damage to grassy areas, subsidence or damage resulting therefrom. Contractor shall promptly repair and restore to its original condition any of the School Board's property, including, but not limited to, roads, utilities, buildings, fences and yards that may be altered, damaged or destroyed in connection with the exercise of the Temporary Access Easement or use of the Temporary Access Easement Area.

B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

2. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Engineer for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility or Designer that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Engineer according to requirements in Section 01 31 00 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.

B. General: Lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels as needed to locate each element of Project.
2. Establish limits on use of Project site.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.
6. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

3.4 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

I. Cleaning: Clean areas and spaces where cutting and patching are performed.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

F. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at time of Substantial Completion.

H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

A. Operate components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation.

3.8 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 01 73 00

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures preceding the Recommendation of Acceptance.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

1.2 ACTION SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at time of Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Recommendation of Acceptance.

1.3 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: Contractor to provide four (4) copies of binders containing maintenance and warranty information.

1.5 SUBSTANTIAL COMPLETION PROCEDURES PRECEDING THE RECOMMENDATION OF ACCEPTANCE

A. Contractor's List of Incomplete Items: Prepare and submit a preliminary list of items to be completed and corrected (Contractor's Preliminary Punch List).

B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Recommendation of Acceptance. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.

    a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect’s signature for receipt of submittals.

5. Submit test/adjust records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Recommendation of Acceptance. List items below that are incomplete at time of request.

1. Advise Owner through Designer of pending insurance changeover requirements.
2. Complete startup and testing of systems and equipment.
3. Perform preventive maintenance on equipment used prior to Substantial Completion.
4. Instruct User's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
5. Advise Owner through Designer of any changeover in utilities.
6. Terminate and remove temporary facilities from Project site, along with construction tools and similar elements.
7. Complete final cleaning requirements, including touchup painting.
8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Recommendation of Acceptance a minimum of ten (10) days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Recommendation of Acceptance after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance. Designer will verify.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Instruct User's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.7 PRELIMINARY LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each item needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Submit preliminary list of incomplete items in PDF electronic file format.
2. Designer will prepare final punch list.

1.8 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Recommendation of Acceptance is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

C. Provide additional copies of each warranty to include in operation and maintenance manuals, to be submitted in triplicate.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for Recommendation of Acceptance for entire Project or for a designated portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
g. Remove labels that are not permanent.
h. Wipe surfaces of mechanical and electrical equipment if any and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
i. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
j. Leave Project clean and ready for occupancy.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Recommendation of Acceptance.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION 01 77 00

DIVISION 2

EXISTING CONDITIONS

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SECTION 02 41 00 - DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to User ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to User.

1.5 SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure User's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.

3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination of User's continuing occupancy of portions of existing building and of User's partial occupancy of completed Work.
5. Means of protection for items to remain and items in path of waste removal from building.
6. Method of providing on-site security.

B. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

C. Pre-demolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations.

1.6 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

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

C. Standards: Comply with ANSI A10.6 and NFPA 241.

D. Predemolition Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
4. Review areas where existing construction is to remain and requires protection.
5. Review procedures for site security and work site access.

1.7 PROJECT CONDITIONS

A. User will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so User's operations will not be disrupted.

1. Comply with requirements specified in Section 01 10 00 "Summary of Work."

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect in writing of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify both Architect and Owner in writing.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities and life safety components in service during selective demolition operations.

1.8 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Owner and Architect.

E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes.

1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

1. Comply with requirements for existing services/systems interruptions specified in Section 01 10 00 "Summary of Work."

B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.
2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Cut off pipe or conduit to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Section 01 50 00 "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection by Authority Having Jurisdiction required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
3. Cover equipment or any other items that have not been removed.
4. Comply with requirements for temporary enclosures, run-off control specified in Section 01 50 00 "Temporary Facilities and Controls."

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining

construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain **fire watch and** portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Store items in a secure area until delivery to User. Verify location with User.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete. Coordinate location with User.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.

B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove all debris from work site daily to Staging Area.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

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

END OF SECTION 02 41 00

DIVISION 3

CONCRETE

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SECTION 033000

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
   1. Indicate amounts of mixing water to be withheld for later addition at Project Site.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrups spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcements.

1.3 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Material certificates. For each of the following, signed by manufacturers:
   1. Cementitious materials
   2. Admixtures.
   3. Form materials and form-release agents.
   4. Steel reinforcements and accessories.
   5. Waterstops.
   6. Curing compounds.
   7. Floor and slab treatments.
   8. Bonding agents.
   9. Adhesives.
   10. Vapor retarders.
   11. Semi-rigid joint filler.
   12. Joint-filler strips.
   13. Repair materials.

C. Material test reports for Aggregates from a qualified testing agency, indicating compliance with requirements.

D. Floor surface flatness and levelness measurements.

E. Field quality-control test and inspection reports.

F. Minutes of pre-installation conference.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Concrete Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

C. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated as documented according to ASTM E 548.

D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer’s plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

E. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code - Reinforcing Steel."

F. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete.
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

G. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

H. Concrete Flatness and Levelness Testing Service: Engage a qualified independent testing agency to perform F_F Floor Flatness and F_L Floor Levelness.

I. Pre-installation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of

each entity directly concerned with cast-in-place concrete to attend, including the following:

a. Contractor's superintendent.
b. Independent testing agency responsible for concrete design mixtures.
c. Ready-mix concrete manufacturer.
d. Concrete subcontractor.

2. Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, curing procedures, vapor barrier installation, steel reinforcement installation, floor and slab flatness and levelness measurement, and concrete protection.

1.5 DELIVERY, STORAGE AND HANDLING

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

B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

D. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from galvanized-steel wire into flat sheets.

E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice of greater compressive strength than concrete and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type II white. Supplement with the following:

a. Fly Ash: ASTM C 618, Class F or C.
b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

2. Blended Hydraulic Cement: ASTM C 595, Type IS, portland blast-furnace slag cement.

B. Normal-Weight Aggregates: ASTM C 33, graded.

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

C. Water: ASTM C 94 and potable.

2.4 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

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

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

C. Set-Accelerating Corrosion-Inhibiting Admixture: Commercially formulated, anodic inhibitor or mixed cathodic and anodic inhibitor; capable of forming a protective barrier and minimizing chloride reactions with steel reinforcement in concrete and complying with ASTM C 494, Type C.

