PROJECT MANUAL

Butch Gore Park Renovations

OWNER:

ASCENSION PARISH GOVERNMENT

Clint Cointment — Parish President

COUNCIL MEMBERS

Alvin “Coach” Thomas Jr., District 1
Joel Robert, District 2
Travis Turner, District 3
Corey Orgeron, District 4
Dempsey Lambert, District 5
Chase Melancon, District 6
Aaron Lawler, District 7
Teri Casso, District 8
Dal Waguespack, District 9
John Cagnolatti, District 10
Michael Mason, District 11

PARISH STAFF

Michael King, CPRP, CPSI — Director of Recreation
Rachael Farrar — Project Manager

DATE:
August 10, 2023

LANDSCAPE ARCHITECT:

Quality Engineering & Surveying, LLC
18320 Hwy. 42
Port Vincent, LA 70726
225-698-1600

END OF TABLE OF CONTENTS

ADVERTISEMENT FOR BIDS

Sealed bids will be received by Ascension Parish Government at the Ascension Parish Government Purchasing Office, 615 E. Worthey Street, Gonzales, Louisiana 70737 (mailing address PO Box 2392, Gonzales, LA 70707- 2392) until **September 6, 2023, at 10:00 a.m.** local time. The bids will be publicly opened and read aloud for the following:

Butch Gore Park Renovations

Statement of Work:
THE PROPOSED PROJECT INCLUDES THE DEMOLITION AND REPLACEMENT OF THE 4 EASTERN MOST EXISTING SOFTBALL INFIELDS, BACKSTOPS, AND SURROUNDING PAVING. THE PROJECT ALSO INCLUDES ALL ASSOCIATED EARTHWORK AND SUBSURFACE DRAINAGE, INCLUDING A SUBSURFACE COLLECTOR SYSTEM BENEATH THE INFIELDS. A NEW PREFABRICATED RESTROOM BUILDING AND ASSOCIATED UTILITY CONNECTIONS, AS WELL AS WALKING TRAILS ARE INCLUDED AS ALTERNATES TO THE PROJECT.

All Bids must be in accordance with the Contract Documents on file at the **Ascension Parish Purchasing Department, 615. E. Worthey Road, Gonzales, LA 70737**.

Copies of Specifications, Bid Documents, Contract Documents and Construction Drawings for use in preparing Bids may be obtained from **Ascension Parish Government, Located 615. East Worthey St. 70737, Gonzales LA**. Documents can be mailed to bidders with a provided shipping account number. No refunds will be made for returned drawings.

Where bids are to be received on forms furnished by the awarding authority, no contract documents shall be issued to anyone except a Licensed Contractor or his/ her authorized Representatives. **In no event shall any document for bidding be issued later than seventy- two (72) hours prior to the hour and date set for receiving bids.**

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, contractor's state license number and the name of the project for which the bid is submitted. If forward by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the **Ascension Parish Purchasing Department, 615 E. Worthey, Gonzales, Louisiana 70737, mailed certified mail and must be received no later than the bid opening.**

Bid security in the amount of five percent (5%) of the Total Bid must accompany each bid and shall be made payable to the Owner.

The Owner reserves the right to waive any informalities or to reject any or all bids.

No bidder may withdraw his/her bid within forty-five (45) days after the actual date of opening thereof.

A Mandatory Pre-Bid Conference will be held on **Tuesday, August 22, 2023, at Butch Gore Memorial Park, 14550 Harry Savoy Rd., St Amant, LA 70774 at 8:00 am.**

All questions regarding this project and the bid package shall be submitted to the Purchasing Department via purchasing@apgov.us **by 4:00 PM on August 24, 2023**. Responses will be coordinated with the Project Landscape Architect and posted on the www.centralauctionhouse.com **by 4:00 pm on August 29, 2023**.

In addition to paper bids, electronic bids and electronic bid bonds for the following project will be downloaded by the Ascension Parish Purchasing Department. Electronic bids and electronic bid bonds must be submitted through www.centralauctionhouse.com prior to the electronic bidding deadline. Beginning at **10:00 am local time on Wednesday, September 6, 2023**, all bids will be downloaded. **No bids are accepted after 10:00 am local time**.

