

UNIVERSITY OF LOUISIANA AT LAFAYETTE

Lafayette, Louisiana

BID NO. - FILE 17202

PROPOSAL FOR FURNISHING

ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, SUPERVISION, PERMITS, ETC. NECESSARY FOR SITE LIGHTING UPGRADES, LOCATED ON THE UL LAFAYETTE CAMPUS, LAFAYETTE, LOUISIANA

NOTE: A MANDATORY pre-bid meeting will be held at 10:00AM on Thursday, July 14, 2016 at Parker Hall, 310 East Lewis, Lafayette, LA, at which time details of the specifications will be discussed.

Proposals will be received up to 2:00PM August 2, 2016 by the Purchasing Office, University of Louisiana at Lafayette, Lafayette, Louisiana. Proposals will not be received after this specified hour and date. At this time, the proposals will be publicly opened and read in the Purchasing Office, Room 123, Martin Hall, 104 University Circle, on the University Campus.

This is a Competitive Sealed Bid; bids SHALL be submitted in a sealed envelope. Complete details for submitting bid, etc. are contained in the attached INSTRUCTIONS TO BIDDERS. Vendors submitting bids in the amount of \$50,000.00 or more SHALL show their license number on the front of the sealed envelope in which their bid is enclosed; bids not submitted in accordance with this requirement, SHALL be rejected and shall not be read.

Bid must be received by the due date and time in the Purchasing Office at the University of Louisiana at Lafayette, 104 University Circle, Martin Hall, Room 123, Lafayette, LA, 70503. Bid is to be in a SEALED ENVELOPE with the BID NUMBER and DUE DATE ON THE OUTSIDE OF THE ENVELOPE.

All inquiries regarding this request shall be directed to:

Director of Purchasing
UL Lafayette Purchasing Department
(337) 482-5396
purchasing@louisiana.edu

TO: University of Louisiana at Lafayette
Purchasing Office, Martin Hall Room 123
104 University Circle
P O Box 40197
Lafayette LA 70504 0197
Fax - 337-482-5059

To Whom It May Concern:

Attached is the completed proposal of the firm listed below. The undersigned certifies that he/she (or they) has/have carefully examined the Instructions to Bidders, the General Conditions, and the Specifications hereto attached and made part herein, and agrees to comply with the instructions, conditions, and specifications, as covered by the attached papers. On the basis of the specifications, the undersigned proposes to furnish any or all items listed in the schedule of items hereto attached, upon which prices are requested, and at the price stated for each item.

Firm Name

Signature [By signing this bid, bidder certifies compliance with La. R.S. 38:2212(A)(1)(c) or RS 38:2212(0)]

Address

Name (Printed)

City, State, Zip Code

Title

Telephone No. including area code

Date

Fax No. including area code

E-Mail

FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, SUPERVISION, PERMITS, ETC. NECESSARY FOR SITE LIGHTING UPGRADES, LOCATED ON THE UNIVERSITY OF LOUISIANA AT LAFAYETTE CAMPUS, LAFAYETTE, LOUISIANA, AS SHOWN ON THESE SPECIFICATIONS.....

SCOPE OF WORK

- 1) CONTRACTOR TO PROVIDE AND INSTALL SITE LIGHTING UPGRADES AS INDICATED ON PLANS AND SPECIFICATIONS FROM THOMASSEE AND ASSOCIATES DATED 5/11/2016 INCLUDING LIGHTING POLE ASSEMBLIES, WIRING, CONDUIT, ETC.

DUE TO THE IMPORTANCE OF THE SCHEDULE, LIQUIDATED DAMAGES IN THE AMOUNT OF 100 DOLLARS (\$100.00) PER DAY WILL BE ASSESSED FOR EVERY CALENDAR DAY THAT THIS PROJECT IS NOT COMPLETE BEYOND ONE HUNDRED FIFTY (150) CALENDAR DAYS OF THE NOTICE TO PROCEED.

Each bidder MUST accompany his/her proposal with a bid security for five percent (5%) of the total maximum amount of his/her bid. The bid security shall be drawn in favor of the University of Louisiana at Lafayette and SHALL be in the form of a Bid Bond (Insurance Company), Bank Money Order, Certified Check or Cashier's Check. It shall become the property of the Owner in the event the contract and any performance bond are not executed within the time set forth. Bid bond shall be written by a surety or insurance company currently on the US Department of the Treasury Financial Management Service List of Approved Bonding Companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an "A-" Rating in the latest printing of the AM Best's Key Rating Guide to write individual bonds up to ten percent (10%) of policyholders' surplus as shown in the AM Best's Key Rating Guide.

Successful bidder WILL BE required to execute and deliver within ten (10) days of notification, a satisfactory performance bond and payment bond in the amount of one hundred percent (100%) of the contract price. Performance Bond, with Power of Attorney, shall be secured by a surety or insurance company currently on the US Department of the Treasury Financial Management Service List of Approved Bonding Companies, and in accordance with restrictions set by them or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds. In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the State of Louisiana. Also, to be provided at the same time is a Labor and Materials payment Bond in an amount equal to one hundred percent (100%) of the contract amount.

Contractors or contracting firms submitting bids in the amount of \$10,000.00 or more shall show their license number on the front of the sealed envelope in which their bid is enclosed. Bids in the amount of \$10,000.00 or more, not submitted in accordance with this requirement, shall be rejected and shall not be read. (Revised dollar amount according to ACT 725.) Bids shall be accepted from Contractors who are licensed under L.A. R.S. 37:2150-2163 in a classification such as: **Electrical Work**. Additional information relative to licensing may be obtained from the Louisiana State Licensing Board for Contractors, Baton Rouge, Louisiana.

In accordance with La. R.S. 38:2227, LA. R.S. 38:2212.10 and LA. R.S. 23:1726(B) each bidder on this project must submit a completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package. The

Attestations Affidavit form shall be submitted to the Purchasing Department within 10 days **after** the opening of bids.

Delivery of any document(s) will NOT be accepted during non-business hours. Business hours are Monday through Thursday, 7:30 am to 11:45 am, 12:30 pm to 5:00 pm, and Friday, 7:30 am to 12:30 pm. The Purchasing office will be closed during Federal, State and University holidays. It is the responsibility of the prospective bidder to be aware of such closures.

In making this bid, each bidder represents that: They have read and understand the bid documents and the bid is made in accordance herewith, and the bid is based upon the specifications described in the bid documents without exception.

It is the responsibility of the prospective bidder to visit and examine jobsite, take measurements to his/her own satisfaction and determine conditions under which work is to be done. Owner will not accept responsibility for conditions which careful examination of premises would have shown existed.

To visit jobsite and for further information, prospective bidder is to contact Mr. Terry Jenkins, 337-482-2001.

A MANDATORY pre-bid meeting will be held at 10:00AM on July 14, 2016 at the Parker Hall, 310 East Lewis, Lafayette, LA, at which time details of plans and specifications, will be discussed.

For vendors unable to download and print plans, the plans are available at the UL Lafayette Facilities Management Department offices located at Parker Hall, 310 East Lewis, at a non-refundable charge of \$30.00 per set. DO NOT SEND CHECKS/CASH TO PURCHASING FOR PLANS!

VENDOR CHECK LIST

REQUIRED FORMS/ITEMS UPON BID SUBMISSION

- Louisiana Uniform Public Works Bid Form
- Bid Security Equal to 5% of Bid
- Louisiana Contractor’s License Number (If Applicable) on Envelop Exterior

REQUIRED FORMS AFTER BID OPENING/UPON BID AWARD

- Attestation Affidavit (ALL BIDDERS, WITHIN 10 DAYS OF BID OPENING)
- Performance and Payment Bond (LOW BIDDER, WITHIN 10 DAYS OF REQUEST)
- Proof of Insurance

INSTRUCTIONS TO BIDDERS

ARTICLE 1

DEFINITIONS

1.1 The Bid Documents include the following:

- Advertisement for Bids
- Instructions to Bidders
- Bid Form
- Bid Bond
- General Conditions of the Contract for Construction,
AIA Document A201, 2007 Edition
- Supplementary Conditions
- Contract Between Owner and Contractor
and Performance and Payment Bond
- Affidavit
- User Agency Documents (if applicable)
- Change Order Form
- Partial Occupancy Form
- Recommendation of Acceptance
- Asbestos Abatement (if applicable)
- Other Documents (if applicable)
- Specifications & Drawings
- Addenda issued during the bid period and
acknowledged in the Bid Form

1.2 All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201 are applicable to the Bid Documents.

1.3 Addenda are written and/or graphic instruments issued by the Owner or Architect prior to the opening of bids which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections and prior approvals.

1.4 A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.

1.5 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 deleted for sums stated in alternate bids.

1.6 An alternate bid (or alternate) is an amount stated in the bid to be added to the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.

1.7 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the Bid Documents.

1.8 A Sub-bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.

1.9 Where the word "Architect" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.

1.10 An agent is the University's representative in Facility Management who is referred to throughout these documents as singular in number.

1.11 A Contractor is the person who contracts with UL Lafayette to perform the work as called for on these documents who is referred to as singular in number.

1.12 The Owner is The University of Louisiana at Lafayette (UL Lafayette)

ARTICLE 2

PRE-BID CONFERENCE

2.1 A Pre-Bid Conference may be held at the project site. The Architect or Owner shall coordinate the setting of the date, time and place for the Pre-Bid Conference with the Agent and shall invite in writing all who have received sets of the Bid Documents to attend. The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and information from interested Bidders. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Contractors who are not in attendance for the **entire** Pre-Bid Conference will be considered to have not attended.

2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

ARTICLE 3

BIDDER'S REPRESENTATION

3.1 Each Bidder by making his bid represents that:

3.1.1 He has read and understands the Bid Documents and his bid is made in accordance therewith.

3.1.2 He has visited the site and has familiarized himself with the local conditions under which the work is to be performed.

3.1.3 His bid is based solely upon the materials, systems and equipment described in the Bid Documents as advertised and as modified by addenda.

3.1.4 His bid is not based on any verbal instructions contrary to the Bid Documents and addenda.

3.1.5 He is familiar with Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into contracts; he is aware that the Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the State on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Designer or any principal within the Designer's firm. (see La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any contract entered into in violation of this clause shall be null and void.

3.2 The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

ARTICLE 4

BID DOCUMENTS

4.1 Copies

4.1.1 Bid Documents may be obtained from the University Purchasing Office as stated in the Advertisement for Bids. If deposits are required, no deposits will be refunded on Bid Documents returned later than ten days after receipt of bids.

4.1.1.1 As an alternative method of distribution, the Designer or Architect may provide the Bid Documents in electronic format. They may be obtained with or without charge as stated in the Advertisement for Bids.

4.1.2 Complete sets of Bid Documents shall 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 Bid Documents.

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

4.2 Interpretation or Correction of Bid Documents

4.2.1 Bidders shall promptly notify the Owner or Agent of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site and local conditions.

4.2.2 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Purchasing Department to reach him at least seven days prior to the date for receipt of bids.

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

4.3 Substitutions

4.3.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitutions shall be allowed after bids are received.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Architect at least seven (7) working days prior to the opening of bids. (RS38:2295C) Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, 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. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval is given contingent upon supplier being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved.

4.3.3 If the Architect or Owner approves any proposed substitution, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 Addenda

4.4.1 Addenda will be mailed or delivered to all who are known by the Owner to have received a complete set of Bid Documents.

4.4.2 Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose. Owner utilizes the Office of State Purchasing LaPAC website for posting Bid Documents and Addenda. Bidder should check frequently for any possible addenda that may be issued.

4.4.3 Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening

of bids, then the opening of bids shall be extended at least seven but no more than twenty-one (21) working days, without the requirement of re-advertising. The revised time and date for the opening of bids shall be stated in the addendum.

4.4.4 Each Bidder shall ascertain from the Owner prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.

4.4.5 The Owner shall have the right to extend the bid date by up to (30) thirty days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Owner.

ARTICLE 5

BID PROCEDURE

5.1 Form and Style of Bids

5.1.1 Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided with the Bid Document.

5.1.2 All blanks on the Bid Form shall be filled in manually in ink or typewritten.

5.1.3 Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

5.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid or his authorized representative.

5.1.5 Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non responsive and shall cause its rejection.

5.1.6 Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work. Unit prices are incorporated into the base bid but are not the sole components thereof.

5.1.7 Bidders are strongly cautioned to ensure that all blanks on the bid form are completely and accurately filled in.

5.1.8 Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

5.1.9 The bid shall include the legal name of Bidder and shall be signed by the person or persons legally authorized to bind the Bidder to a Contract.

The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable under any of the following conditions:

(a) Signature on bid is that of any corporate officer or member of a partnership or partnership in commendam listed on most current annual report on file with Secretary of State.

(b) Signature on bid is that of authorized representative of corporation, partnership, or other legal entity and bid is accompanied by corporate resolution, certification as to the corporate principal, or other documents indicating authority.

(c) Corporation, partnership, or other legal entity has filed in the records of the Secretary of State, an affidavit, resolution or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. A bid submitted by an agency shall have a current Power of Attorney attached certifying agent's authority to bind Bidder. The name and license number on the envelope shall be the same as the entity identified on the Bid Form.