D. Non-Set-Accelerating Corrosion-Inhibiting Admixture: Commercially formulated, non-set-accelerating, anodic inhibitor or mixed cathodic and anodic inhibitor; capable of

forming a protective barrier and minimizing chloride reactions with steel reinforcement in concrete.

E. Color Pigment: ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis.

1. Color: As selected by Architect from manufacturer’s full range.

2.5 VAPOR RETARDERS

A. Sheet Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

B. Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 15 mils thick.

2.6 FLOOR AND SLAB TREATMENTS

A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; ordorless; colorless, that penetrates, hardens, and densifies concrete surfaces.

2.7 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

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

D. Water: Potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.

G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, 18 to 25 percent solids, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering

H. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

I. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.

2.8 REPAIR MATERIALS

A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109/C 109M.

B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109.

2.9 CONCRETE MIXTURES

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

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

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

1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

E. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: As shown on Plans at 28 days.

2. Minimum Cementitious Materials Content: 520 lb/cu. Yd.
3. Maximum Water-Cementitious Materials Ratio: 0.40.
4. Slump Limit: 4 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
5. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

2.10 FABRICATING REINFORCEMENT

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

2.11 CONCRETE MIXING

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

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 55 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR RETARDERS

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 301.

3.7 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

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

C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and

remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.8 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in one direction.

1. Apply scratch finish to surfaces indicated and to receive concrete floor toppings to receive mortar setting beds for bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces indicated to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces indicated, exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated or where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

G. Polished Concrete: See Specification Section 03363 for Method and Process. Comply with flatness and levelness tolerances for polished concrete as recommended by the Concrete Polishing Association of America (CPAA).

1. Testing shall be conducted within 8 hours after completion of the final troweling and in accordance with the latest edition of ASTM E1155 Standard Test Method for Determining F_F Floor Flatness and F_L Floor Levelness Numbers by an independent testing agency experience with the testing procedure and possessing the necessary equipment.

	Specified Overall Value	Minimum Local Value
F_F Floor Flatness	50	35
F_L Floor Levelness	30	20

2. Slab shall be saw cut as soon as possible after finishing using a saw blade that has a triangular arbor configuration to reduce edge raveling or dislodging aggregates at the following spacing to minimize flab curling and cracking:

Slab thickness, inches	Spacing, feet on centers each way
4	10
6	12
8	15

3. The concrete slab shall comply with the damage and stain prevention provisions as recommended by CPAA.

3.9 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive.

Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

    a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

3.11 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

END OF SECTION 033000

DIVISION 5

METALS

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SECTION 051200

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Structural steel.
2. Architecturally exposed structural steel.
3. Grout.

1.3 DEFINITIONS

A. Structural Steel: Elements of structural-steel frame, as classified by AISC's "Code of Standard Practice for Steel Buildings and Bridges," that support design loads.

B. Architecturally Exposed Structural Steel: Structural steel designated as architecturally exposed structural steel in the Contract Documents.

1.4 PERFORMANCE REQUIREMENTS

A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator to withstand loads indicated and comply with other information and restrictions indicated.

1. Select and complete connections using schematic details indicated and AISC's "Manual of Steel Construction, Load and Resistance Factor Design,"
2. Engineering Responsibility: Fabricator's responsibilities include using a qualified professional engineer to prepare structural analysis data for structural-steel connections.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment drawings.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
5. For structural-steel connections indicated to comply with design loads, include structural analysis data prepared by the qualified professional engineer responsible for their preparation.

C. Welding certificates.

D. Mill Test Reports: Signed by manufacturers certifying that the following products comply with requirements:

1. Structural steel including chemical and physical properties.
2. Bolts, nuts, and washers including mechanical properties and chemical analysis.
3. Direct-tension indicators.
4. Tension-control, high-strength bolt-nut-washer assemblies.
5. Shear stud connectors.
6. Shop primers.
7. Nonshrink grout.

E. Source quality-control test reports.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector.

B. Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant.

C. Shop-Painting Applicators: Qualified according to "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."

D. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel."

E. Comply with applicable provisions of the following specifications and documents:

1. AISC's "Code of Standard Practice for Steel Buildings and Bridges."
2. AISC's "Seismic Provisions for Structural Steel Buildings" and "Supplement No. 2."
3. AISC's "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design or Load and Resistance Factor Design Specification for Structural Steel Buildings."
4. AISC's "Specification for the Design of Steel Hollow Structural Sections."

5. AISC's "Specification for Allowable Stress Design of Single-Angle Members or Specification for Load and Resistance Factor Design of Single-Angle Members."
6. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

F. Mockups: Build mockups of architecturally exposed structural steel to set quality standards for fabrication and installation.

1. Coordinate finish painting requirements with Division 9 painting Sections.
2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from erosion and deterioration.

1. Store fasteners in a protected place. Clean and relubricate bolts and nuts that become dry or rusty before use.
2. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

1.8 COORDINATION

A. Furnish anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

A. W-Shapes: ASTM A 992/A 992M, Grade 50.

B. Channels, Angles, M or, S-Shapes: ASTM A 36/A 36M.

C. Plate and Bar: ASTM A 36/A 36M.

D. Corrosion-Resisting Structural Steel: ASTM A 588/A 588M, Grade 50.

E. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B or C, structural tubing.

F. Corrosion-Resisting Cold-Formed Hollow Structural Sections: ASTM A 847, structural tubing.

G. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.

1. Weight Class: Standard.
2. Finish: Black, except where indicated to be galvanized.

H. Medium-Strength Steel Castings: ASTM A 27/A 27M, Grade 65-35, carbon steel.

I. High-Strength Steel Castings: ASTM A 148/A 148M,Grade 80-50 , carbon or alloy steel.

J. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

A. High-Strength Bolts, Nuts, and Washers: ASTM A 325 , Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

1. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.
2. Direct-Tension Indicators: ASTM F 959, Type 325 compressible-washer type.

a. Finish: Plain Mechanically deposited zinc coating, ASTM B 695, Class 50.

B. High-Strength Bolts, Nuts, and Washers: ASTM A 490 , Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436) hardened carbon-steel washers, plain.

1. Direct-Tension Indicators: ASTM F 959, Type 490 compressible-washer type, plain.

C. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, [heavy hex] [round] head steel structural bolts with splined ends; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

1. Finish: Plain Mechanically deposited zinc coating, ASTM B 695, Class 50.

D. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1, Type B.