RS 38:2218. Evidence of good faith; countersigning

A. The public entity advertising for bids for work shall require the bidders to attach certified check, cashier's check, or bid bond for not more than five percent of the contract price of work to be done, as an evidence of good faith of the bidder. The public entity advertising for bids for work may require the bidders to attach a certified check, cashier's check, or bid bond for not more than five percent of the estimated price of supplies or materials, as evidence of good faith of the bidder.

To address the above requirement for electronic bids Ascension Parish Government will allow electronic bids submitted via the parish approved on-line bid site to be submitted as follows:

A. A copy of the bid bond **must** be attached to the bid document submitted electronically.

B. The original bid bond document must be received in our office no later than 48 hours after bid opening date and time ***(Ascension Parish Purchasing Department, 615 E. Worthey, Gonzales, Louisiana (P.O. Box 2392, Gonzales, Louisiana 70707)***.

C. The bid-bond envelope must be clearly labeled as a "Bid Bond" with the project name, vendor's name as it appears on the bid documents and address.

All addenda, Amendments, Letters of Clarification, and Withdrawal Notices will be posted online in addition to electronic copies being distributed. Construction proposal information may be accessed via the internet at www.centralauctionhouse.com. Users must click on Login and create a New User Registration to view and download drawings. Once logged in, users must click on Ascension Parish Government to view current advertisement listings. This listing is titled **"Butch Gore Park Renovations."** Registered users will have access to view Project Information, submit a question concerning the project, and view the drawings. All project specific notices are found here. It will be the responsibility of the bidder to check for updates. All submitted questions will be forwarded by email to the Project Manager and the Project Landscape Architect for a response.

Ascension Parish Government shall not be responsible if the bidder cannot complete and submit a bid due to failure or incomplete delivery of the files submitted via the internet.

Ascension Parish Government reserves the right to reject any and all bids for just cause.

ASCENSION PARISH GOVERNMENT
CLINT COINTMENT, PARISH PRESIDENT

WEEKLY- 8/10/23, 8/17/23, 8/24/23
CHIEF- 8/10/23,8/17/23, 8/24/23

END OF SECTION

DRAFT

AIA® Document A701™ – 2018

Instructions to Bidders

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

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»« »

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

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»«»
«»

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

«Quality Engineering & Surveying, LLC »«»
«18320 Hwy. 42, Port Vincent, LA 70726»
«Telephone Number: (225) 698-1600»
«»

TABLE OF ARTICLES

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

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

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

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

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

ARTICLE 1 DEFINITIONS

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

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

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

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

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

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

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

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

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

ARTICLE 2 BIDDER'S REPRESENTATIONS

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

.1 the Bidder has read and understands the Bidding Documents;

.2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;

.3 the Bid complies with the Bidding Documents;

.4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;

.5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and

.6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

« Via electronic form at www.centralauctionhouse.com»

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper

documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

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

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

§ 3.2 Modification or Interpretation of Bidding Documents

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

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

«Requests for Clarification shall be made to the Ascension Parish Purchasing Department via email (purchasing@apgov.us)»

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

§ 3.3 Substitutions

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

§ 3.3.2 Substitution Process

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

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

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

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

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

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

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

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

« »

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

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

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

All bidders shall submit the following forms:

1. Louisiana Uniform Public Work Bid Form

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

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

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

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

§ 4.2 Bid Security

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

(Insert the form and amount of bid security.)

« 5% of Bid Amount via Bid Bond »

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

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

§ 4.3 Submission of Bids

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

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

A. Sealed bids are requested to be filled in by typewriter or manually in ink and submitted using the Louisiana Uniform Public Work Bid Form attached to the Bidding Documents. All blanks on the Bid Form must be filled in prior to the signature line to include acknowledgement of addenda, base bid, alternates, if any, and the name, title, address of the bidder and the name of the firm or entity of the bidder. If applicable, when utilized any unit prices on the bid form are to be filled in. Submit the Bid Form, Bid security or bond, a corporate resolution or written evidence of the authority of the person to sign the Bid Form in a sealed opaque envelope addressed as follows:

Ascension Parish Purchasing Department
615 East Worthey Street
Gonzales, LA 70737

The envelope shall be plainly marked with the name of the project as shown in the Advertisement for Bids and with the date the bids are to be opened. Also, as required by La. R.S. 37:2163 A (1) on the envelope include the Bidder's name, address, and Louisiana Contractor's license number. Failure to show the contractor's license number on the envelope containing the bid shall result in the bid being automatically rejected and returned to the Bidder. 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 of the envelope. Enclose in the envelope the other documents listed on the Bid Form.