5.1.10 On any bid in excess of fifty thousand dollars (\$50,000.00), the Contractor shall certify that he is licensed under R.S. 37: 2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 Bid Security

5.2.1 No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of five percent (5.0%) of the base bid and all alternates.

The bid security shall be drawn in favor of the University of Louisiana at Lafayette and SHALL be in the form of a Bid Bond (Insurance Company), Bank Money Order, Certified Check or Cashier's Check. It shall become the property of the Owner in the event the contract and any performance bond are not executed within the time set forth. Bid bond shall be written by a surety or insurance company currently on the US Department of the Treasury Financial Management Service List of Approved Bonding Companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an "A-" Rating in the latest printing of the AM Best's Key Rating Guide to write individual bonds up to ten percent (10%) of policyholders' surplus as shown in the AM Best's Key Rating Guide.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within ten (10) days after written notice that the instrument is ready for his signature.

Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

5.2.2 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, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 Submission of Bids

5.3.1 The Bid shall be sealed in an opaque envelope. The bid envelope shall be identified on the outside with the name of the project, file number, and the name, address, and license number of the Bidder.

The envelope shall contain **only one bid form** and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to the Purchasing Department at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by United States Mail, or express delivery, shall disqualify the bid.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Bid Enclosed" on the face thereof. Such bids shall be sent by Registered or Certified Mail, Return Receipt Requested, addressed to:

University of Louisiana at Lafayette
Purchasing Department,
P. O. Box 40197
Lafayette, LA 70504.

Bids sent by express delivery shall be delivered to:

University of Louisiana at Lafayette
Purchasing Department
Martin Hall, Room 123
104 University Circle
Lafayette, LA 70503

5.3.2 Bids shall be deposited at the designated location prior to the time on the date for receipt of bids indicated in the Advertisement for Bids, or any extension thereof made by addendum. Bids received after the time and date for receipt of bids will be returned unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

5.3.4 Oral, telephonic or telegraphic bids are invalid and shall not receive consideration. Owner shall not consider notations written on outside of bid envelope which have the effect of amending the bid. Written modifications enclosed in the bid envelope, and signed or initialed by the Contractor or his representative, shall be accepted.

5.4 Modification or Withdrawal of Bid

5.4.1 A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Bid Document, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 38:2214 which states, in part, "Bids containing patently obvious mechanical, clerical or mathematical errors may be withdrawn by the Contractor if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty eight hours of the Bid Opening excluding Saturdays, Sundays and legal holidays".

5.4.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

5.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

5.4.4 Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

ARTICLE 6

CONSIDERATION OF BIDS

6.1 Opening of Bids

6.1.1 The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 Rejection of Bids

6.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.

6.3 Acceptance of Bid

6.3.2 It is the intent of the Owner, if he accepts any alternates, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order which does not affect determination of the Low Bidder.

ARTICLE 7

POST-BID INFORMATION

7.1 Submissions

7.1.1 At the Pre-Construction Conference, the Contractor shall submit the following information to the Architect. (If Applicable)

7.1.1.1 A designation of the work to be performed by the Contractor with his own forces.

7.1.1.2 A breakdown of the Contract cost attributable to each item listed in the Schedule of Values Form (attached). No payments will be made to the Contractor until this is received.

7.1.1.3 The proprietary names and the suppliers of principal items or systems of material and equipment proposed for the work.

7.1.1.4 A list of names and business domiciles of all Subcontractors, manufacturers, suppliers or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the work. It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, suppliers and labor.

7.1.2 The Contractor will be required to establish to the satisfaction of the Architect the reliability and responsibility of the proposed Subcontractors to furnish and perform the work described in the sections of the Specifications pertaining to such proposed Subcontractor's respective trades. The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's/or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

7.1.3 Subcontractors and other persons and organizations selected by the Bidder must be used on the work for which they were proposed and shall not be changed except with the written approval of the Owner and the Architect.

7.1.4 In accordance with La. R.S. 38:2227, LA. R.S. 38:2212.10 and LA. R.S. 23:1726(B) each bidder on this project must submit a completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package. The Attestations Affidavit form shall be submitted to the Purchasing Department within 10 days **after** the opening of bids.

ARTICLE 8

PERFORMANCE AND PAYMENT BOND

8.1 Bond Required

8.1.1 The Contractor shall furnish and pay for a Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent or attorney-in-fact, in an amount equal to 100% of the Contract amount. Surety must be listed currently on the U. S. Department of Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the contract amount, or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of \$500,000. However, a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A. M. Best's Key Rating Guide shall not be subject to the \$500,000 limitation, provided that the contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-in-fact. The Bond shall be in favor of the State of Louisiana, Office of Facility Planning and Control.

8.2 Time of Delivery and Form of Bond

8.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.

8.2.2 The Bidder shall require the Attorney-in-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of Attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 Form to be Used

9.1.1 Form of the Contract to be used shall be furnished by the Purchasing Department.

9.2 Award

9.2.1 Before award of the Contract, the successful Bidder shall furnish to the Owner a copy of a Disclosure of Ownership Affidavit stamped by the Secretary of State, a certified copy of the minutes of the corporation or partnership meeting which authorized the party executing the bid to sign on behalf of the Contractor.

9.2.2 In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents

9.2.3 When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract Between Owner and Contractor is duly executed.

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions modify, change, delete from or add to the General Conditions of the Contract for Construction, AIA Document A201, 2007 Edition. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

Articles, Paragraphs, Subparagraphs or Clauses modified or deleted have the same numerical designation as those occurring in the General Conditions.

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1. THE CONTRACT DOCUMENTS

In Subparagraph 1.1.1 delete the third sentence, and add the following sentence:

The Contract Documents shall include the Bid Documents as listed in the Instructions to Bidders and any modifications made thereto by addenda.

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE [REFER TO R.S. 38:2317]

1.5.1 Delete the first sentence of the paragraph.

1.5.1 In the third sentence: delete the remainder after the word “publication”.

ARTICLE 2

OWNER

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 Delete this paragraph.

2.2.2 In the first sentence, delete: all before “...the Owner shall secure...”

ARTICLE 3

CONTRACTOR

3.4 LABOR AND MATERIALS

3.4.2 Delete this paragraph.

3.4.3 Delete this paragraph and substitute with the following:
Contractor and its employees, officers, agents, representatives, and Subcontractors shall conduct themselves in an appropriate and professional manner, in accordance with the Owner’s requirements, at all times while working on the Project. Any such individual who behaves in an inappropriate manner or who engages in the use of inappropriate language or conduct while on Owner’s property, as determined by the Owner, shall be removed from the Project at the Owner’s request. Such individual shall not be permitted to return without the written permission of the Owner. 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 its Subcontractor as a result of the removal of an individual from the Owner’s property pursuant to this paragraph. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS (R.S. 40:1724[A])

3.7.1 Delete Subparagraph 3.7.1

3.7.2 In paragraph 3.7.2, replace the word “public” with the word “State”.

Delete Subparagraph 3.7.5 and substitute the following:

3.7.5 If, during the course of the Work, the Contractor discovers human remains, unmarked burial or archaeological sites, burial artifacts, or wetlands, which are not indicated in the Contract Documents, the Contractor shall follow all procedures mandated by State and Federal law, including but not limited to L.R.S. 8:671 et seq., R.S. 49:213.1 et seq., and Sections 401 & 404 of the Federal Clean Water Act. Request for adjustment of the Contract Sum and Contract Time arising from the existence of such remains or features be submitted in writing to the Owner pursuant to the Contract Documents.

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3.8 ALLOWANCES

Delete Subparagraph 3.8.1, 3.8.2, and 3.8.3 in their entirety and add the following new
3.8.1:

Subparagraph

3.8.1 Allowances shall not be made on any of the Work.

3.9 SUPERINTENDENT

3.9.1 Add the following to the end of the paragraph: Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONTRACTOR’S CONSTRUCTION SCHEDULES

3.10.1 Add the following:

For projects with a contract sum greater than \$1,000,000.00, the Contractor shall include with the schedule, for the Owner’s and Architect’s information, a network analysis to identify those tasks which are on the critical path, i.e. where any delay in the completion of these tasks will lengthen the project timescale, unless action is taken. A revised schedule shall be submitted with each Application and Certificate for Payment. No payment will be made until this schedule is received.

3.10.3 Delete the word “...general...” Add the following: If the Work is not on schedule, as determined by the Architect, and the Contractor fails to take action to bring the Work on schedule, then the Contractor shall be deemed in default under this Contract and the progress of the Work shall be deemed unsatisfactory. Such default may be considered grounds for termination by the Owner for cause in accordance with 14.2.

3.10.4 Add the following: Submittal by the contractor of a schedule or other documentation showing a completion date for his Work prior to the completion date stated in the contract shall not impose any obligation or responsibility on the Owner or Architect for the earlier completion date.

3.10.5 Add the following: In the event the Owner employs a commissioning consultant, the Contractor shall cooperate fully in the commissioning process and shall require all subcontractors and others under his control to cooperate. The purpose of such services shall be to ensure that all systems perform correctly and interactively according to the provisions of the Contract Documents.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following:

This requirement is of the essence of the contract. The Architect shall determine the value of these documents and this amount shall not be approved for payment to the Contractor until all of the listed documents are delivered to the Architect in good order, completely marked with field changes and otherwise complete in all aspects.

ARTICLE 4

ARCHITECT

4.1 GENERAL

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 of Louisiana, identified as such in the Agreement and is referred to throughout the Documents as if singular in number.

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4.1.3 Delete the words: “as to whom the Contractor has no reasonable objection and”

4.2 ADMINISTRATION OF THE CONTRACT

4.2.1 In the first sentence, delete the phrase: “the date the Architect issues the final Certificate for Payment” and replace with the phrase “final payment is due, and with the Owner’s concurrence, from time to time during the one year period for correction of described in Section 12.2.”

~~Wk~~

4.2.2 In the first sentence, after the phrase: “become generally familiar with”; insert the following: “and to keep the Owner informed about.”

In the first sentence, after the phrase “portion of the Work completed”, insert the following: “to endeavor to guard the Owner against defects and deficiencies in the Work,”

4.2.10 Add the following sentence to the end of Subsection 4.2.10:

There will be no restriction on the Owner having a Representative.

4.2.11 Add the following sentence to the end of Subsection 4.2.11:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 after written request is made for them.

~~ds~~

4.2.14 Insert the following sentence between the second and third sentences of Subsection 4.2.14:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 after written request is made for them.

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ARTICLE 5

SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Subparagraph 5.2.1, and substitute the following:

- 5.2.1 Unless otherwise required by the Contract Documents, the Contractor shall furnish at the Pre-Construction Conference, to the Owner and the Architect, in writing, the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. No Contractor payments shall be made until this 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 an increase in the contract sum due to a problem with performance or non-performance of a subcontractor.

Delete Subparagraph 5.2.3 and 5.2.4 and add the following:

- 5.2.3 The contractor shall notify the Owner when a subcontractor is to be changed and substituted with another subcontractor.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Delete Subparagraphs 5.4.1, 5.4.2 and 5.4.3

ARTICLE 7

CHANGES IN THE WORK

7.1 GENERAL

Add the following paragraph:

- 7.1.4 As part of the pre-construction conference submittals, the contractor is to submit the following prior to the commencement of Work:

Fixed job site overhead cost itemized with documentation to support daily rates.
Bond Premium Rate with supporting information from the General Contractor's carrier.
Labor Burden by trade for both Subcontractors and General Contractor.
Internal Rate Charges for all significant company owned equipment.

Failure to submit this information as part of the pre-construction submittals shall prohibit the Contractor from claiming these items as costs on any change order issued on the project.

7.2 CHANGE ORDERS

Delete Subparagraph clause 7.2.1, and substitute the following paragraphs:

- 7.2.1 A Change Order is a written order to the Contractor prepared by the Architect and signed by the Owner and the Architect, issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his

agreement therewith, including the adjustment in the Contract Sum or the Contract Time. Any reservation of rights, stipulation, or other modification made on the change order by the contractor will have no effect.

7.2.2 “Cost of the Work” for the purpose of Change Orders shall be costs required to be incurred in performance of the Work and paid by the Contractor and Subcontractors which shall consist of:

7.2.2.1 Wages paid direct labor personnel, delineating a labor burden markup for applicable payroll taxes, worker’s compensation insurance, unemployment compensation, and social security taxes.

7.2.2.2 Cost of all materials and supplies, including the identification of each item and its cost including taxes.

7.2.2.3 Identify each necessary piece of machinery and equipment and its individual cost including taxes.

7.2.2.4 Increases in insurance premiums for those forms of insurance required by Article 11 of these Supplementary Conditions and only for those forms.

7.2.2.5 Bond costs.

Credit will not be required for Overhead and Profit.

7.2.3 Overhead and Profit - The Contractor and Subcontractor shall be due job-site and home office fixed overhead and profits on the Cost of the Work, but shall not exceed a total of 25% of the direct cost of any portion of Work:

The credit to the Owner resulting from a change in the Work shall be the sum of those items above, except credit will not be required for Overhead and Profit. Where a change results in both credits to the Owner and extras to the Contractor for related items, overhead and profit will only be computed on the net extra cost to the Contractor.