E. Unheaded Anchor Rods: ASTM F 1554, Grade 36 ASTM F 1554, Grade 55, weldable ASTM A 354 ASTM A 449 ASTM A 572/A 572M, Grade 50.

1. Configuration: Hooked.

2. Nuts: ASTM A 563 [heavy]hex carbon steel.
3. Plate Washers: ASTM A 36/A 36M carbon steel.
4. Washers: ASTM F 436 hardened carbon steel.
5. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C Mechanically deposited zinc coating, ASTM B 695, Class 50.

F. Headed Anchor Rods: ASTM F 1554, Grade 36 ASTM F 1554, Grade 55, weldable ASTM A 307, Grade A , straight.

1. Nuts: ASTM A 563 heavy hex carbon steel.
2. Plate Washers: ASTM A 36/A 36M carbon steel.
3. Washers: ASTM F 436 hardened carbon steel.
4. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

G. Threaded Rods: ASTM A 307, Grade A .

1. Nuts: ASTM A 563 heavy hex carbon steel.
2. Washers: ASTM A 36/A 36M carbon steel.
3. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

H. Clevises Turnbuckles: ASTM A 108, Grade 1035, cold-finished carbon steel.

I. Eye Bolts and Nuts: ASTM A 108, Grade 1030, cold-finished carbon steel.

J. Sleeve Nuts: ASTM A 108, Grade 1018, cold-finished carbon steel.

2.3 PRIMER

A. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer.

B. Galvanizing Repair Paint: MPI#18, MPI#19, or SSPC-Paint 20.

2.4 GROUT

A. Cement Grout: Portland cement, ASTM C 150, Type I; and clean, natural sand, ASTM C 404, Size No. 2. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

B. Metallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.

C. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC's "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design or Load and Resistance Factor Design Specification for Structural Steel Buildings."

1. Camber structural-steel members where indicated.
2. Identify high-strength structural steel according to ASTM A 6/ A 6M and maintain markings until structural steel has been erected.
3. Mark and match-mark materials for field assembly.
4. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.

B. Architecturally Exposed Structural Steel: Comply with fabrication requirements, including tolerance limits, of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for structural steel identified as architecturally exposed structural steel.

1. Fabricate with exposed surfaces smooth, square, and free of surface blemishes including pitting, rust, scale, seam marks, roller marks, rolled trade names, and roughness.
2. Remove blemishes by filling or grinding or by welding and grinding, before cleaning, treating, and shop priming.

C. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.

1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1.

D. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.

E. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

F. Cleaning: Clean and prepare steel surfaces that are to remain unpainted.

G. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

H. Steel Wall-Opening Framing: Select true and straight members for fabricating steel wall-opening framing to be attached to structural steel. Straighten as required to provide uniform, square, and true members in completed wall framing.

I. Welded Door Frames: Build up welded door frames attached to structural steel. Weld exposed joints continuously and grind smooth. Plug-weld fixed steel bar stops to frames. Secure removable stops to frames with countersunk, cross-recessed head

machine screws, uniformly spaced not more than 10 inches o.c., unless otherwise indicated.

J. Holes: Provide holes required for securing other work to structural steel and for passage of other work through steel framing members.

1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
2. Base-Plate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

1. Remove backing bars or runoff tabs, back gouge, and grind steel smooth.
2. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for mill material.
3. Verify that weld sizes, fabrication sequence, and equipment used for architecturally exposed structural steel will limit distortions to allowable tolerances. Prevent weld show-through on exposed steel surfaces.

a. Grind butt welds flush.
b. Grind or fill exposed fillet welds to smooth profile. Dress exposed welds.

2.7 SHOP PRIMING

A. Shop prime steel surfaces except the following:

1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
2. Surfaces to be field welded.
3. Surfaces to be high-strength bolted with slip-critical connections.
4. Surfaces to receive sprayed fire-resistive materials.
5. Galvanized surfaces.

B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:

1. SSPC-SP 2, "Hand Tool Cleaning."
2. SSPC-SP 3, "Power Tool Cleaning."
3. SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning."
4. SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
5. SSPC-SP 7/NACE No. 4, "Brush-Off Blast Cleaning."
6. SSPC-SP 8, "Pickling."
7. SSPC-SP 10/NACE No. 2, "Near-White Blast Cleaning."
8. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
9. SSPC-SP 14/NACE No. 8, "Industrial Blast Cleaning."

C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
2. Apply two coats of shop paint to inaccessible surfaces after assembly or erection. Change color of second coat to distinguish it from first.

D. Painting: Apply a 1-coat, nonasphaltic primer complying with SSPC-PS Guide 7.00, "Painting System Guide 7.00: Guide for Selecting One-Coat Shop Painting Systems," to provide a dry film thickness of not less than 1.5 mils.

2.8 GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/ A 123M.

1. Fill vent holes and grind smooth after galvanizing.

2.9 SOURCE QUALITY CONTROL

A. Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.

1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.

B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

C. Bolted Connections: Shop-bolted connections will betested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1 and the following inspection procedures, at testing agency's option:

1. Liquid Penetrant Inspection: ASTM E 165.
2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
3. Ultrasonic Inspection: ASTM E 164.
4. Radiographic Inspection: ASTM E 94.

E. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1 for stud welding and as follows:

1. Bend tests will be performed if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
2. Tests will be conducted on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments, with steel erector present, for compliance with requirements.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place, unless otherwise indicated.

1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

A. Set structural steel accurately in locations and to elevations indicated and according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic

Design or Load and Resistance Factor Design Specification for Structural Steel Buildings."

B. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting base and bearing plates. Clean bottom surface of base and bearing plates.

1. Set base and bearing plates for structural members on wedges, shims, or setting nuts as required.
2. Weld plate washers to top of base plate.
3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of base or bearing plate before packing with grout.
4. Promptly pack grout solidly between bearing surfaces and base or bearing plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure.Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

C. Maintain erection tolerances of structural steel and architecturally exposed structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

D. Align and adjust various members forming part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.

E. Splice members only where indicated.

F. Remove erection bolts on welded, architecturally exposed structural steel; fill holes with plug welds; and grind smooth at exposed surfaces.

G. Do not use thermal cutting during erection.

H. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

I. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1 for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

1. Comply with AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design or Load and Resistance Factor Design Specification for Structural Steel Buildings" for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.
2. Remove backing bars or runoff tabs, back gouge, and grind steel smooth.
3. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for mill material.
4. Verify that weld sizes, fabrication sequence, and equipment used for architecturally exposed structural steel will limit distortions to allowable tolerances. Prevent weld show-through on exposed steel surfaces.

a. Grind butt welds flush.
b. Grind or fill exposed fillet welds to smooth profile. Dress exposed welds.