1. Oral, telephonic, or facsimile transmitted bids will not be considered.
2. Bidders shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
3. Bids received after the time and date for receipt of Bids will be returned unopened.

B. Electronic Bidding Option: Bidders may use Central Bidding from Central Auction House to submit their bids. Go to https://www.centralauctionhouse.com/ and click the Register hyperlink and follow the given steps. The Basic Subscription has a recurring monthly charge of $99.99. For an electronic bid, La. R. S. 37:2163 A (1) allows a contractor to submit an authentic digital signature on the electronic bid proposal accompanied by the contractor's license number in order to comply with La. R. S. 37:2163 A (1)

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

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

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

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

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

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

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

« »

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

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

§ 5.2 Rejection of Bids

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

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

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

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids.

Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

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

.1 a designation of the Work to be performed with the Bidder's own forces;

.2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and

.3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

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

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

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

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

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

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.
(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

« »

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

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

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

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

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

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

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

« »

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

« »

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

« »

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

« »

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda:

Number	Date	Pages

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

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

« »

[« »] The Sustainability Plan:

Title	Date	Pages

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

Document	Title	Date	Pages

.9 Other documents listed below:
(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

« »

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Ascension Parish Government
615 East Worthey Street
Gonzales, LA 70737
(*Owner to provide name of project and other identifying information)*

BID FOR: **Butch Gore Park Renovations**
14550 Harry Savoy Road
St. Amant, LA 70774
(Owner to provide name and address of owner)

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: Quality Engineering & Surveying, LLC and dated: August 10, 2023.
(Owner to provide name of entity preparing bidding documents.)

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

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

_____ Dollars ($_____)

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

Alternate No. 1 *(Prefabricated, Pre-engineered Restroom Building with Associated Utility Connections)* for the lump sum of:

_____ Dollars ($_____)

Alternate No. 2 *(Perimeter Walking Trails)* for the lump sum of:

_____ Dollars ($_____)

Alternate No. 3 *(Outfield Irrigation System)* for the lump sum of:

_____ Dollars ($_____)

NAME OFBIDDER: _____

ADDRESS OFBIDDER: _____

_____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORYOF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER:** _____

DATE: _____

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

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

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

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

DRAFT

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»

BOND AMOUNT: $ « »

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

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»
« »

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

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

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

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

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

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

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

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this « » day of « » , « »

	« »
	(Contractor as Principal) *(Seal)*
	« »
(Witness)	*(Title)*
	« »
	(Surety) *(Seal)*
	« »
(Witness)	*(Title)*

DRAFT

AIA® Document A201® – 2017

General Conditions of the Contract for Construction

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

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»

THE OWNER:
(Name, legal status and address)

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»

THE ARCHITECT:
(Name, legal status and address)

Quality Engineering & Surveying, LLC
18320 Hwy. 42
Port Vincent, LA 70726
« »

TABLE OF ARTICLES

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

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

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

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

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

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all sections of the Project Manual, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The Contract Documents include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

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

§ 1.1.9 Project Manual

The Project Manual is a volume assemble for the Work that includes the Bidding Documents, sample forms, the bidding requirements, the Advertisement for Bids, the Instructions to Bidders, the Agreement, the General and Supplemental Conditions of the Contract (as modified), and the Specifications. The Project Manual may exist in electronic form only, in paper format, or both.