7.2.4 The cost to the Owner resulting from a change in the Work shall be the sum of: Cost of the Work (as defined at 7.2.2) and Overhead and Profit (as defined at 7.2.4), and shall be computed as follows:

7.2.4.1 When all of the Work is General Contract Work; 15% markup on the Cost of the Work.

7.2.4.2 When the Work is all Subcontract Work; 15% markup on the Cost of the Work for Subcontractor’s Overhead and Profit, plus 10% markup on the Cost of the Work, not including the Subcontractor’s Overhead and Profit markup, for General Contractor’s Overhead and Profit.

7.2.4.3 When the Work is a combination of General Contract Work and Subcontract

Work; that portion of the direct cost that is General Contract Work shall be computed per 7.2.4.1 and that portion of the direct cost that is Subcontract Work shall be computed per 7.2.4.2.

Premiums for the General Contractor's bond may be included, but after the markup is added to the Cost of the Work.

7.2.4.4 Subcontract cost shall consist of the items in 7.2.2 above plus Overhead and Profit as defined in 7.2.4.

7.2.5 Before a Change Order is prepared, the Contractor shall provide and deliver to the Architect the following information concerning the Cost of the Work, not subject to waiver, within a reasonable time after being notified to prepare said Change Order:

A detailed itemized list of labor, material and equipment costs for the General Contractor's Work including quantities and unit costs for each item of labor, material and equipment.

An itemized list of labor, material and equipment costs for each Subcontractor's and/or Sub-Subcontractor's Work including quantities and unit costs for each item of labor, material and equipment.

7.2.6 After a Change Order has been approved, no future requests for extensions of time or additional cost shall be considered for that Change Order.

7.2.7 The Contractor will be due extended fixed job-site overhead for time delays only when complete stoppage of Work occurs causing a contract completion extension, and the Contractor is unable to mitigate financial damages through replacement Work. The stoppage must be due to acts or omissions solely attributable to the Owner. In all cases the Contractor is to notify the Architect in writing as required by Article 15.1.2. Reasonable proof may be required by the architect that alternate Work could not be performed. Reasonable proof may be required by the Architect that the stoppage affected the Completion Date.

7.2.8 "Cost of the Work" whether General Contract cost or Subcontract cost shall not apply to the following:
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 on the Contractor's capital employed for the Work.

Overhead and general expenses of any kind or the cost of any item not specifically and expressly included above in Cost of the Work.

Cost of supervision not specifically required by the Change Order.

7.2.9 When applicable as provided by the Contract, the cost to Owner for Change Orders shall be determined by quantities and unit prices. The quantity of any item shall be as submitted by the Contractor and approved by the Architect. Unit prices shall cover cost of Material, Labor, Equipment, Overhead and Profit.

Add the following:

7.2.10 Unless otherwise agreed to by the Owner and Contractor, the Contractor shall submit all ~~changeorder~~ documents through the web based electronic document management system designated by Facility Planning and Control. Any fees charged by the provider of the system shall be the responsibility of the Owner. In using this system the Contractor shall strictly adhere to the naming conventions for change orders assigned by Facility Planning and Control.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.3 In the first sentence after following methods add: “, but not to exceed a specified amount.”

7.3.7 Delete the following from .1 of the list: “fringe benefits required by agreement or custom,”

Delete the following from .4 of the list: “permit fees,”

Delete the following from .5 of the list: “and field office personnel”

7.3.9 Delete Subparagraph 7.3.9 and substitute the following:

Pending final determination of the total costs of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties’ agreement with part or all of such costs.

ARTICLE 8

TIME

8.1 DEFINITIONS

Add the following:

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 to Subparagraph 8.2.1 the following:

Completion of the Work must be within the Time for Completion stated in the Agreement, subject to such

extensions as may be granted under Section 8.3. The Contractor agrees to commence Work not later than fourteen (14) days after the transmittal date of Written Notice to Proceed from the Owner and to substantially complete the project within the time stated in the Contract. The Owner will suffer financial loss if the project is not substantially complete in the time set forth in the Contract Documents. The Contractor and the Contractor's Surety shall be liable for and shall pay to the Owner the sum stated in the Contract Documents as fixed, agreed and liquidated damages for each consecutive calendar day (Saturdays, Sundays and holidays included) of delay until the Work is substantially complete. The Owner shall be entitled to the sum stated in the Contract Documents. Such Liquidated Damages shall be withheld by the Owner from the amounts due the Contractor for progress payments.

Delete Subparagraph 8.2.2

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 In the first sentence after the words Owner pending delete the words: "mediation and arbitration" and add the word: "litigation" and delete the last word: "determine" and add the following: "recommend, subject to Owner's approval of Change Order. If the claim is not made within the limits of Article 15, all right for future claims for that month are waived."

ARTICLE 9

PAYMENTS AND COMPLETION

9.2 SCHEDULE OF VALUES

Delete Subparagraph 9.2 and substitute the following:

9.2 At the Pre-Construction Conference, the Contractor shall submit to the Owner and the Architect a Schedule of Values prepared as follows:

9.2.1 The attached Schedule of Values Format shall be used. If applicable, the cost of Work for each section listed under each division, shall be given. The cost for each section shall include Labor, Materials, Overhead and Profit.

9.2.2 The Total of all items shall equal the Total Contract Sum. This schedule, when approved by the Architect, shall be used as a basis for the Contractor's Applications for Payment and it may be used for determining the cost of the Work in deductive change orders, when a specific item of Work listed on the Schedule of Values is to be removed. Once the Schedule of Values is submitted at the Pre-Construction Conference, the schedule may not be modified without approval from the Owner and Architect.

9.3 APPLICATIONS FOR PAYMENT

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

9.3.1 Monthly, the Contractor shall submit to the Architect an Application & Certificate for Payment on the AIA Document G702-1992, accompanied by AIA Document G703-1992, and 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 for the value of labor and materials incorporated into the Work and of materials, suitably stored, at the site as of the twenty-fifth day of the preceding month, less normal retainage as follows, per R.S. 38:2248:

9.3.1.1 Projects with Contract price up to \$500,000.00 – 10% of the Contract price.

9.3.1.2 Projects with Contract price of \$500,000.00, or more – 5% of the Contract price.

9.3.1.3 No payment will be made until the revised schedule required by Section 3.10.1 is received.

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, consent of surety and invoice 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. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner’s title to such materials and equipment or otherwise protect the Owner’s interest, including applicable insurance.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Subparagraph 9.5.1.7: Delete the word “repeated”.

Delete Subparagraph 9.5.3

9.6 PROGRESS PAYMENTS

Delete Subparagraph 9.6.1 and substitute the following:

9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment within twenty days except for projects funded fully or in part by a Federal reimbursement program. For such projects the Owner will make payment in a timely manner consistent with reimbursement.

9.6.2 Delete the phrase: “no later than seven days” from the first sentence.

After the end of the second sentence, add the following:

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 the receipt of

payment from the Owner. If not paid, a penalty in the amount of ½ of 1% per day is due, up to a maximum of 15% from the expiration date until paid. The contractor or subcontractor, whichever is applicable, is solely responsible for payment of a penalty.

9.6.4 Delete the first two sentences of Subparagraph 9.6.4 and add the following to the end of the Subparagraph:

Pursuant to La. R.S. 38:2242, when the Owner receives any claim of nonpayment arising out of the Contract, the Owner shall deduct 125% of such claim from the Contract Sum. The Contractor, or any interested party, may deposit security, in accordance with La. R.S. 38:2242.2, guaranteeing payment of the claim with the recorder of mortgages of the parish where the Work has been done. When the Owner receives original proof of such guarantee from the recorder of mortgages, the claim deduction will be added back to the Contract Sum.

9.7 FAILURE OF PAYMENT

Delete Subparagraph 9.7

9.8 SUBSTANTIAL COMPLETION: Delete this section and substitute the following:

9.8 SUBSTANTIAL COMPLETION

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. The Architect shall determine if the project is substantially complete in accordance with this Subparagraph.

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

9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work is substantially complete. A prerequisite to the Work being considered as substantially complete is the Owner's receipt of the executed Roofing Contractor's and Roofing Manufacturer's guarantees, where roofing Work is part of the Contract. Prior to inspection by the Architect, the Contractor shall notify the Architect that the project is ready for inspection by the State Fire Marshal's office. 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 the Work can be considered 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.

- 9.8.4 When the Architect determines that the project is Substantially Complete, he shall prepare a punch list of exceptions and the dollar value related thereto. The monetary value assigned to this list will be the sum of the cost estimate for each particular item of Work the Architect develops based on the mobilization, labor, material and equipment costs of correcting the item and shall be retained from the monies owed the contractor, above and beyond the standard lien retainage. The cost of these items shall be prepared in the same format as the schedule of values. At the end of the 45 day lien period payment shall be approved for all punch list items completed up to that time. After that payment, none of the remaining funds shall be due the contractor until all punch list items are completed and are accepted by the Architect. If the dollar value of the punch list exceeds the amount of funds, less the retainage amount, in the remaining balance of the Contract, then the Project shall not be considered as substantially complete. If funds remaining are less than that required to complete the Work, the Contractor shall pay the difference.
- 9.8.5 When the preparation of the punch list is complete the Architect shall prepare a Recommendation of Acceptance incorporating the punch list and submit it to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of Building Contract which shall establish the Date of Substantial Completion. The Contractor will record the Notice of Acceptance with the Clerk of Court in the Parish in which the Work has been performed. If the Notice of Acceptance has not been recorded seven (7) days after issuance, the Owner may record the Acceptance at the Contractor's expense. All additive change orders must be processed before issuance of the Recommendation of Acceptance. The Owner will not be responsible for payment for any Work associated with change orders that is not incorporated into the contract at the time of the Recommendation of Acceptance.
- 9.8.6 Warranties required by the Contract Documents shall commence on the date of Acceptance 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.
- 9.8.7 If all punch list items have not been completed by the end of the forty-five (45) day lien period, through no fault of the Architect or Owner, 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, the Surety has not completed the punch list, through no fault of the Architect or Owner, the Owner may, at his option, contract 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 state contracts. If the surety fails to complete the punch list within the stipulated time period, the Owner may not accept bonds submitted, in the future, by the surety.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 Delete paragraph and substitute the following:

Partial Occupancy is that stage in the progress of the Work when a designated portion of the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the designated portion of the Work for its intended use. The Owner may occupy or use any substantially completed portion of the Work so designated by separate agreement with the Contractor and authorized by public authorities having jurisdiction over the Work. Such occupancy or use may commence provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers the designated portion substantially complete the Contractor shall prepare and submit a list to the Architect as provided under Subparagraph 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonable withheld.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 After the first sentence, add the following:

If the Architect does not find the Work acceptable under the Contract Documents, 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 \$175.00/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.

9.10.4 Replace with the following:

The making of final payment shall not constitute a waiver of claims by the Owner for the following:

9.10.4.1 Claims, security interests or encumbrances arising out of the Contract and unsettled;

9.10.4.2 Failure of the Work to comply with the requirements of the Contract Documents irrespective of when such failure is discovered; or

9.10.4.3 Terms of special warranties required by the Contract Documents.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.2 In the first sentence, between the words: “bearing on and safety”, add the words: “the health and,”

10.3 HAZARDOUS MATERIALS

10.3.1 In the first sentence after (PCB) add: “or lead”

10.3.2 After the first sentence, delete all remaining sentences.

Add at the end: “The Contract time shall be extended appropriately.”

10.4 EMERGENCIES

Delete Subparagraph 10.4 and substitute the following:

10.4 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. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Article 15 and Article 7.

ARTICLE 11

INSURANCE AND BONDS

Delete all of Paragraphs 11.1, 11.2 and 11.3 and substitute the following:

INSURANCE REQUIREMENTS FOR NEW CONSTRUCTION, ADDITIONS AND RENOVATIONS

11.1 The Contractor shall purchase and maintain without interruption 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, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

11.2 MINIMUM SCOPE AND LIMITS OF INSURANCE

11.2.1 Worker’s Compensation

Worker’s Compensation insurance shall be in compliance with the Worker’s Compensation law of the State of Louisiana. Employers Liability is included with a minimum limit of \$500,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or maritime law coverage shall be included and the Employers Liability limit increased to a minimum of \$1,000,000. A.M. Best’s insurance company rating requirement may be waived for Worker’s compensation coverage only.

11.2.2 Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

The aggregate loss limit must apply to each project. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

Type of Construction	Projects up to \$1,000,000	Projects over \$1,000,000 up to \$10,000,000	Projects over \$10,000,000
New Buildings:			
Each Occurrence Minimum Limit	\$1,000,000	\$2,000,000	\$4,000,000
Per Project Aggregate	\$2,000,000	\$4,000,000	\$8,000,000
Renovations: The building(s) value for the Project will be released if applicable			
Each Occurrence Minimum Limit	\$1,000,000**	\$2,000,000**	\$4,000,000**
Per Project Aggregate	2 times per occur limit**	2 times per occur limit**	2 times per occur limit**

**While the minimum Combined Single Limit of \$1,000,000 is required for any renovation, the limit is calculated by taking 10% of the building value and rounding it to the nearest \$1,000,000 to get the insurance limit. Example: Renovation on a \$33,000,000 building would have a calculated \$3,000,000 combined single limit of coverage (33,000,000 times .10 = 3,300,000 and then rounding down to \$3,000,000). If the calculated limit is less than the minimum limit listed in the above chart, then the amount needed is the minimum listed in the chart. Maximum per occurrence limit required is \$10,000,000 regardless of building value. The per project aggregate limit is then calculated as twice the per occurrence limit.