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.

B. Bolted Connections: Shop-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

C. Welded Connections: Field welds will be visually inspected according to AWS D1.1.

1. In addition to visual inspection, field welds will be tested according to AWS D1.1 and the following inspection procedures, at testing agency's option:

a. Liquid Penetrant Inspection: ASTM E 165.
b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
c. Ultrasonic Inspection: ASTM E 164.
d. Radiographic Inspection: ASTM E 94.

D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1 for stud welding and as follows:

1. Perform bend tests if visual inspections reveal either a less-than- continuous 360-degree flash or welding repairs to any shear connector.
2. Conduct tests on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1.

E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Touchup Painting: After installation, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted joists and accessories, bearing plates, and abutting structural steel.

1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

C. Touchup Painting: Cleaning and touchup painting are specified in Division 9 painting Sections.

END OF DOCUMENT 051200

DIVISION 13

SPECIAL CONSTRUCTION

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SECTION 133416.03 – MODULAR PRESS BOX

PART 1 - GENERAL

1.1 SUMMARY

A. Provide engineering, material, freight, installation, and supervision to provide new 8' – 0” x 48'-0” wide prefabricated, Type VB, modular press box.

1.2 REFERENCES

A. NFPA 70 National Electric Code.

B. International Building Code, (IBC)

C. Act 364 of the Louisiana 2007 Regular Session, requires that Industrialized Buildings have the plans for each model reviewed by the Louisiana State Fire Marshal.

1.3 ACTION SUBMITTALS

A. Complete shop drawings showing plans, sections, elevations, and wall sections showing complete detail of layout, connection, and trim detail.
   1. Include all attachments to grandstands.
   2. Plans shall have Louisiana State Fire Marshal stamp indicating their review and approval.

B. The building shall have the proper Louisiana State Fire Marshal insignia installed indicating the building meets the Louisiana State requirements.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 DESIGN CRITERIA

A. General : Provide proper temporary bracing of the structure for wind and construction loads until the installation of all permanent structural elements is complete.

B. Code Compliance : Units shall comply with NFPA 101, FBC, and ASCE 7

C. All materials shall be new and shall comply with the requirements of the ASTM specifications.

1.6 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 5-years experience in fabrication of grandstand structures.

B. Engineering Qualifications :
   1. A licensed professional engineer registered in the State of Louisiana shall approve Press box and all submittals shall bear said professional's seal.
   2. Calculations are required, must show all vertical and lateral loads, and must show positive and negative biaxial stress ratios.
   3. Submit the calculations with the approval drawings.

C. Product Liability : Provide details Certificate of Insurance, including products/complete operations insurance.

1.7 WARRANTY

A. Provide product guaranteed for a period of one year against defective materials and workmanship.

B. Damage resulting from abnormal use, vandalism, or incorrect installation (if installed by other than authorized installer of the manufacturer) is not applicable.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Subject to compliance with requirements, provide product indicated on drawings by “National Recreation Systems” or comparable elevated press box product by one of the following:
   1. American Press Box
   2. Panel Built Incorporated
   3. Whitley Manufacturing

2.2 SIZE

A. The overall size of the press box shall be 8'-0” x 48'-0” width and entrance platform on both ends.

B. MATERIALS :

   1. FLOOR CONSTRUCTION

      a. Bottom Board: 1/2” CDX plywood sheathing (painted black) Continuous aluminum vent.
      b. Insulation : Min. R-19 fiberglass batts, with vapor barrier.

c. Joists : 2” x 6” #2 SPF, on 12” centers, transverse framing.
d. Decking : ¾” Sturdifloor, underlayment grade, tongue and groove fir plywood, (Index 24” o.c.)
e. Covering : 1/8” Armstrong Excelon vinyl composition tile, Cottage Tan.
f. Molding : 4” vinyl base molding by Roppe.

2. WALL CONSTRUCTION

a. Studs : 2” x 4” dimensional lumber, grade #2 or better SPF, installed 16” o.c., IBC framing.
b. Bottom Plate: 2” x 4” dimensional lumber, grade #2 or better SPF.
c. Top Plates : (2) 2” x 4” dimensional lumber, grade #2 or better SPF
d. Headers : As span and design load requires.
e. Ceiling Height : 8’-0” x 4’-10”, front to back
f. Covering : 5/8 vinyl-faced gypsum panels, Class A, F.S.R.
g. Insulation : Minimum R-11 fiberglass batts with vapor barrier.
h. Sheathing : ½” CDX Plywood and House wrap air infiltration barrier.
i. Siding : MBCI “PBU-Panel” .026 gauge ribbed steel panels with Kynar 500 finish.

3. ROOF CONSTRUCTION

a. Joists : 2” x 8” dimensional lumber, grade #2 installed 16” o.c or #1 SYP as required.
b. Overhang : 15-1/2” over front wall; 6” over rear wall. .019 aluminum fascia with perforated aluminum soffit panels.
c. Ceiling : 5/8” gypsum board, taped and bedded with spray textured finish, Class A F.S.R.
d. Insulation : Minimum R-19 fiberglass batts with vapor barrier.
e. Decking : ¾” Sturdifloor, underlayment grade, tongue and groove plywood for camera decks (Index 24” o.c.)
OR
5/8” CDX plywood sheathing for non-camera decks (Index 20” o.c.)
f. Covering : .060 single-ply EPDM rubber membrane, fully adhered.

4. WINDOWS

a. Lindsay #3300 “Earthwise Series” double horizontal sliders with extruded vinyl frames, AAMA LC-25 structural rating, with ¾” insulated Low-E, Argon filled tempered glass and removable insect screens. Minimum U-Value = .29, SHGC = .29
b. Interior windows to be ¼” tempered safety glass fixed pane with stained jabs and casing.

5. DOORS : (Exterior) : “Oakcraft” wood-gran textured insulated fiberglass entry door with solid vinyl jabs; 16” insulated/tempered lite, aluminum threshold, vinyl weather stops, stainless steel knuckle hinges and heavy-duty retention chain. Doors equipped with commercial lever-handled keyed locksets. Min. U-Value = .22

6. DOORS : (Interior) : 1-3/8” solid-core stained Birch door with stained Fruitwood Birch wood jambs and casing. Passage lever-handled hardware.