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

§ 1.2 Correlation and Intent of the Contract Documents
§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. . In the event of a discrepancy in the Contract Documents, the more specific and more detailed requirement shall take precedence over the general and less detailed requirement. In case of doubt, the Contractor shall assume that the Owner intends that the more complete method, system, or process is required. Any work, labor, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce a functionally complete Project or part thereof shall be supplied by the Contractor at no additional cost to the Owner, regardless of whether it is specifically stated in the Contract Documents. Any reference to standard specifications, manuals, codes of any technical society, group, organization, or association, or to the laws or regulations of any governmental authority, whether such reference is specific or by implication, shall mean the latest or most recent standard specifications, manual, code, laws, or regulations in effect at the time of the opening of bids (or the date of the Contract if not advertised for bids), unless otherwise specifically stated. However, no provision of any standard specification, manual, or code shall be effective to change the duties or the responsibilities of the Owner, Contractor, or Architect (or any of their consultants, agents, or employees) from those set forth in the Contract Documents. In the event of conflict, the Architect may interpret or construe the documents so as to obtain the most substantial and complete performance of the Work consistent with the Contract Documents and reasonably inferable therefrom, in the best interest of the Owner.

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

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

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

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

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

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

§ 1.4 Interpretation
In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in

another is not intended to affect the interpretation of either statement. If there is a conflict in the terms and conditions in the Contract Documents, the more stringent requirements shall govern.

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

§ 1.5.1 The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights. As provided for in La. R.S. 38:2317, the Owner is the owner of the drawings, specifications, and other instruments of service.

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

§ 1.6 Notice

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

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

ARTICLE 2 OWNER

§ 2.1 General

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

§ 2.1.2 The Owner, at its sole discretion, may require that the Contractor, all subcontractors, and material suppliers provide sworn lien releases on the Owner's forms with each of the Contractor's pay applications. The Owner reserves the right to withhold progress payments until such lien releases are received for all Work for which prior progress payments have been made to the Contractor. The Owner shall have the sole right to require the Contractor, all subcontractors, and all material suppliers to provide such releases with every Contractor's payment request until Final Acceptance of the Project.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 The Owner, being a political subdivision of the State of Louisiana, must have funds in the full amount of the Contract on hand prior to the award and execution of the Contract Documents.

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

§ 2.3 Information and Services Required of the Owner

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

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. The term "Architect" when used herein and in the Contract Documents shall mean the Prime Designer (Architect, Engineer or Landscape Engineer). That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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

§ 2.3.4 The Owner may furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information if furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor shall confirm and verify the location of each utility required for the Project and make further investigation of all structural, surface, and subsurface conditions including any soil borings of the site of the Project.

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

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

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work or a portion of the Work or the Work at one or more sites in a multiple site Project that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, or fails or refuses to provide a sufficient number of properly supervised and coordinated labor or amount of materials or equipment to complete the Work within the Contract Time, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. Stoppage of the Work by the Owner pursuant to this Subsection shall not result in a claim by the Contractor for delay or for any extension of the Contract Time.

§ 2.5 Owner's Right to Carry Out the Work

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

§ 2.6 Owner's Right to Audit

The Contractor shall keep full and accurate records of all costs incurred and items invoiced in connection with the Work and shall keep and maintain all records related to this Project, for a period of five (5) years after Final Payment, or five (5) years after any Grant close-out (if applicable), whichever is longer. The Contractor shall require

the same of its subcontractors, suppliers, or any entity involved in the Project or Work. Such records of the Contractor and its subcontractors shall be open to audit by the Owner and/or its authorized representatives, and by the Legislative Auditor for the State of Louisiana, during the performance of the Work and during the referenced five (5) year period.

§ 2.7 Contract Administration

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

ARTICLE 3 CONTRACTOR

§ 3.1 General

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

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents and in accordance with any industry or quality standards.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Program Manager or the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor. Quality control (i.e. ensuring compliance with the Contract Documents) is the responsibility of the Contractor. Testing, observations and or inspections performed or provided by the Owner are for quality assurance (i.e. confirming compliance with the Contract Documents) purposes and are solely for the benefit of the Owner.

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

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

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

§ 3.1.7 The Contractor is solely responsible for providing a safe place for the performance of the Work.

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

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

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

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

§ 3.3 Supervision and Construction Procedures

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

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors. In the event the Owner or the Architect notify the Contractor of any such acts or omissions, The Contractor shall immediately cure such acts or omissions, or results thereof.

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

§ 3.3.4 The Contractor shall review any survey provided and establish the building grades, lines, levels, column, wall and partition lines required by the various subcontractors in laying out their work, including but not limited to, all underground work in accordance with the Contract Documents. The Contractor shall properly and effectively coordinate the timing, scheduling and routing of all Work performed by all trades and subcontractors.