11.2.3 Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-

bodily injury and property damage liability for owned, hired and non-owned automobiles.

11.2.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability and Automobile Liability only.

11.2.5 Builder's Risk

Builder's Risk Insurance shall be in an amount equal to the greater of the fully-completed project value or the amount of the construction contract including any amendments and shall be upon the entire Work included in the contract. The policy shall provide coverage equivalent to the ISO form number CP 10 20, Broad Form Causes of Loss (extended, if necessary, to include the perils of wind, earthquake, collapse, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure). The policy must include architects' and engineers' fees necessary to provide plans, specifications and supervision of Work for the repair and/or replacement of property damage caused by a covered peril, not to exceed 10% of the cost of the repair and/or replacement.

Flood coverage shall be provided by the Contractor on the first floor and below for projects North of the Interstate Corridor beginning at the Texas – Louisiana border at Interstate 10 East to the Baton Rouge junction of Interstate 12, East to Slidell junction with Interstate 10 to the Louisiana – Mississippi border. If flood is included in the builder's risk insurance policy, then the sub-limit shall not be less than ten percent (10%) of the total contract cost per occurrence. If flood is purchased as a separate policy, the limit shall be ten percent (10%) of the total contract cost per occurrence (with a max of \$500,000 if NFIP). Coverage for roofing projects shall **not** require flood coverage.

On projects South of this corridor, flood coverage shall be provided by the State of Louisiana as the Owner. The Contractor will be liable for the \$5,000 policy deductible from the Notice to Proceed date through the date of final payment of the project in the event of a flood loss.

A Specialty Contractor may provide an installation floater in lieu of a Builder's Risk policy, with the similar coverage as the Builder's Risk policy, upon the system to be installed in an amount equal to the greater of the fully-completed project value or the amount of the contract including any amendments. Flood coverage is not required.

The policy must include coverage for the Owner, Contractor and any subcontractors as their interests may appear.

11.2.6 Pollution Liability (*required when asbestos or other hazardous material abatement is included in the contract*)

Pollution Liability insurance, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days

after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy. The policy shall not be cancelled for any reason, except non-payment of premium.

11.2.7 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

11.3 OTHER INSURANCE PROVISIONS

11.3.1 The policies are to contain, or be endorsed to contain, the following provisions:

11.3.1.1 Worker's Compensation and Employers Liability Coverage

11.3.1.1.1 The insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.

11.3.1.2 General Liability Coverage

11.3.1.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insured's as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (current form approved for use in Louisiana), or equivalent, is to be used.

11.3.1.2.2 The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the Owner shall be excess and non-contributory of the Contractor's insurance.

11.3.1.2.3 The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the policy limits.

11.3.1.3 Builder's Risk

The policy must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy which may also be covered by a State of Louisiana self-insurance or commercial property policy through the Office of Risk Management (ORM), Contractor and its insurer agree to follow the following procedure to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, the Contractor's insurer and either ORM or its commercial

insurance company shall each select a competent and impartial appraiser and notify the other of the appraiser selected. The two appraisers will select a competent and impartial umpire. The appraisers will then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss that must be borne by each policy. If the two appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two shall determine the policy or policies and the amount of the loss. Each insurance company agrees that the decision of the appraisers and the umpire if involved will be binding and final and that neither party will resort to litigation. Each of the two parties shall pay its chosen appraise and bear the cost of the umpire equally.

11.3.1.4 All Coverages

11.3.1.4.1 Coverage shall not be canceled, suspended, or voided by either party (the Contractor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Owner. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy.

11.3.1.4.2 Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.

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

11.3.1.4.4 Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

11.3.2 ACCEPTABILITY OF INSURERS

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance as required in the contract.

11.3.3 VERIFICATION OF COVERAGE

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. 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 are to be received and approved by the Owner before Work commences and upon any contract renewal thereafter. The Certificate Holder must be listed as follows:

State of Louisiana
 Name of Owner
 Owner Address
 City, State, Zip
 Attn: Project # _____

In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision endorsement for each insurance policy. The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Owner, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

11.3.4 SUBCONTRACTORS

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

11.3.5 WORKER'S COMPENSATION INDEMNITY

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

11.3.6 INDEMNIFICATION/HOLD HARMLESS AGREEMENT

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent.

11.4 PERFORMANCE AND PAYMENT BOND

Add the following Subparagraph 11.4.3:

11.4.3 RECORDATION OF CONTRACT AND BOND [38:2241A(2)]

The Owner shall record within thirty (30) days the Contract Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish in which the Work is to be performed.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

At the end of the paragraph, add the following sentences: “If the Contractor fails to correct Work identified as defective within a thirty (30) day period, through no fault of the Designer, the Owner may hold the Contractor in default. If the Owner finds the Contractor in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the nonconforming Work, through no fault of the Architect or Owner, the Owner may contract to have nonconforming Work corrected and hold the Surety and Contractor responsible for the cost, including architectural fees and other indirect costs. If the Surety fails to correct the Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may elect not to accept bonds submitted in the future by the Surety. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts.

12.2.2 AFTER SUBSTANTIAL COMPLETION

12.2.2.1 At the end of the paragraph delete the last sentence and add the following sentences: If the

Contractor fails to correct nonconforming Work within a thirty (30) day period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the nonconforming Work, through no fault of the Architect or Owner, the Owner may contract to have the nonconforming Work corrected and hold the Surety responsible for the cost including architects fees and other indirect costs. Corrections by the Owner shall be in accordance with Section 2.4. If the Surety fails to correct the nonconforming Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may not accept bonds submitted, in the future, by the Surety.

- 12.2.2.1 At the end of the paragraph delete the last sentence and add the following sentences: If the Contractor fails to correct Work covered by warranties within a thirty (30) day period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the warranty Work, through no fault of the Architect or Owner, the Owner may contract to have the warranty Work corrected and hold the Surety responsible for the cost including architects fees and other indirect costs. Corrections by the Owner shall be in accordance with Section 2.4. If the Surety fails to correct the warranty Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may not accept bonds submitted, in the future, by the Surety.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Delete all after the word “located”.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 In the second sentence, delete “Except as ... 13.2.2”

Delete paragraph 13.2.2

13.4 RIGHTS AND REMEDIES

Add the following clause 13.4.3

13.4.3 The Nineteenth Judicial Court in and for the Parish of East Baton Rouge, State of Louisiana shall have sole jurisdiction and venue in any action brought under this contract.

13.5 TESTS AND INSPECTIONS

In Subparagraph 13.5.1, delete the second sentence and substitute the following:

The Contractor shall make arrangements for such tests, inspections and approvals with the Testing Laboratory provided by the Owner, and the Owner shall bear all related costs of tests, inspections and approvals.

Delete the last sentence of Subparagraph 13.5.1

13.6 INTEREST

Delete Paragraph 13.6

13.7 TIME LIMITS ON CLAIMS

Delete Paragraph 13.7 (See L.R.S. 38:2189).

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

Delete clause 14.1.1.4

In Subparagraph 14.1.3, after the word “profit” add the following: “for Work completed prior to stoppage”.

14.2 TERMINATION BY THE OWNER FOR CAUSE

Add the following clause:

14.2.1.5 Failure to complete the punch list within the lien period as provided in 9.8.7.

14.2.3 Add the following sentence:

Termination by the Owner shall not suspend assessment of liquidated damages against the Surety.

14.2.5 Add the following Subparagraph:

If an agreed sum of liquidated damages has been established, termination by the Owner under this Article will not relieve the Contractor and/or surety of his obligations under the liquidated damages provisions and the Contractor and/or surety shall be liable to the Owner for per diem liquidated damages.

ARTICLE 15

CLAIMS AND DISPUTES

15.1 CLAIMS

In the first sentence of Subparagraph 15.1.1, after the word “money”, add the phrase: “extension of time,”

15.1.2 Add the following to the end of the paragraph: A Reservation of Rights and similar stipulations shall not be recognized under this contract as having any effect. A party must make a claim as defined herein within the time limits provided.

15.1.3 In the second sentence of the Subparagraph, delete “the decisions of the Initial Decision Maker” and replace with: “his/her decision”

Delete Paragraph 15.1.5.2 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. At the end of each month, the Contractor shall make one Claim for any adverse weather days occurring within the month. The Claim must be accompanied by sufficient documentation evidencing the adverse days and the impact on construction. Failure to make such Claim within twenty-one (21) days from the last day of the month shall prohibit any future claims for adverse days for that month.

15.1.5.3 Add the following Subparagraph:

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

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

The Contractor shall ask for total adverse weather days. The Contractor’s request shall be considered only for days over the allowable number of days stated above.

Note: Contract is on a calendar day basis.

15.2 INITIAL DECISION

15.2.1 In the second sentence, delete the word “will” and replace with: “shall always”.

In the second sentence, delete the phrase: “unless otherwise indicated in the Agreement.”

In the third sentence, delete the word “mediation” and replace with: “litigation”.

In the third sentence, delete: “unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered.”

15.2.5 In the middle of the first sentence, delete all after the phrase: “rejecting the Claim”.

In the second sentence, delete the phrase: “and the Architect, if the Architect is not serving as the Initial Decision Maker.”

In the third sentence, delete all after: “binding on the parties” and add the following: “except that the Owner may reject the solution or suggest a compromise or both.”

15.2.6 Delete Paragraph.

Delete Subparagraph 15.2.6.1

15.3 MEDIATION

Delete Article 15.3

15.4 ARBITRATION

Delete Article 15.4

GENERAL SPECIFICATIONS

GENERAL REQUIREMENTS

The Contractor shall furnish and install all labor and material necessary to provide and install the complete portion of this contract, including all materials and equipment as shown on the plans. It is the intention of these specifications that all systems be furnished complete with whatever necessary items are required to produce a satisfactory installation in a working order. The Contractor shall be responsible for bringing to the attention of the Owner any shortcomings of the design, or thereby, shall be responsible in full to meet the conditions set forth, that being, the system is to be in a satisfactory working order.

All material shall be installed in accordance with the instructions of the manufacturers. The work shall be done in strict compliance with state and local ordinances governing this class of work. The prospective bidder shall visit the job site and become familiar with all existing conditions found at the site. The Contractor shall become acquainted with all existing factors and conditions which affect the work. Failure to do so shall not relieve meeting the responsibility to install the work correctly.

The Contractor shall protect the entire installation from injury on the project until final acceptance. Failure to do so shall be sufficient cause for the Agent to reject any work.

CONSTRUCTION FORCE

The Contractor shall provide and maintain in full operation at all times during the performance of the contract a sufficient work crew to execute the work with dispatch. The Contractor shall provide a full time superintendent who shall be on the job during all working periods.

The Contractor shall be responsible for maintenance and repair of all equipment installed by him which fails due to substandard workmanship.

PARKING

Contractor shall be responsible for all fees for temporary campus parking permits. The Facility Management department shall request the permits through the UL Parking and Transit department. Contractor shall be required to display the permit on their vehicles at all times while on campus. Failure to do so may result in parking citation.

DEQ NOTIFICATION

The Contractor shall be responsible for the proper notification of the Department of Environmental Quality whenever demolition work is to be performed. Copies of the DEQ Notification Form AAC-2 and any additional correspondence with DEQ shall be copied to the University.

STANDARDS

All materials furnished under this contract shall be designed, constructed and rated in accordance with the latest applicable standards, and shall pass tests as recommended therein.

WORKMANSHIP AND MATERIALS

The workmanship shall conform to the best accepted construction practice. Should it become evident that during the course of construction that the items indicated on the plans, are for any reason undesirable, the Contractor shall

immediately bring the situation to the attention of the Agent for a decision. The Contractor shall be responsible for installing the proper materials as described by the drawings and specifications.

All materials furnished for this project shall be new, undamaged, and bear the label of the Underwriters' Laboratories, Inc. Deliver materials in manufacturer's original package and store on skids so that the materials are off the ground, and so that product labels are exposed for easy inspection.

The Bidder shall base the proposal on materials herein specified. Reference to specific manufacturers or trade names is not intended to limit or indicate preference to specific manufacturers, but to indicate a standard of quality. Written approval from the Agent is required on all substitutions prior to installations.

GUARANTEE

The Contractor shall guarantee new materials and workmanship for a minimum of one (1) full year after formal acceptance of the project. The Contractor will replace defective material and repair all workmanship defects promptly, and absorb all costs.

This provision shall not override any other warranties that are specified herein.

CAMPUS SAFETY POLICY

Contractor shall adhere to the campus safety policy. Information regarding campus safety can be found on the UL Lafayette website at: <http://www.louisiana.edu/ehs>

LOUISIANA ONE CALL

UL Lafayette is a member in the Louisiana One Call system. At least 72 hours before digging anywhere on UL Lafayette property the contractor **must** call 1-800-272-3020 to verify the location of utilities.