7. ELECTRICAL

   a. Service Entrance Panel : Square D QO112M100 with Main Disconnect; rated at 120/240v, single phase, 100 amp capacity.

   b. Switches/Receptacles :
      1) Pass & Seymour #TM870 125 volt/15 amp duplex, spec-grade, switches.
      2) Intermatic #EI500 programmable astronomical timer switches as required.
      3) Lutron #MSOPS5MLA occupancy sensor switches as required.
      4) Pass & Seymour #3232 125 volt/15 amp duplex, spec-grade, receptacles.
      5) Wiremold 5400 Series two-piece multi-channel, dual voltage, non-metallic surface raceway along front wall below scorer’s counter, outlets on 48” centers.

      6) Conduit prep and circuity for customer’s PA and DATA systems.

   c. Lighting
      1) Interior: SATCO #45/LED/1X4/FLUSH/3K/WH 45 watt, 30K LED 1X4 surface mounted LED light.
      2) Exterior: SATCO #S9014 4” (7 watt) 4000K LED recessed light
      3) Emergency/Exit: Lithonia ECR-REM-LED emergency combination exit/flood light with 90 min. battery back-up and ERE-SLG-WP LED remote emergency flood light.

   d. Circuits: All branch circuit wiring is minimum #12 THHN copper wire encased in EMT thin-wall conduit or MC cable.

   e. HVAC: GE Zoneline 4100 series packaged terminal HVAC units with integral thermostats if required

8. SCORER’S COUNTER : 18” deep x 3/4” lauan grade plywood with 1-1/2” x 2” edge,
   surfaced with .060 plastic laminate by Nevamar.

9. CAMERA DECKS

   a. Hatch: Bilco Model NB50 2’6” x 4’6” aluminum roof hatch.

   b. Ladder (Aluminum): Alaco Model H70 70-degree ships ladder.

   c. Roof Surface: Dec-K-ing .060 polyester reinforced skid and spike resistant PVC membrane, fully adhered.

d. Railing mounts: 1/2” galvanized threaded bolts & nuts through roof fascia on 48” centers along perimeter edge of roof.

10. MISCELLANEOUS
10 LB. dry chemical fire extinguisher.
Rated 4-A: 20-B:C

2.3 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.

PART 3 - EXECUTION

3.1 ERECTION OF STRUCTURAL FRAMING

A. Erect building system according to manufacturer's written erection instructions and erection drawings.

B. Do not field cut, drill, or alter structural members without written approval from building system manufacturer's professional engineer.

END OF SECTION 133416.03

DIVISION 26

ELECTRICAL

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SECTION 260500

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Electrical equipment coordination and installation.
2. Sleeves for raceways and cables.
3. Sleeve seals.
4. Grout.
5. Common electrical installation requirements.

1.3 DEFINITIONS

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. Product Data: For sleeve seals.

1.5 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed.

D. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 07 Section "Penetration Firestopping."."

PART 2 - PRODUCTS

2.1 SLEEVES FOR RACEWAYS AND CABLES

A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

C. Sleeves for Rectangular Openings: Galvanized sheet steel.

1. Minimum Metal Thickness:

a. For sleeve cross-section rectangle perimeter less than 50 inches and no side more than 16 inches, thickness shall be 0.052 inch.
b. For sleeve cross-section rectangle perimeter equal to, or more than, 50 inches and 1 or more sides equal to, or more than, 16 inches, thickness shall be 0.138 inch.

2.2 SLEEVE SEALS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

a. Advance Products & Systems, Inc.
b. Calpico, Inc.
c. Metraflex Co.
d. Pipeline Seal and Insulator, Inc.

3. Sealing Elements: EPDM or NBR interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
4. Pressure Plates: Plastic, Carbon steel or Stainless steel. Include two for each sealing element.
5. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating or Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.3 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

A. Comply with the National Electrical Code 2011 and the National Electrical Contractors Association (NECA) 1-2006.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.

C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.

D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

E. Right of Way: Give to piping systems installed at a required slope.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.

B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.

C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.

E. Cut sleeves to length for mounting flush with both surfaces of walls.

F. Extend sleeves installed in floors 2 inches above finished floor level.

G. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable, unless indicated otherwise.

H. Seal space outside of sleeves with grout for penetrations of concrete and masonry

1. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.

I. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Division 07 Section "Joint Sealants.".

J. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with requirements in Division 07 Section "Penetration Firestopping."

K. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.

L. Aboveground, Exterior-Wall Penetrations: Seal penetrations using cast-iron pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

M. Underground, Exterior-Wall Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

3.3 SLEEVE-SEAL INSTALLATION

A. Install to seal exterior wall penetrations.

B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.4 FIRESTOPPING

A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Penetration Firestopping."

END OF SECTION 260500

SECTION 260519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Copper Conductors: Comply with NEMA WC 70/ICEA S-95-658.

B. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THHN and THWN.

C. Multiconductor Cable: Comply with NEMA WC 70/ICEA S-95-658 for armored cable, Type AC, metal-clad cable, Type MC and nonmetallic-sheathed cable, Type NM with ground wire.

D. VFC Cable:

1. Comply with UL 1277, UL 1685, and NFPA 70 for Type TC-ER cable.
2. Comply with UL requirements for cables in direct burial applications.

2.2 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

2.3 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper; Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits: Copper. Solid or stranded for No. 12 AWG and smaller; stranded for No. 10 AWG and larger, except VFC cable, which shall be extra flexible stranded.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Service Entrance: Type THWN, single conductors in raceway.

B. Exposed Feeders: Type THHN, single conductors in raceway.

C. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN, single conductors in raceway.

D. Feeders Installed below Raised Flooring: Type THHN, single conductors in raceway.

E. Exposed Branch Circuits: Type THHN, single conductors in raceway.

F. Branch Circuits Concealed in Ceilings, Walls, and Partitions, Including in Crawlspaces: Type THHN, single conductors in raceway in all areas utilizing steel frame construction and Nonmetallic sheathed cable, Type NMC in all areas utilizing wood frame construction.

G. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THWN, single conductors in raceway.

H. Branch Circuits Installed below Raised Flooring: Type THHN, single conductors in raceway.

I. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

J. VFC Output Circuits: with braided shield.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 26053 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Support cables according to Section 26059 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than un-spliced conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

3.5 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 26055 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 26054 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 07841 "Penetration Firestopping."

3.8 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. After installing conductors and cables and before electrical circuitry has been energized, test the service entrance, feeder conductors, ATS conductors and conductors for the Generator for compliance with requirements.

B. Test and Inspection Reports: Prepare a written report to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

C. Cables will be considered defective if they do not pass tests and inspections.

END OF SECTION 260519

SECTION 260526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes grounding and bonding systems and equipment.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. Burndy; Part of Hubbell Electrical Systems.
2. Dossert; AFL Telecommunications LLC.
3. ERICO International Corporation.
4. Fushi Copperweld Inc.
5. Galvan Industries, Inc.; Electrical Products Division, LLC.
6. Harger Lightning and Grounding.
7. ILSCO.
8. O-Z/Gedney; A Brand of the EGS Electrical Group.
9. Robbins Lightning, Inc.
10. Siemens Power Transmission & Distribution, Inc.

2.2 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.3 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.4 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy.

C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

D. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression or exothermic-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

2.5 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet.

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

B. Underground Grounding Conductors: Install bare copper conductor, No. 2/0 AWG minimum.

1. Bury at least 24 inches below grade.

C. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.
4. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING AT THE SERVICE

A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.3 GROUNDING OVERHEAD LINES

A. Comply with IEEE C2 grounding requirements.

B. Install 2 parallel ground rods.

C. Drive ground rods until tops are 12 inches below finished grade in undisturbed earth.

D. Ground-Rod Connections: Install bolted connectors for underground connections and connections to rods.

E. Lightning Arrester Grounding Conductors: Separate from other grounding conductors.

F. Secondary Neutral and Transformer Enclosure. Interconnect and connect to grounding conductor.

G. Protect grounding conductors running on surface of wood poles with molding extended from grade level up to and through communication service and transformer spaces.

3.4 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. Comply with IEEE C2 grounding requirements.

B. Pad-Mounted Transformers and Switches: Install two ground rods around the pad. Ground pad-mounted equipment and noncurrent-carrying metal items associated with substations by connecting them to underground cable and grounding electrodes. Install tinned-copper conductor not less than No. 2 AWG for taps to equipment grounding terminals.

3.5 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.
5. Three-phase motor and appliance branch circuits.
6. Flexible raceway runs.
7. Armored and metal-clad cable runs.
8. Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.
9. X-Ray Equipment Circuits: Install insulated equipment grounding conductor in circuits supplying x-ray equipment.

C. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.

D. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.

E. Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

F. Metallic Fences: Comply with requirements of IEEE C2.

1. Grounding Conductor: Bare copper, not less than No. 8 AWG.
2. Gates: Shall be bonded to the grounding conductor with a flexible bonding jumper.
3. Barbed Wire: Strands shall be bonded to the grounding conductor.

3.6 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical

power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.

C. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
2. For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.

D. Test Wells: Ground rod driven through drilled hole in bottom of handhole and shall be at least 12 inches deep, with cover.

1. Test Wells: Install at least one test well for each service unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.

E. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

F. Grounding and Bonding for Piping:

1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

3.7 FIELD QUALITY CONTROL

A. Perform tests and inspections. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

END OF SECTION 260526

SECTION 260533

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Nonmetal conduits, tubing, and fittings.
3. Metal wireways and auxiliary gutters.
4. Nonmetal wireways and auxiliary gutters.
5. Surface raceways.
6. Boxes, enclosures, and cabinets.
7. Handholes and boxes for exterior underground cabling.

1.2 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:

1. Structural members in paths of conduit groups with common supports.
2. HVAC and plumbing items and architectural features in paths of conduit groups with common supports.

PART 2 - PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. GRC: Comply with ANSI C80.1 and UL 6.

C. ARC: Comply with ANSI C80.5 and UL 6A.

D. IMC: Comply with ANSI C80.6 and UL 1242.

E. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.

1. Comply with NEMA RN 1.
2. Coating Thickness: 0.040 inch, minimum.

F. EMT: Comply with ANSI C80.3 and UL 797.

G. FMC: Comply with UL 1; zinc-coated steel.

H. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

I. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.

1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.
2. Fittings for EMT:

a. Material: Steel or die cast.
b. Type: Setscrew or compression.

3. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.
4. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040 inch, with overlapping sleeves protecting threaded joints.

J. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.2 NONMETALLIC CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. ENT: Comply with NEMA TC 13 and UL 1653.

C. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.

D. LFNC: Comply with UL 1660.

E. Continuous HDPE: Comply with UL 651B.

F. Coilable HDPE: Preassembled with conductors or cables, and complying with ASTM D 3485.

G. Fittings for ENT and RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.

H. Fittings for LFNC: Comply with UL 514B.

2.3 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Description: Sheet metal, complying with UL 870 and NEMA 250, Type 1, Type 3R, Type 4 or Type 12 unless otherwise indicated, and sized according to NFPA 70.

1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.4 NONMETALLIC WIREWAYS AND AUXILIARY GUTTERS

A. Listing and Labeling: Nonmetallic wireways and auxiliary gutters shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Description: Fiberglass polyester, extruded and fabricated to required size and shape, without holes or knockouts. Cover shall be gasketed with oil-resistant gasket material and fastened with captive screws treated for corrosion resistance. Connections shall be flanged and have stainless-steel screws and oil-resistant gaskets.

C. Description: PVC, extruded and fabricated to required size and shape, and having snap-on cover, mechanically coupled connections, and plastic fasteners.

D. Fittings and Accessories: Couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings shall match and mate with wireways as required for complete system.

2.5 SURFACE RACEWAYS

A. Listing and Labeling: Surface raceways and tele-power poles shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Surface Metal Raceways: Galvanized steel with snap-on covers complying with UL 5.

C. Surface Nonmetallic Raceways: Two- or three-piece construction, complying with UL 5A, and manufactured of rigid PVC. Product shall comply with UL 94 V-0 requirements for self-extinguishing characteristics.

D. Tele-Power Poles:

1. Material: Galvanized steel with ivory baked-enamel finish.
2. Fittings and Accessories: Dividers, end caps, covers, cutouts, wiring harnesses, devices, mounting materials, and other fittings shall match and mate with tele-power pole as required for complete system.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, ferrous alloy or aluminum, Type FD, with gasketed cover.

D. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.