EXISTING LANDSCAPING

Contractor is liable for any damages caused to the existing landscaping. All landscaping must be protected from root compaction and other physical damage. Contractor **must** provide three foot high orange construction fencing around the drip line of all trees within the construction site.

ASBESTOS

The contractor **will not** be required to interface with any asbestos containing material (ACM) during this project. The State of Louisiana has conducted an asbestos survey of all buildings on the UL Lafayette campus. The results of the survey are compiled in management plans for each building. The management plans were assembled according to the requirements set forth in the Department of Environmental Quality Required Elements Index. These plans are available for review to anyone interested in the results. The plans are kept on file in the Reserve Reading Room of Edith Garland Dupre' Library.

COORDINATION OF WORK

The Contractor shall inform the Agent each day of his work location before proceeding to work, and each time the Contractor moves into a different area.

PAYMENT

The Contractor may invoice the Owner for work performed on a monthly basis. The work performed shall meet the approval of UL Lafayette. UL Lafayette shall process payment after verification of the invoice.

On projects where a performance bond is specified, the University will withhold ten percent (10%) retainage from all payments for completed work. The retainage will be released to the contractor according to the procedures set forth in the “INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS”, section 10.

FINAL PAYMENT WILL NOT BE ISSUED UNTIL ALL UNIVERSITY KEYS HAVE BEEN RETURNED TO THE FACILITY MANAGEMENT OFFICE.

CLEAN-UP

The Contractor is responsible for the daily clean-up and disposal of all trash and construction debris relating to this project. University dumpsters shall **not** be used for the disposal of debris. Should the Contractor dispose of any debris into University facilities, the cost of removal will be deducted from the University’s final payment under this contract. Occupied areas (e.g.: Classrooms, Offices, Labs, etc.) shall be broom cleaned and vacuumed at the end of the work day to allow use of the room by the university. Debris and materials shall be removed from the rooms to allow use of the room by the university.

INSURANCE

The successful Bidder/Contractor shall carry and maintain Workmen’s Compensation and Public Liability and Property Damage Insurance in accordance with the statutes and laws of the State of Louisiana, and he/she shall furnish the Owner with satisfactory proof of carriage of the insurance required. This coverage shall be in accordance with the *Louisiana Office of Risk Management Procedural Manual for Insurance Requirements in Contracts, Exhibit A*, which can read online at:

<http://doa.louisiana.gov/orm/uw.htm>

This required coverage includes, but is not limited to:

1. Minimum \$1,000,000.00 Comprehensive General Liability coverage per occurrence
2. Minimum \$2,000,000.00 Comprehensive General Liability coverage general aggregate
3. Minimum \$1,000,000.00 Automobile Liability coverage per occurrence.
4. Workman Compensation coverage for all contractor employees, as statutorily required.

Unless otherwise specified in this document, upon award of the Contract, the Contractor shall be required to submit a Certificate of Insurance naming the University as an additional insured for the duration of the Contract.

INDEMNIFICATION

The Contractor will indemnify and hold harmless the Owner and all of their agents and employees from and against all claims, damages, losses, and expenses including attorney’s fees arising out of or resulting from operations under the Contract Documents by the Contractor, and subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, which are caused in whole or in part by any error, omission, or act of any of them. If any and all claims against the Owner or any of their agents or employees by any employee of the Contractor, subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation of the Contractor under this article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under Workmen’s Compensation laws.

Site Lighting
University of Louisiana Lafayette, Louisiana
Thomassee: 15011



Electrical Engineer

Date

The following sections of Division 16 have been prepared by and under the direct supervision of the licensed Electrical Engineer whose seal/stamp appears above.

Site Lighting
University of Louisiana Lafayette, Louisiana
Thomassee: 15011

Electrical Engineer

Date

The following sections of Division 16 have been prepared by and under the direct supervision of the licensed Electrical Engineer whose seal/stamp appears above.

SECTION 16010 - ELECTRICAL GENERAL CONDITIONS

PART 1 - GENERAL

1.1 DESCRIPTION

A. The General Conditions and all pertinent sections are a part of this specification and the Contractor shall consult them in detail for instructions pertaining to his work. He shall consult all other sections of the specifications to determine if he is required to perform any work relative to that particular section.

1.2 SCOPE OF WORK

A. The work contemplated under this specification comprises the furnishing of all labor and materials required and necessary for the complete installation of electrical wiring in conduit for lighting control and power from the various panelboards to each ultimate outlet hereinafter specified and/or shown on the accompanying drawings. Said work shall be done in accordance with the latest edition of the National Electrical Code and all local codes and ordinances. The specifications are intended to describe a complete workable system and bidders shall report any discrepancies or omissions preventing such workability prior to the time their bids are submitted.

B. The work covered by this specification shall be as shown on the plans and called for herein, and shall be comprised generally of the following:

1. Furnish and install light fixtures, wiring, concrete foundations and controls.

C. All equipment installed by this contractor shall be installed in strict accordance with instructions of the manufacturer.

D. He shall install his work to meet existing conditions as found at the building site.

E. The Electrical contractor is referred to the Architectural and Structural details for information in regards to the Architectural details. His work shall be done in strict accordance with local and state ordinances governing this class of work.

1.3 REJECTED WORK AND MATERIALS

A. Should contractor introduce any materials different from those called for and described in specifications or shown on plans, it must on notification from the engineers, be immediately removed from building or premises.

1.4 SHOP DRAWINGS

A. Before proceeding with work and/or within fifteen (15) days award of the General Contract for this work, the Electrical Contractor shall furnish to the Architect/Engineer, complete shop and working drawings of such apparatus, equipment, controls, insulation, etc. to be provided in this project. These drawings shall give dimensions, weights, mounting data, performance curves, and other pertinent information. Shop drawings to be submitted as listed below.

1. Lighting Fixtures

B. The contractor may be required to submit shop drawings on any other material he supplies in construction of this project. These drawings shall be submitted at time requested by Architect/Engineer.

1.5 ADDITIONS AND CHANGES

A. The accompanying drawings show approximate location of feeders, branch circuits, light and power circuits, etc. Complete and accurate details in regard to location of outlets, apparatus, etc. from location shown shall be made before roughing-in and without additional cost to the owner.

1.6 STANDARDS OF MATERIALS AND WORKMANSHIP

A. All materials shall be new and listed by UL as conforming to its standards. Work shall be executed in a workmanlike manner and present a neat finished appearance when completed.

1.7 GUARANTEE

A. The Contractor for this work shall be required to keep the work installed by him in repair and perfect working order for one year from date of completion and final acceptance; said guarantee shall be based on defective materials and substandard workmanship. Contractor shall furnish, free of cost to owner, all materials and labor necessary to comply with this guarantee.

1.8 LAWS, PERMITS AND INSPECTIONS

A. This contractor shall at his own cost obtain all necessary permits, pay all legal fees and charges, and comply with all building and safety laws, ordinances and regulations relating to the building and the public health and safety, including NEC, NFPA, IBC and OSHA.

1.9 TESTS

A. After installation is complete and at such time as the Engineers may direct, Contractor shall conduct an operating test for approval. Equipment shall be demonstrated to operate in accordance with requirements of this specification. The test shall be performed in the presence of Engineers. Contractor shall furnish all instruments and personnel required for the test.

1.10 CUTTING AND PATCHING

A. Contractor shall do all cutting and patching where necessary at his own expense with approval of the Engineers as to cutting of any structural beams or joists, but all patching shall be done by crafts whose work is involved. After initial surfacing has been done, all further cutting, patching, and painting shall be done at this contractor's expense.

1.11 SAFETY PRECAUTIONS

A. Contractor shall furnish and place proper guards for prevention of accidents. He shall provide and maintain any other necessary construction required to secure safety of life or property, including maintenance of sufficient lights during all night hours to secure such protection.

1.12 SUPERVISION

A. Contractor shall personally, or through an authorized and competent representative, constantly supervise the work done from beginning to completion and final acceptance. To the best of his ability he shall keep the same foreman and workmen throughout the project duration. During the progress of the work, it shall be subject to inspection by the representatives of the Engineers, and at these times, the contractor shall furnish the required information.

1.13 INSERTS AND OPENINGS

A. Contractor shall furnish and install all inserts and hangers required to support conduit, cables, wireways, disconnect switches, etc.

1.14 OPENINGS THROUGH WALLS AND FLOORS

A. Provide all slots, sleeved holes and other openings necessary through walls and floors, and through any other parts of the structure. Where conduits pass through walls which are intended as rated fire walls, leave-outs, penetrations or sleeves shall be sealed so as not to interfere with the rating of the wall.

1.15 BACKFILLING

A. Contractor shall be responsible to backfill any trenches for electrical runs under the building, paving, or any area of the site by backfilling the bottom of the trench-up to the top of the conduit with sand, then placing compacted fill in 4" layers using power tamping equipment.

1.16 RECORD DRAWINGS

A. The Contractor shall be provided with a set of prints of the original bidding documents by the Architect. The Contractor shall then have a set of sepia (reproducible plans) made.

B. If the Contractor elects to vary from the contract documents and secures prior approval from the architect for any phase of the work, he shall record in a neat and readable manner, ALL such variances on the print in red. These changes shall then be transferred to the permanent set (sepia) at the completion of the job. Both the sepia and the original print shall be returned to the Engineer for documentation.

C. All deviations from sizes, locations and from all other features of the installations shown in the Contract Documents shall be recorded.

D. In addition, it shall be possible using these drawings to correctly and easily locate, identify and establish sizes of all piping, directions, and the like, as well as other features of work which will be concealed underground and/or in the finished building. Locations of underground work shall be established by dimensions to columns, lines or walls, locating all turns, etc. and by properly referenced centerline.

E. For work concealed in the building, sufficient information shall be given so it can be located with reasonable accuracy and ease. In some cases this may be by dimension. In others, it may be sufficient to illustrate the work on the drawings in relation to the spaces in the building near which it was actually installed. Architect's/Engineer's decision in this matter will be final.

F. The following requirements apply to all “record” drawings:

1. They shall be maintained at the contractor's expense.
2. All such drawings shall be done carefully and neatly and in a form approved by the Engineer.
3. Additional drawings shall be provided as necessary for clarification.
4. They shall be kept up-to-date during the entire course of the work and shall be available upon request for examination by Engineer and when necessary, to establish clearances for other parts of the work.
5. "Record" drawings shall be returned to the Architect upon completion of the work and are subject to approval of the Engineer.
6. The Contractor shall refer to the Architectural section under "RECORD DRAWINGS" for further requirements and procedures.

END OF SECTION 16010

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

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. Supporting devices for electrical components.
2. Concrete equipment bases.
3. Cutting and patching for electrical construction.
4. Touchup painting.

1.3 SUBMITTALS

A. Shop Drawings: Dimensioned plans and sections or elevation layouts of electricity-metering equipment.

B. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

1.5 COORDINATION

A. Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow.

1. Set inserts and sleeves in poured-in-place concrete, masonry work, and other structural components as they are constructed.

B. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Coordinate installing large equipment requiring positioning before closing in the building.

C. Coordinate electrical service connections to components furnished.

1. Coordinate installation and connection of exterior underground utilities and services, including provision for electricity-metering components.

2. Comply with requirements of authorities having jurisdiction.

D. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.

E. Where electrical identification markings and devices will be concealed by acoustical ceilings and similar finishes, coordinate installation of these items before ceiling installation.

PART 2 - PRODUCTS

2.1 SUPPORTING DEVICES

A. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.

B. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel.

C. Slotted-Steel Channel Supports: Flange edges turned toward web, and 9/16-inch- diameter slotted holes at a maximum of 2 inches o.c., in webs.

D. Slotted-Steel Channel Supports: Comply with Specification Section "Metal Fabrications" for slotted channel framing.

1. Channel Thickness: Selected to suit structural loading.

2. Fittings and Accessories: Products of the same manufacturer as channel supports.

E. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.

F. Pipe Sleeves: Schedule 40, galvanized steel, plain ends.

G. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for nonarmored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.

H. Expansion Anchors: Carbon-steel wedge or sleeve type.

I. Toggle Bolts: All-steel springhead type.

J. Powder-Driven Threaded Studs: Heat-treated steel.

2.2 TOUCHUP PAINT

A. For Equipment: Equipment manufacturer's paint selected to match installed equipment finish.

B. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

PART 3 - EXECUTION

3.1 ELECTRICAL EQUIPMENT INSTALLATION

A. Temperature ratings of all equipment lugs and terminations shall be compatible with those of the wire or cable per NEC 110-14(C) and 110-40 as applicable.

B. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.

C. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.

D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.

E. Right of Way: Give to raceways and piping systems installed at a required slope.

3.2 ELECTRICAL SUPPORTING DEVICE APPLICATION

A. Damp Locations and Outdoors: Hot-dip galvanized materials or nonmetallic, U-channel system components.

B. Dry Locations: Steel materials.

C. Support Clamps for PVC Raceways: Click-type clamp system.

D. Selection of Supports: Comply with manufacturer's written instructions.

E. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four; minimum of 200-lb design load.

3.3 SUPPORT INSTALLATION

A. Install support devices to securely and permanently fasten and support electrical components.

B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.

C. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.

D. Size supports for multiple raceway installations so capacity can be increased by a 25 percent minimum in the future.

E. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.

F. Install 1/4-inch- diameter or larger threaded steel hanger rods, unless otherwise indicated.

G. Spring-steel fasteners specifically designed for supporting single conduits or tubing may be used instead of malleable-iron hangers for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to slotted channel and angle supports.

H. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.

I. Simultaneously install vertical conductor supports with conductors.

J. Separately support cast boxes that are threaded to raceways and used for fixture support. Support sheet-metal boxes directly from the building structure or by bar hangers. If bar hangers are used, attach bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches from the box.

K. Install metal channel racks for mounting cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices unless components are mounted directly to structural elements of adequate strength.

L. Install sleeves for cable and raceway penetrations of concrete slabs and walls unless core-drilled holes are used. Install sleeves for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.

M. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated:

1. Wood: Fasten with wood screws or screw-type nails.
2. Masonry: Toggle bolts on hollow masonry units and expansion bolts on solid masonry units.
3. New Concrete: Concrete inserts with machine screws and bolts.
4. Existing Concrete: Expansion bolts.

5. Instead of expansion bolts, threaded studs driven by a powder charge and provided with lock washers may be used in existing concrete.
6. Steel: Welded threaded studs or spring-tension clamps on steel.
7. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or other items.
8. Light Steel: Sheet-metal screws.
9. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load.

3.4 FIRESTOPPING

A. Apply firestopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly.

3.5 CUTTING AND PATCHING

A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.

B. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

3.6 FIELD QUALITY CONTROL

A. Inspect installed components for damage and faulty work, including the following:

1. Raceways.
2. Building wire and connectors.
3. Supporting devices for electrical components.
4. Electrical identification.
5. Electricity-metering components.
6. Concrete bases.
7. Cutting and patching for electrical construction.
8. Touchup painting.

B. Test Owner's electricity-metering installation for proper operation, accuracy, and usability of output data.

1. Connect a load of known kW rating, 1.5 kW minimum, to a circuit supplied by the metered feeder.
2. Turn off circuits supplied by the metered feeder and secure them in the "off" condition.

3. Run the test load continuously for eight hours, minimum, or longer to obtain a measurable meter indication. Use a test load placement and setting that ensure continuous, safe operation.
4. Check and record meter reading at end of test period and compare with actual electricity used based on test load rating, duration of test, and sample measurements of supply voltage at the test load connection. Record test results.
5. Repair or replace malfunctioning metering equipment or correct test setup; then retest. Repeat for each meter in installation until proper operation of entire system is verified.

3.7 REFINISHING AND TOUCHUP PAINTING

A. Refinish and touch up paint. Paint materials and application requirements are specified in Specification Section "Painting."

1. Clean damaged and disturbed areas and apply primer, intermediate, and finish coats to suit the degree of damage at each location.
2. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.
3. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
4. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

3.8 CLEANING AND PROTECTION

A. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.

B. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

END OF SECTION 16050

SECTION 16060 - GROUNDING AND BONDING

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 grounding of electrical systems and equipment. Grounding requirements specified in this Section may be supplemented by special requirements of systems described in other Sections.

B. Related Sections include the following:

1. Division 2 Section "Underground Ducts and Utility Structures" for ground test wells.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product Data: For the following:

1. Ground rods.

C. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

D. Field Test Reports: Submit written test reports to include the following:

1. Test procedures used.

2. Test results that comply with requirements.

3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Testing agency as defined by OSHA in 29 CFR 1910.7 or a member company of the InterNational Electrical Testing Association and that is acceptable to authorities having jurisdiction.

1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association to supervise on-site testing specified in Part 3.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1. Comply with UL 467.

C. Comply with NFPA 70; for overhead-line construction and medium-voltage underground construction, comply with IEEE C2.

D. Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Grounding Conductors, Cables, Connectors, and Rods:
 - a. Apache Grounding/Erico Inc.
 - b. Boggs, Inc.
 - c. Chance/Hubbell.
 - d. Copperweld Corp.
 - e. Dossert Corp.
 - f. Erico Inc.; Electrical Products Group.
 - g. Framatome Connectors/Burndy Electrical.
 - h. Galvan Industries, Inc.
 - i. Harger Lightning Protection, Inc.
 - j. Hastings Fiber Glass Products, Inc.
 - k. Heary Brothers Lightning Protection Co.
 - l. Ideal Industries, Inc.
 - m. ILSCO.
 - n. Kearney/Cooper Power Systems.
 - o. Korns: C. C. Korns Co.; Division of Robroy Industries.
 - p. Lightning Master Corp.
 - q. Lyncole XIT Grounding.
 - r. O-Z/Gedney Co.; a business of the EGS Electrical Group.
 - s. Raco, Inc.; Division of Hubbell.
 - t. Robbins Lightning, Inc.
 - u. Salisbury: W. H. Salisbury & Co.
 - v. Superior Grounding Systems, Inc.
 - w. Thomas & Betts, Electrical.

2.2 GROUNDING CONDUCTORS

A. For insulated conductors, comply with Division 16 Section "Conductors and Cables."

B. Material: Copper.

C. Equipment Grounding Conductors: Insulated with green-colored insulation.

D. Isolated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green and two bands of yellow.

E. Grounding Electrode Conductors: Stranded cable.

F. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.

G. Bare Copper Conductors: Comply with the following:

1. Solid Conductors: ASTM B 3.

2. Assembly of Stranded Conductors: ASTM B 8.

3. Tinned Conductors: ASTM B 33.

H. Copper Bonding Conductors: As follows:

1. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG copper conductor, 1/4 inch in diameter.

2. Bonding Conductor: No. 4 or No. 6 AWG, stranded copper conductor.

3. Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

4. Tinned Bonding Jumper: Tinned-copper tape, braided copper conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

I. Ground Conductor and Conductor Protector for Wood Poles: As follows:

1. No. 4 AWG minimum, soft-drawn copper conductor.

2. Conductor Protector: Half-round PVC or wood molding. If wood, use pressure-treated fir, or cypress or cedar.

J. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with insulators.

2.3 CONNECTOR PRODUCTS

A. Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items.

B. Bolted Connectors: Bolted-pressure-type connectors, or compression type.

C. Welded Connectors: Exothermic-welded type, in kit form, and selected per manufacturer's written instructions.

2.4 GROUNDING ELECTRODES

A. Ground Rods: Sectional type; **copper-clad** steel.

1. Size: 3/4 by 120 inches in diameter.

PART 3 - EXECUTION

3.1 APPLICATION

A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.

B. In raceways, use insulated equipment grounding conductors.

C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections, except those at test wells.

D. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.

E. Ground Rod Clamps at Test Wells: Use bolted pressure clamps with at least two bolts.

F. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.

1. Use insulated spacer; space 1 inch from wall and support from wall 6 inches above finished floor, unless otherwise indicated.

2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the specified height above the floor.

G. Underground Grounding Conductors: Use copper conductor, No. 2/0 AWG minimum. Bury at least 24 inches below grade or bury 12 inches above duct bank when installed as part of the duct bank.

3.2 EQUIPMENT GROUNDING CONDUCTORS

A. Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.

B. Install equipment grounding conductors in all feeders and circuits.

C. Install insulated equipment grounding conductor with circuit conductors for the following items, in addition to those required by NEC:

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.

D. Busway Supply Circuits: Install insulated equipment grounding conductor from the grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.

E. Computer Outlet Circuits: Install insulated equipment grounding conductor in branch-circuit runs from computer-area power panels or power-distribution units.

F. Isolated Grounding Receptacle Circuits: Install an insulated equipment grounding conductor connected to the receptacle grounding terminal. Isolate grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.

G. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure, and install a separate equipment grounding conductor. Isolate equipment grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.

H. Nonmetallic Raceways: Install an equipment grounding conductor in nonmetallic raceways unless they are designated for telephone or data cables.

I. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.

1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-12-inch grounding bus.

2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.

J. et al Poles Supporting Outdoor Lighting Fixtures: Provide a grounding electrode in addition to installing a separate equipment grounding conductor with supply branch-circuit conductors.

3.3 COUNTERPOISE

A. Ground the steel framework of the building with a driven ground rod at the base of every corner column and at intermediate exterior columns at distances not more than 60 feet apart. Provide a grounding conductor (counterpoise), electrically connected to each ground rod and to each steel column, extending around the perimeter of the building. Use tinned-copper conductor not less than No. 2/0 AWG for counterpoise and for tap to building steel. Bury counterpoise not less than 18 inches below grade and 24 inches from building foundation.

3.4 INSTALLATION

A. Ground Rods: 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.

1. Drive ground rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.

2. Interconnect ground rods with grounding electrode conductors. Use exothermic welds, except at test wells and as otherwise indicated. Make connections without exposing steel or damaging copper coating.

B. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

C. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers and supports is not transmitted to rigidly mounted equipment. Use exothermic-welded connectors for outdoor locations, unless a disconnect-type connection is required; then, use a bolted clamp. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.

D. Metal Water Service Pipe: Provide 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 by grounding clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.

E. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with grounding clamp connectors.

F. Bond each aboveground portion of gas piping system upstream from equipment shutoff valve.

G. Install one test well for each service at the ground rod electrically closest to the service entrance. Set top of well flush with finished grade or floor.

3.5 CONNECTIONS

A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.

1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.

2. Make connections with clean, bare metal at points of contact.

3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

B. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.

C. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.

D. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.

E. Connections at Test Wells: Use compression-type connectors on conductors and make bolted- and clamped-type connections between conductors and ground rods.

F. Tighten screws and bolts for grounding and bonding 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 .

G. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.

H. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

3.6 FIELD QUALITY CONTROL

A. Testing: Perform the following field quality-control testing:

1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance with requirements.
2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells. Measure ground resistance not less than two full days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests, by the fall-of-potential method according to IEEE 81.
3. Provide drawings locating each ground rod and ground rod assembly and other grounding electrodes, identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and

their depth at each location and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

- a. Equipment Rated 500 kVA and Less: 10 ohms.
- b. Equipment Rated 500 to 1000 kVA: 5 ohms.
- c. Equipment Rated More Than 1000 kVA: 3 ohms.
- d. Substations and Pad-Mounted Switching Equipment: 5 ohms
- e. Manhole Grounds: 10 ohms.

4. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

3.7 GRADING AND PLANTING

A. Restore surface features, including vegetation, at areas disturbed by Work of this Section. Reestablish original grades, unless otherwise indicated. If sod has been removed, replace it as soon as possible after backfilling is completed. Restore areas disturbed by trenching, storing of dirt, cable laying, and other activities to their original condition. Include application of topsoil, fertilizer, lime, seed, sod, sprig, and mulch. Comply with Division 2 Section "Landscaping." Maintain restored surfaces. Restore disturbed paving as indicated.

END OF SECTION 16060

SECTION 16120 - CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.

1.2 SUBMITTALS

A. Field quality-control test reports.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 CONDUCTORS AND CABLES

A. Manufacturers:

1. American Insulated Wire Corp.; a Leviton Company.

2. General Cable Corporation.

3. Senator Wire & Cable Company.

4. Southwire Company.

B. Refer to Part 3 "Conductor and Insulation Applications" Article for insulation type, cable construction, and ratings.

C. Conductor Material: Copper; solid conductor for No. 10 AWG and smaller, stranded for No. 8 AWG and larger.

D. Conductor Insulation Types: Type THHN-THWN, and XHHW complying with NEMA WC 5 or 7.

2.3 CONNECTORS AND SPLICES

A. Manufacturers:

1. AFC Cable Systems, Inc.

2. AMP Incorporated/Tyco International.

3. Hubbell/Anderson.

4. O-Z/Gedney; EGS Electrical Group LLC.

5. 3M Company; Electrical Products Division.

B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

3.1 CONDUCTOR AND INSULATION APPLICATIONS

A. Service Entrance: Type THHN-THWN, single conductors in raceway.

- B. Feeders Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Concrete, below Slabs-on-Grade, and in Crawlspace: Type THHN-THWN, single conductors in raceway.
- D. Exposed Branch Circuits, including in Crawlspace: Type THHN-THWN, single conductors in raceway.
- E. Branch Circuits Concealed in Ceilings, Walls, and Partitions: .
- F. Branch Circuits Concealed in Concrete and below Slabs-on-Grade: Type THHN-THWN, single conductors in raceway.
- G. Cord Drops and Portable Appliance Connections: Type SO, hard service cord.
- H. Fire Alarm Circuits: Type THHN-THWN, in raceway.
- I. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- J. Class 2 Control Circuits: Type THHN-THWN, in raceway.

3.2 INSTALLATION

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. 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.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- E. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."
- F. Seal around cables penetrating fire-rated elements according to Division 7 Section "Through-Penetration Firestop Systems."
- G. Identify and color-code conductors and cables according to Division 16 Section "Basic Electrical Materials and Methods Electrical Identification."
- H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- I. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches of slack.