E. Metal Floor Boxes:

1. Material: Cast metal.
2. Type: Fully adjustable or Semi-adjustable.
3. Shape: Rectangular.
4. Listing and Labeling: Metal floor boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

F. Nonmetallic Floor Boxes: Nonadjustable, round or rectangular.

1. Listing and Labeling: Nonmetallic floor boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

G. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb Outlet boxes designed for attachment of luminaires weighing more than 50 lb shall be listed and marked for the maximum allowable weight.

H. Paddle Fan Outlet Boxes: Nonadjustable, designed for attachment of paddle fan weighing 70 lb.

1. Listing and labeling: Paddle fan outlet boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

I. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

J. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum or galvanized, cast iron with gasketed cover.

K. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

L. Device Box Dimensions: 4 inches square by 2-1/8 inches deep or 4 inches by 2-1/8 inches by 2-1/8 inches deep .

M. Gangable boxes are allowed.

N. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1, Type 3R, Type 4 or Type 12 with continuous-hinge cover with flush latch unless otherwise indicated.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
2. Nonmetallic Enclosures: Plastic or Fiberglass.
3. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.

O. Cabinets:

1. NEMA 250, Type 1, Type 3R or Type 12 galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
2. Hinged door in front cover with flush latch and concealed hinge.
3. Key latch to match panelboards.
4. Metal barriers to separate wiring of different systems and voltage.
5. Accessory feet where required for freestanding equipment.
6. Nonmetallic cabinets shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.7 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. General Requirements for Handholes and Boxes:

1. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
2. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.

1. Standard: Comply with SCTE 77.
2. Configuration: Designed for flush burial with closed bottom unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC."
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.

C. Fiberglass Handholes and Boxes: Molded of fiberglass-reinforced polyester resin, with frame and covers of hot-dip galvanized-steel diamond plate.

1. Standard: Comply with SCTE 77.
2. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC."
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: RNC, Type EPC-80-PVC.
2. Concealed Conduit, Aboveground: RNC, Type EPC-40-PVC.
3. Underground Conduit: RNC, Type EPC-40-PVC or Type EPC-80-PVC.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC or LFNC
5. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R or Type 4.

B. Indoors: Apply raceway products as specified below unless otherwise indicated.

1. Exposed, Not Subject to Physical Damage: EMT or RNC.
2. Exposed, Not Subject to Severe Physical Damage: EMT or RNC identified for such use.
3. Exposed and Subject to Severe Physical Damage: GRC or IMC. Raceway locations include the following:

    a. Loading dock.
    b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
    c. Mechanical rooms.
    d. Gymnasiums.
    e. Apparatus Bays

4. Concealed in Ceilings and Interior Walls and Partitions: EMT, ENT or RNC, Type EPC-40-PVC.
5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
6. Damp or Wet Locations: GRC or IMC.
7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 stainless steel in institutional and commercial kitchens and damp or wet locations.

C. Minimum Raceway Size: 3/4-inch trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
3. EMT: Use setscrew or compression, steel fittings. Comply with NEMA FB 2.10.
4. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

E. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.

F. Install surface raceways only where indicated on Drawings.

G. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F.

3.2 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for

aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

B. Keep raceways at least 12 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

C. Comply with requirements in Section 26059 "Hangers and Supports for Electrical Systems" for hangers and supports.

D. Arrange stub-ups so curved portions of bends are not visible above finished slab.

E. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

F. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

G. Support conduit within 12 inches of enclosures to which attached.

H. Raceways Embedded in Slabs:

1. Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support. Secure raceways to reinforcement at maximum 10 foot intervals.
2. Arrange raceways to cross building expansion joints at right angles with expansion fittings.
3. Arrange raceways to keep a minimum of 2 inches of concrete cover in all directions.
4. Do not embed threadless fittings in concrete unless specifically approved by Architect for each specific location.
5. Change from ENT to RNC, Type EPC-40-PVC, GRC or IMC before rising above floor.

I. Stub-ups to Above Recessed Ceilings:

1. Use EMT, IMC, or RMC for raceways.
2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

J. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

K. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

L. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

M. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch trade size and insulated throat metal bushings on 1-1/2-inch trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

N. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

O. Surface Raceways:

1. Install surface raceway with a minimum 2-inch radius control at bend points.
2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.

P. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces.

Q. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:

1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Where an underground service raceway enters a building or structure.
3. Where otherwise required by NFPA 70.

R. Expansion-Joint Fittings:

1. Install in each run of aboveground RNC that is located where environmental temperature change may exceed 30 deg F and that has straight-run length that exceeds 25 feet.
2. Install type and quantity of fittings that accommodate temperature change listed for each of the following locations:

    a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.
    b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.
    c. Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F temperature change.
    d. Attics: 135 deg F temperature change.

3. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per degree F of temperature change for PVC conduits.
4. Install expansion fittings at all locations where conduits cross building or structure expansion joints.
5. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.

S. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72 inches of flexible conduit for recessed and semirecessed luminaires,equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

T. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements.

U. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between the box and cover plate or the supported equipment and box.

V. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

W. Locate boxes so that cover or plate will not span different building finishes.

X. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

Y. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

Z. Set metal floor boxes level and flush with finished floor surface.

AA. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom at a minimum of 4 feet in depth for pipe less than 6 inches in nominal diameter.
2. Backfill 6” with small rock to set bedding for pipe. Top of pipe shall be minimum of 3 feet below existing grade after conduit installation.
3. After installing conduit, backfill and compact with granular material in 6” lifts. Compact to 95% density. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.
4. Install manufactured duct elbows for stub-up at poles and equipment and at building entrances through floor unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.

    a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete for a minimum of 12 inches on each side of the coupling.
    b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60 inches from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.

6. Underground Warning Tape: Comply with requirements in Section 26055 "Identification for Electrical Systems."

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.

D. Install handholes with bottom below frost line.

E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 26054 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.6 FIRESTOPPING

A. Install firestopping at penetrations of fire-rated floor and wall assemblies. Comply with requirements in Section 07841 "Penetration Firestopping."

3.7 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

SECTION 260544

SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sleeves for raceway and cable penetration of non-fire-rated construction walls and floors.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Grout.
5. Silicone sealants.

B. Related Requirements:

1. Section 07841 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Wall Sleeves:

1. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, plain ends.
2. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.

B. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies: Galvanized-steel sheet; 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.

C. Sleeves for Rectangular Openings:

1. Material: Galvanized sheet steel.
2. Minimum Metal Thickness:

    a. For sleeve cross-section rectangle perimeter less than 50 inches and with no side larger than 16 inches, thickness shall be 0.052 inch.
    b. For sleeve cross-section rectangle perimeter 50 inches or more and one or more sides larger than 16 inches, thickness shall be 0.138 inch.