3.3 FIELD QUALITY CONTROL

A. Testing: Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.1. Certify compliance with test parameters.

B. Test Reports: Prepare a written report to record the following:

1. Test procedures used.

2. Test results that comply with requirements.

3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

END OF SECTION 16120

SECTION 16130 - RACEWAYS AND BOXES

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 raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

B. Related Sections include the following:

1. Division 16 Section "Basic Electrical Materials and Methods" for supports, anchors, and identification products.

2. Division 16 Section "Wiring Devices" for devices installed in boxes and for floor-box service fittings.

1.3 DEFINITIONS

A. EMT: Electrical metallic tubing.

B. ENT: Electrical nonmetallic tubing.

C. FMC: Flexible metal conduit.

D. IMC: Intermediate metal conduit.

E. LFMC: Liquidtight flexible metal conduit.

F. LFNC: Liquidtight flexible nonmetallic conduit.

G. RNC: Rigid nonmetallic conduit.

1.4 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: Show fabrication and installation details of components for raceways, fittings, boxes, enclosures, and cabinets.

C. Coordination Drawings: Reflected ceiling plans drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:

1. Ceiling suspension assembly members.
2. Method of attaching hangers to building structure.
3. Size and location of initial access modules for acoustical tile.
4. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

1.6 COORDINATION

A. Coordinate layout and installation of raceways, boxes, enclosures, cabinets, and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 METAL CONDUIT AND TUBING

A. Manufacturers:

1. AFC Cable Systems, Inc.
2. Alflex Inc.
3. Anamet Electrical, Inc.; Anaconda Metal Hose.
4. Electri-Flex Co.
5. Grinnell Co./Tyco International; Allied Tube and Conduit Div.
6. LTV Steel Tubular Products Company.
7. Manhattan/CDT/Cole-Flex.
8. O-Z Gedney; Unit of General Signal.
9. Wheatland Tube Co.

B. Rigid Steel Conduit: ANSI C80.1.

C. Aluminum Rigid Conduit: ANSI C80.5.

D. MC: ANSI C80.6.

E. Plastic-Coated Steel Conduit and Fittings: NEMA RN 1.

F. Plastic-Coated IMC and Fittings: NEMA RN 1.

G. EMT and Fittings: ANSI C80.3.

1. Fittings: Compression type.

H. FMC: Zinc-coated steel.

I. LFMC: Flexible steel conduit with PVC jacket.

J. Fittings: NEMA FB 1; compatible with conduit and tubing materials.

2.3 NONMETALLIC CONDUIT AND TUBING

A. Manufacturers:

1. American International.
2. Anamet Electrical, Inc.; Anaconda Metal Hose.

3. Arnco Corp.
4. Cantex Inc.
5. Certainteed Corp.; Pipe & Plastics Group.
6. Condux International.
7. ElecSYS, Inc.
8. Electri-Flex Co.
9. Lamson & Sessions; Carlon Electrical Products.
10. Manhattan/CDT/Cole-Flex.
11. RACO; Division of Hubbell, Inc.
12. Spiralduct, Inc./AFC Cable Systems, Inc.
13. Thomas & Betts Corporation.

B. ENT: NEMA TC 13.

C. RNC: NEMA TC 2, Schedule 40 and Schedule 80 PVC.

D. ENT and RNC Fittings: NEMA TC 3; match to conduit or tubing type and material.

E. LFNC: UL 1660.

2.4 METAL WIREWAYS

A. Manufacturers:

1. Hoffman.

2. Square D.

B. Material and Construction: Sheet metal sized and shaped as indicated, NEMA 3R.

C. Fittings and Accessories: Include 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.

D. Select features, unless otherwise indicated, as required to complete wiring system and to comply with NFPA 70.

E. Wireway Covers: Screw-cover type.

F. Finish: Manufacturer's standard enamel finish.

2.5 NONMETALLIC WIREWAYS

A. Manufacturers:

1. Hoffman.
2. Lamson & Sessions; Carlon Electrical Products.

B. Description: Fiberglass polyester, extruded and fabricated to size and shape indicated, with no holes or knockouts. Cover is gasketed with oil-resistant gasket material and fastened with captive screws treated for corrosion resistance. Connections are flanged, with stainless-steel screws and oil-resistant gaskets.

C. Fittings and Accessories: Include 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.

D. Select features, unless otherwise indicated, as required to complete wiring system and to comply with NFPA 70.

2.6 SURFACE RACEWAYS

A. Surface Metal Raceways: Galvanized steel with snap-on covers. Finish with manufacturer's standard prime coating.

1. Manufacturers:

- a. Airey-Thompson Sentinel Lighting; Wiremold Company (The).
- b. Thomas & Betts Corporation.
- c. Walker Systems, Inc.; Wiremold Company (The).
- d. Wiremold Company (The); Electrical Sales Division.

B. Types, sizes, and channels as indicated and required for each application, with fittings that match and mate with raceways.

2.7 BOXES, ENCLOSURES, AND CABINETS

A. Manufacturers:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
2. Emerson/General Signal; Appleton Electric Company.
3. Erickson Electrical Equipment Co.
4. Hoffman.

5. Hubbell, Inc.; Killark Electric Manufacturing Co.
 6. O-Z/Gedney; Unit of General Signal.
 7. RACO; Division of Hubbell, Inc.
 8. Robroy Industries, Inc.; Enclosure Division.
 9. Scott Fetzer Co.; Adalet-PLM Division.
 10. Spring City Electrical Manufacturing Co.
 11. Thomas & Betts Corporation.
 12. Walker Systems, Inc.; Wiremold Company (The).
 13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
- B. Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- C. Cast-Metal Outlet and Device Boxes: NEMA FB 1, Type FD, with gasketed cover.
- D. Floor Boxes: Cast metal, fully adjustable, rectangular.
- E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- F. Cast-Metal Pull and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- G. Hinged-Cover Enclosures: EMA 250, Type 1, with continuous hinge cover and flush latch.
1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
- H. Cabinets: NEMA 250, Type 1, galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel. Hinged door in front cover with flush latch and concealed hinge. Key latch to match panelboards. Include metal barriers to separate wiring of different systems and voltage and include accessory feet where required for freestanding equipment.

2.8 FACTORY FINISHES

- A. Finish: For raceway, enclosure, or cabinet components, provide manufacturer's standard prime-coat finish ready for field painting.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors:

1. Exposed: Rigid steel or IMC.
2. Concealed: Rigid steel or IMC.
3. Underground, Single Run: RNC.
4. Underground, Grouped: RNC.
5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
6. Boxes and Enclosures: NEMA 250, Type 3R.

B. Indoors:

1. Exposed: EMT.
2. Concealed: EMT.
3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except use LFMC in damp or wet locations.
4. Damp or Wet Locations: Rigid steel conduit.
5. Boxes and Enclosures: NEMA 250, Type 1, except as follows:
 - a. Damp or Wet Locations: NEMA 250, Type 4, stainless steel.

C. Minimum Raceway Size: 1/2-inch trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.

E. Do not install aluminum conduits embedded in or in contact with concrete.

3.2 INSTALLATION

A. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

B. Complete raceway installation before starting conductor installation.

C. Support raceways as specified in Division 16 Section "Basic Electrical Materials and Methods."

D. Install temporary closures to prevent foreign matter from entering raceways.

E. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portions of bends are not visible above the finished slab.

F. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and keep straight legs of offsets parallel, unless otherwise indicated.

G. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.

1. Install concealed raceways with a minimum of bends in the shortest practical distance, considering type of building construction and obstructions, unless otherwise indicated.

H. Raceways Below Slabs: Do not install raceways embedded in slabs.

1. **Secure raceways to reinforcing rods to prevent sagging or shifting, using stainless steel straps.**

2. Space raceways laterally to prevent voids in concrete.

3. 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.

4. Change from nonmetallic tubing to Schedule 80 nonmetallic conduit, rigid steel conduit, or IMC before rising above the floor.

I. Install exposed raceways parallel or at right angles to nearby surfaces or structural members and follow surface contours as much as possible.

1. Run parallel or banked raceways together on common supports.

2. Make parallel bends in parallel or banked runs. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.

J. Join raceways with fittings designed and approved for that purpose and make joints tight.

1. Use insulating bushings to protect conductors.

K. Tighten set screws of threadless fittings with suitable tools.

L. Terminations:

1. Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against box. Use two locknuts, one inside and one outside box.

2. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used, align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.

M. 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.

N. Telephone and Signal System Raceways, 2-Inch Trade Size and Smaller: In addition to above requirements, install raceways in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements.

O. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with UL-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. Install raceway sealing fittings at the following points:

1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Where otherwise required by NFPA 70.

P. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment. Install with an adjustable top or coupling threaded inside for plugs set flush with finished floor. Extend conductors to equipment with rigid steel conduit; FMC may be used 6 inches above the floor. Install screwdriver-operated, threaded plugs flush with floor for future equipment connections.

Q. Flexible Connections: Use maximum of 72 inches of flexible conduit for recessed and semirecessed lighting fixtures, install jbox above each fixture to transition from conduit to flex; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use LFMC in damp or wet locations. Install separate ground conductor across flexible connections.

R. Surface Raceways: Install a separate, green, ground conductor in raceways from junction box supplying raceways to receptacle or fixture ground terminals.

S. Set floor boxes level and flush with finished floor surface.

T. Install hinged-cover enclosures and cabinets plumb. Support at each corner.

3.3 PROTECTION

A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

3.4 CLEANING

A. After completing installation of exposed, factory-finished raceways and boxes, inspect exposed finishes and repair damaged finishes.

END OF SECTION 16130

SECTION 16145 - LIGHTING CONTROL DEVICES

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 lighting control devices:

1. Time switches.
2. Outdoor and indoor photoelectric switches.
3. Switch-box occupancy sensors.
4. Indoor occupancy sensors.
5. Outdoor motion sensors.
6. Multipole contactors.

B. Related Sections include the following:

1. Division 16 Section "Wiring Devices" for wall-box dimmers and manual light switches.
2. Division 16 Section "Dimming Controls" for architectural dimming system equipment.

1.3 DEFINITIONS

A. LED: Light-emitting diode.

B. PIR: Passive infrared.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show installation details for occupancy and light-level sensors.

1. Lighting plan showing location, orientation, and coverage area of each sensor.

2. Interconnection diagrams showing field-installed wiring.

C. Field quality-control test reports.

D. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.6 COORDINATION

A. Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 GENERAL LIGHTING CONTROL DEVICE REQUIREMENTS

A. Line-Voltage Surge Protection: An integral part of the devices for 120- and 277-V solid-state equipment. For devices without integral line-voltage surge protection, field-mounting surge protection shall comply with IEEE C62.41 and with UL 1449.

2.3 TIME SWITCHES

A. Manufacturers:

1. Area Lighting Research, Inc.

2. Fisher Pierce.

3. Grasslin Controls Corporation.

4. Intermatic, Inc.

3. Leviton Mfg. Company Inc.

4. Lightolier Controls; a Genlyte Company.

5. Lithonia Lighting.

6. Paragon Electric Co.
7. Square D.
8. TORK.
9. Touchplate Technologies, Inc.
10. Watt Stopper (The).

B. Digital Time Switches: Electronic, solid-state programmable units with alphanumeric display complying with UL 917.

1. Contact Configuration: As indicated.
2. Contact Rating: As indicated.
3. Program: Single channel, 2 on-off set points on a 24-hour schedule with skip-a-day weekly schedule.
4. Circuitry: Allow connection of a photoelectric relay as substitute for on and off function of a program.
5. Astronomical Time: All channels.
6. Battery Backup: For schedules and time clock.

2.4 OUTDOOR PHOTOELECTRIC SWITCHES

A. Manufacturers:

1. Area Lighting Research, Inc.
2. Fisher Pierce.
3. Grasslin Controls Corporation.
4. Intermatic, Inc.
5. Lithonia Lighting.
6. Novitas, Inc.
7. Paragon Electric Co.
8. Square D.
9. TORK.
10. Touchplate Technologies, Inc.

11. Watt Stopper (The).

B. Description: Solid state, with DPST dry contacts rated for 1800-VA tungsten or 1000-VA inductive, to operate connected relay, contactor coils, microprocessor input, and complying with UL 773A.

1. Light-Level Monitoring Range: 1.5 to 10 fc, with an adjustment for turn-on and turn-off levels within that range, and a directional lens in front of photocell to prevent fixed light sources from causing turn-off.

2. Time Delay: 15-second minimum, to prevent false operation.

3. Surge Protection: Metal-oxide varistor type, complying with IEEE C62.41 for Category A1 locations.

4. Mounting: Twist lock complying with IEEE C136.10, with base-and-stem mounting or stem-and-swivel mounting accessories as required to direct sensor to the North sky exposure.

2.5 INDOOR PHOTOELECTRIC SWITCHES

A. Manufacturers:

1. Allen-Bradley/Rockwell Automation.

2. Area Lighting Research, Inc.

3. Cutler-Hammer; Eaton Corporation.

4. Fisher Pierce.

5. Grasslin Controls Corporation.

6. Intermatic, Inc.

7. Lithonia Lighting.

8. MicroLite Corporation.

9. Novitas, Inc.

10. Paragon Electric Co.

11. Square D.

12. TORK.

13. Touchplate Technologies, Inc.

14. Watt Stopper (The).

B. Ceiling-Mounting Photoelectric Switch: Solid-state, light-level sensor unit, with separate relay unit mounted on luminaire, to detect changes in lighting levels that are perceived by the eye. Cadmium sulfide photoresistors are not acceptable.

1. Sensor Output: Contacts rated to operate the associated relay, complying with UL 773A. Sensor shall be powered from the relay unit.
2. Relay Unit: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Power supply to sensor shall be 24-V dc, 150-mA, Class 2 power source as defined by NFPA 70.
3. Light-Level Monitoring Range: 10 to 200 fc, with an adjustment for turn-on and turn-off levels within that range.
4. Time Delay: Adjustable from 5 to 300 seconds to prevent cycling, with deadband adjustment.
5. Indicator: Two LEDs to indicate the beginning of on and off cycles.

C. Skylight Photoelectric Sensors: Solid-state, light-level sensor; housed in a threaded, plastic fitting for mounting under skylight, facing up at skylight; with separate relay unit mounted on luminaire, to detect changes in lighting levels that are perceived by the eye. Cadmium sulfide photoresistors are not acceptable.

1. Sensor Output: Contacts rated to operate the associated relay, complying with UL 773A. Sensor shall be powered from the relay unit.
2. Relay Unit: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Power supply to sensor shall be 24-V dc, 150-mA, Class 2 power source as defined by NFPA 70.
3. Light-Level Monitoring Range: 1000 to 10,000 fc, with an adjustment for turn-on and turn-off levels within that range.
4. Time Delay: Adjustable from 5 to 300 seconds to prevent cycling, with deadband adjustment.
5. Indicator: Two LEDs to indicate the beginning of on and off cycles.

2.6 SWITCH-BOX OCCUPANCY SENSORS

A. Manufacturers:

1. Bryant Electric; a Hubbell Company.
2. Hubbell Lighting Inc.
3. Leviton Mfg. Company Inc.
4. Lightolier Controls; a Genlyte Company.
5. Lithonia Lighting.
6. MYTECH Corporation.

7. Novitas, Inc.
8. RAB Electric Manufacturing, Inc.
9. Sensor Switch, Inc.
10. TORK.
11. Unenco Electronics; a Hubbell Company.
12. Watt Stopper (The).

B. Description: PIR type with integral power-switching contacts rated for 800 W at 120-V ac, suitable for incandescent light fixtures, fluorescent light fixtures with magnetic or electronic ballasts, or 1/6-hp motors; and rated for 1000 W at 277-V ac, suitable for incandescent light fixtures, fluorescent light fixtures with magnetic or electronic ballasts, or 1/3-hp motors, minimum.

2.7 INDOOR OCCUPANCY SENSORS

A. Manufacturers:

1. Hubbell Lighting Inc.
2. Leviton Mfg. Company Inc.
3. Lithonia Lighting.
4. MYTECH Corporation.
5. Novitas, Inc.
6. RAB Electric Manufacturing, Inc.
7. Sensor Switch, Inc.
8. TORK.
9. Unenco Electronics; a Hubbell Company.
10. Watt Stopper (The).

B. General Description: Wall- or ceiling-mounting, solid-state units with a separate relay unit.

1. Operation: Unless otherwise indicated, turn lights on when covered area is occupied and off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

2. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor shall be powered from the relay unit.

3. Relay Unit: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Power supply to sensor shall be 24-V dc, 150-mA, Class 2 power source as defined by NFPA 70.

4. Mounting:

a. Sensor: Suitable for mounting in any position on a standard outlet box.

b. Relay: Externally mounted through a 1/2-inch knockout in a standard electrical enclosure.

c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.

5. Indicator: LED, to show when motion is being detected during testing and normal operation of the sensor.

6. Bypass Switch: Override the on function in case of sensor failure.

7. Automatic Light-Level Sensor: Adjustable from 2 to 200 fc; keeps lighting off when selected lighting level is present.

8. FailSafe: In case of sensor failure, lighting fixtures shall remain on.

C. Dual-Technology Type: Ceiling mounting; detect occupancy by using a combination of PIR and ultrasonic detection methods in area of coverage. Particular technology or combination of technologies that controls on and off functions shall be selectable in the field by operating controls on unit.

1. Sensitivity Adjustment: Separate for each sensing technology.

2. Detector Sensitivity: Detect occurrences of 6-inch minimum movement of any portion of a human body that presents a target of at least 36 sq. in., and detect a person of average size and weight moving at least 12 inches in either a horizontal or a vertical manner at an approximate speed of 12 inches/s.

4. Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. when mounted on a 96-inch- high ceiling.

2.8 OUTDOOR MOTION SENSORS (PIR)

A. Manufacturers:

1. Bryant Electric; a Hubbell Company.

2. Hubbell Lighting Inc.

3. Lithonia Lighting.

4. Paragon Electric Co.

5. RAB Electric Manufacturing, Inc.

6. TORK.

7. Watt Stopper (The).

B. General Description: Suitable for operation in ambient temperatures ranging from minus 40 deg F to 130 deg F, UL 773A rated as raintight.

1. Operation: Turn lights on when sensing infrared energy changes between background and moving body in area of coverage; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

2. Sensor Output: Suitable for switching 300 W of tungsten load at 120- or 277-V ac. Lampholders shall comply with UL 1571 for wet locations.

3. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor shall be powered from the relay unit.

4. Relay Unit: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Power supply to sensor shall be 24-V dc, 150-mA, Class 2 power source as defined by NFPA 70.

5. Mounting:

a. Sensor: Suitable for mounting in any position on a standard outdoor junction box.

b. Relay: Internally mounted in a standard weatherproof electrical enclosure.

c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.

6. Indicator: LED, to show when motion is being detected during testing and normal operation of the sensor.

7. Bypass Switch: Override the on function in case of sensor failure.

8. Automatic Light-Level Sensor: Adjustable from 1 to 20 fc; keeps lighting off during daylight hours.

C. Detector Sensitivity: Detect occurrences of 6-inch minimum movement of any portion of a human body that presents a target of at least 36 sq. in.

2.9 MULTIPOLE CONTACTORS

A. Manufacturers:

1. Allen-Bradley/Rockwell Automation.

2. ASCO Power Technologies, LP; a division of Emerson Electric Co.

3. Cutler-Hammer; Eaton Corporation.

4. Fisher Pierce.

5. GE Industrial Systems; Total Lighting Control.
6. Grasslin Controls Corporation.
7. Hubbell Lighting Inc.
8. Lithonia Lighting.
9. MicroLite Corporation.
10. TORK.
11. Touchplate Technologies, Inc.
12. Watt Stopper (The).

B. Description: Electrically operated and electrically held, complying with NEMA ICS 2 and UL 508.

1. Current Rating for Switching: Listing or rating consistent with type of load served, including tungsten filament, inductive, and high-inrush ballast (ballast with 15 percent or less total harmonic distortion of normal load current).
2. Control-Coil Voltage: Match control power source.

2.10 CONDUCTORS AND CABLES

1. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG, complying with Division 16 Section "Conductors and Cables."
2. Install unshielded, twisted-pair cable for control and signal transmission conductors, complying with Division 16 Section "Voice and Data Communication Cabling."

PART 3 - EXECUTION

3.1 SENSOR INSTALLATION

A. Install and aim sensors in locations to achieve at least 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.

3.2 WIRING INSTALLATION

A. Wiring Method: Comply with Division 16 Section "Conductors and Cables." Minimum conduit size shall be ½ inch.

B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points. Separate power-limited and nonpower-limited conductors according to conductor manufacturer's written instructions.

C. Install field-mounting transient voltage suppressors for lighting control devices in Category A locations that do not have integral line-voltage surge protection.

D. Size conductors according to lighting control device manufacturer's written instructions, unless otherwise indicated.

E. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures.

F. Tighten electrical connectors and terminals according to manufacturers published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.3 IDENTIFICATION

A. Identify components and power and control wiring according to Division 16 Section "Electrical Identification."

B. Label time switches and contactors with a unique designation.

3.4 FIELD QUALITY CONTROL

A. Perform the following field tests and inspections and prepare test reports:

1. After installing time switches and sensors, and after electrical circuitry has been energized, adjust and test for compliance with requirements.

2. Operational Test: Verify actuation of each sensor and adjust time delays.

B. Remove and replace lighting control devices where test results indicate that they do not comply with specified requirements.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.5 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting sensors to suit actual occupied conditions. Provide up to two visits to site outside normal occupancy hours for this purpose.

END OF SECTION 16145

SECTION 16512 - LED INTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior solid-state luminaires that use LED technology.
2. Lighting fixture supports.

B. Related Requirements:

1.2 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product, arranged by designation.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.

2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

3. Include diagrams for power, signal, and control wiring.

C. Product Schedule: For luminaires and lamps. (**See Plans.**)

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale and coordinated with each other, using input from installers of the items involved:

B. Seismic Qualification Certificates: For luminaires, accessories, and components, from manufacturer.

C. Product Certificates: For each type of luminaire.

D. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.6 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: **Seven (7)** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 LUMINAIRE REQUIREMENTS

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. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.

C. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.

D. Recessed Fixtures: Comply with NEMA LE 4.

E. Lamps dimmable from 100 percent to 0 percent of maximum light output.

F. Internal driver.

G. Nominal Operating Voltage: Field verify. All fixtures shall be rated 120VAC – 277VAC

1. Lens Thickness: At least 0.125 inch (3.175 mm) minimum unless otherwise indicated.

2.2 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.

2. Sheet metal components shall be steel unless otherwise indicated.

3. Form and support to prevent warping and sagging

B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.

C. Diffusers, and Globes:

1. Acrylic: One hundred percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

2. Glass: Annealed crystal glass unless otherwise indicated.

3. Lens Thickness: At least 0.125 inch (3.175 mm) minimum unless otherwise indicated.

2.3 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.4 LUMINAIRE SUPPORT COMPONENTS

A. Single-Stem Hangers: 1/2-inch (13-mm) steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.

B. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel.

C. Rod Hangers: 3/16-inch (5-mm) minimum diameter, cadmium-plated, threaded steel rod.

D. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Supports: Sized and rated for luminaire weight.

E. Flush-Mounted Luminaire Support: Secured to outlet box.

F. Suspended Luminaire Support:

1. Pendants and Rods: Where longer than 48 inches (1200 mm), brace to limit swinging.

2. Stem-Mounted, Single-Unit Luminaires: Suspend with four-stem hangers. Support with approved outlet box and accessories that hold stem and provide damping of luminaire oscillations. Support outlet box vertically to building structure using approved devices.

3. Continuous Rows of Luminaires: Use tubing or stem for wiring at one point and **rod** for suspension for each unit length of luminaire chassis, including one at each end.

4. Do not use ceiling grid as support for pendant luminaires. Connect support wires or rods to building structure.

G. Ceiling-Grid-Mounted Luminaires:

1. Secure to any required outlet box.

2. Secure luminaire using approved fasteners in a minimum of four locations, spaced near corners of luminaire.

3.2 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.

2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION 16512

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: University of Louisiana at Lafayette
Purchasing Office, Martin Hall Room 123
104 University Circle
PO Box 40197
Lafayette, LA 70504
(Owner to provide name and address of owner)

BID FOR: Site Lighting Upgrades
File 17202

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:

UNIVERSITY OF LOUISIANA AT LAFAYETTE and dated: JUNE 2016.

Bidder 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: N/A Dollars (\$)

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of: N/A Dollars (\$)

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

** If someone other than a corporate officer signs for the Bidder/Contractor, a copy of a corporate resolution or other signature authorization shall be required for submission of bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid unless bidder has complied with La. R.S. 38:2212(A)(1)(c) or RS 38:2212(0).

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

Louisiana Register Vol. 35, No. 08 August 20, 2009.

NOTE: Affidavit submitted with the Bid Documents, prior to the opening of bids, will not be accepted in accordance with LA. R.S. 38:2212.10.

Name of Project

Project No.

STATE OF _____

PARISH OF _____

ATTESTATIONS AFFIDAVIT

Before me, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

- (a) Public bribery (R.S. 14:118)
- (b) Corrupt influencing (R.S. 14:120)
- (c) Extortion (R.S. 14:66)
- (d) Money laundering (R.S. 14:23)

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

- (a) Theft (R.S. 14:67)
- (b) Identity Theft (R.S. 14:67.16)
- (c) Theft of a business record (R.S.14:67.20)
- (d) False accounting (R.S. 14:70)
- (e) Issuing worthless checks (R.S. 14:71)
- (f) Bank fraud (R.S. 14:71.1)
- (g) Forgery (R.S. 14:72)
- (h) Contractors; misapplication of payments (R.S. 14:202)
- (i) Malfeasance in office (R.S. 14:134)

LA. R.S. 38:2212.10 Verification of Employees

A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.

B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

Name of Project

Project No.

LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance

A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.

B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding / proposing entity.

NAME OF BIDDER

NAME OF AUTHORIZED SIGNATORY OF BIDDER

DATE

TITLE OF AUTHORIZED SIGNATORY OF BIDDER

**SIGNATURE OF AUTHORIZED
SIGNATORY OF BIDDER/AFFIANT**

Sworn to and subscribed before me by Affiant on the ____ day of _____, 20__ .

Notary Public