2.2 SLEEVE-SEAL SYSTEMS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

    a. Advance Products & Systems, Inc.
    b. CALPICO, Inc.
    c. Metraflex Company (The).
    d. Pipeline Seal and Insulator, Inc.
    e. Proco Products, Inc.

3. Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
4. Pressure Plates: Carbon steel, Plastic or Stainless steel.
5. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating or Stainless steel of length required to secure pressure plates to sealing elements.

2.3 SLEEVE-SEAL FITTINGS

A. Description: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit shall have plastic or rubber waterstop collar with center opening to match piping OD.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

    a. Presealed Systems.

2.4 GROUT

A. Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.

B. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

C. Design Mix: 5000-psi , 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

2.5 SILICONE SEALANTS

A. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below.

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

B. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

A. Comply with NECA 1.

B. Comply with NEMA VE 2 for cable tray and cable penetrations.

C. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:

1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

a. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 07920 "Joint Sealants."
b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect material while curing.

2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
3. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed.

4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
5. Install sleeves for floor penetrations. Extend sleeves installed in floors 2 inches above finished floor level. Install sleeves during erection of floors.

D. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:

1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

E. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.

F. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel or cast-iron pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

G. Underground, Exterior-Wall and Floor Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch annular clear space between raceway or cable and sleeve for installing sleeve-seal system.

3.2 SLEEVE-SEAL-SYSTEM INSTALLATION

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.

B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.3 SLEEVE-SEAL-FITTING INSTALLATION

A. Install sleeve-seal fittings in new walls and slabs as they are constructed.

B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange to be centered in concrete slab or wall.

C. Secure nailing flanges to concrete forms.

D. Using grout, seal the space around outside of sleeve-seal fittings.

END OF SECTION 260544

SECTION 260529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Hangers and supports for electrical equipment and systems.
2. Construction requirements for concrete bases.

1.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design supports for multiple raceways, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.

C. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

D. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

1.3 SUBMITTALS

A. Product Data: For steel slotted support systems.

B. Shop Drawings: Show fabrication and installation details and include calculations for the following:

1. Trapeze hangers. Include Product Data for components.
2. Steel slotted channel systems. Include Product Data for components.
3. Equipment supports.

C. Welding certificates.

1.4 QUALITY ASSURANCE

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

B. Comply with NFPA 70.

1.5 COORDINATION

A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 3.

B. Coordinate installation of roof curbs, equipment supports, and roof penetrations.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Allied Tube & Conduit.
b. Cooper B-Line, Inc.
c. ERICO International Corporation.
d. GS Metals Corp.
e. Thomas & Betts Corporation.
f. Unistrut; Atkore International.
g. Wesanco, Inc.

3. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
4. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
5. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
6. Channel Dimensions: Selected for applicable load criteria.

B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.

C. Conduit and Cable Support Devices: Steel or Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.

E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

    a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    b. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

        1) Hilti, Inc.
        2) ITW Ramset/Red Head; Illinois Tool Works, Inc.
        3) MKT Fastening, LLC.
        4) Simpson Strong-Tie Co., Inc.

2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated or stainless steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.

    a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    b. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

        1) Cooper B-Line, Inc.
        2) Empire Tool and Manufacturing Co., Inc.
        3) Hilti, Inc.
        4) ITW Ramset/Red Head; Illinois Tool Works, Inc.
        5) MKT Fastening, LLC.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: All-steel springhead type.
7. Hanger Rods: Threaded steel.

2.2 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

B. Materials: Comply with requirements in Section 05500 "Metal Fabrications" for steel shapes and plates.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with two-bolt conduit clamps.

D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC and RMC may be supported by openings through structure members, as permitted in NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
6. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts or Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
7. To Light Steel: Sheet metal screws.
8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Comply with installation requirements in Section 05500 "Metal Fabrications" for site-fabricated metal supports.

B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

C. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 CONCRETE BASES

A. Construct concrete bases of dimensions indicated but not less than 4 inches larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.

B. Use 3000-psi, 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Section 03300 "Cast-in-Place Concrete."

C. Anchor equipment to concrete base.

1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor bolts to elevations required for proper attachment to supported equipment.
3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

3.5 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

B. Touchup: Comply with requirements in Section 09912 "Interior Painting” for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 260529

DIVISION 32

EXTERIOR IMPROVEMENTS

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SECTION 323113 - CHAIN LINK FENCES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes chain-link fences.

1.2 PERFORMANCE REQUIREMENTS

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of chain-link fence and gate, from manufacturer.

B. Product Test Reports: For framing strength according to ASTM F 1043.

C. Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which Manufacturer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:

1. Fabric Height: As indicated on Drawings.
2. Steel Wire Fabric: Wire with a diameter of 0.148 inch.

    a. Mesh Size: 2 inches.
    b. Zinc-Coated Fabric: ASTM A 392, Type II, Class 2, 2.0 oz./sq. ft with zinc coating.

3. Selvage: Knuckled at both selvages.

2.2 FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 based on the following:

1. Fence Height: As indicated on Drawings.

2. Horizontal Framework Members: Intermediate, top and bottom rails complying with ASTM F 1043.
3. Brace Rails: Comply with ASTM F 1043.
4. Metallic Coating for Steel Framing:

    a. Type A zinc coating.
    b. Type B zinc with organic overcoat.
    c. External, Type B zinc with organic overcoat and internal, Type D zinc-pigmented coating.
    d. Type C, Zn-5-Al-MM alloy coating.
    e. Coatings: Any coating above.

2.3 TENSION WIRE

A. Metallic-Coated Steel Wire: 0.177-inch diameter, marcelled tension wire complying with ASTM A 817 and ASTM A 824, with the following metallic coating:

1. Type III, Zn-5-Al-MM alloy with minimum coating weight matching chain-link fabric coating weight

2.4 FITTINGS

A. General: Comply with ASTM F 626.

B. Finish:

1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. zinc.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.

D. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.

E. Line Posts: Space line posts uniformly as shown on drawings.

F. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Provide horizontal tension wire at the following locations:

1. Extended along bottom of fence fabric.

G. Chain-Link Fabric: Apply fabric to inside of enclosing framework. Leave 2 inches between finish grade or surface and bottom selvage unless otherwise indicated.

END OF SECTION 323113