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

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

§ 3.4 Labor and Materials

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

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

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

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect and the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor's warranty includes any and all specific warranties set forth in the Contract Documents and all warranties provided by law including, but not limited to any actions or claims that may be asserted as provided in La. R. S. 38:2189. Nothing herein or otherwise provided in the Contract Documents limits in any way all warranties allowed by law.

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

§ 3.6 Taxes

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

§ 3.6.2 In the event the Contract Documents designate the Project for exemption of sales and use taxes, the Contractor is informed that La. R.S. 47:301(8)(c) exempts the State of Louisiana, cities, parishes and other political subdivisions and their agencies, boards and commissions from state and local sales and use taxes. The Contractor is hereby made aware that materials and equipment which are affixed to and made a part of the Project such that they become immovable property and permanently incorporated into the Project or Work may qualify for the exemption. The Contractor as an Agent of the Owner shall execute any documentation required to effectuate this exemption. The Contractor is still responsible for payment of all taxes on nonexempt items necessary in the construction of the Project.

§ 3.6.3 After the Contract is executed, the Owner will furnish the Contractor a Louisiana Department of Revenue Form R-1020 entitled "Designation of Construction Contractor as Agent of Governmental Entity and Exemption Certificate" for use by the Contractor, Subcontractors, and Material Suppliers for the Project which is required by the State of Louisiana Department of Revenue and Taxation, Sales Tax Division.

§ 3.6.4 If designated and in accordance with La. R.S. 47:301(8)(c), the Contractor shall not pay any State or local sales taxes or State or local use taxes on materials and equipment which are affixed to and made a part of the real estate of the Project or Work (hereinafter referred to as "exempt items").

§ 3.6.5 All purchases of "exempt items" for the Project shall be made by the Contractor on behalf of and for the Owner.

§ 3.6.6 Payment requests for materials and equipment that are tax exempt shall be submitted separately but at the same time with progress payment requests. The payment request shall include a description of each item purchased, name of supplier, invoice number and date, and the cost of each item excluding taxes. The "Tax Exempt" payment requests shall not include any amount for the Contractor's or Subcontractor's labor. Copies of invoices shall be attached to the Progress Payment request.

§ 3.6.7 When applicable and the exemption is exercised, the Contractor and all Subcontractors shall record all purchases of materials and equipment to be permanently installed or permanently incorporated into the Work. Preparing, maintaining and preserving these records shall be in accordance with applicable State laws and local ordinances and resolutions except that the records shall be preserved for not less than five (5) years from the date of Final Payment. In addition to making the records available to the Louisiana Department of Revenue and Taxation and/or local taxing authorities, copies of the records shall also be made available to the Owner upon request.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice the Architect before conditions are disturbed and in no event later than 48 hours after first observance

of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

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

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum any cash allowances stated in the Contract Documents and as may be allowed by La. R.S. 38:2212(K) limited to hardware, face brick, landscaping, electrical light fixtures, miscellaneous steel, tile, wallpaper and other exterior finishes, fixtures and furnishings, and carpeting, or other allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

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

§ 3.8.4 If any materials are specified as to quantity only, such are not considered a cash allowance. The provisions stated in the information in the Specifications about any quantity will be applicable regarding any credit to the Owner.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent Project Manager, a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The Project Manager, and if no Project Manager, the superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. The superintendent shall be present at the Project site at all times work is being performed.

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Architect's review and approval a Contractor's construction schedule for the Work in such form and detail as specified in the Contract Documents. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The date of Commencement to begin the Work is the date set forth in the Contract or such other date as may be established in a Notice to Proceed. The schedule must show a completion of the Work within the Contract Time. A schedule showing early completion dates will not be accepted without written acceptance of the Owner. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The Schedule may be used as a means of determining the Contractor's progress in performance of the Work, but neither the Contractor by providing the schedule to the Architect and Owner, nor its acceptance or use by the Architect or Owner, acts in any way to relieve the Contractor of any of the Contractor's obligations under the Contract. All float is owned by the Owner. The schedule shall include a network analysis to identify those tasks that will lengthen the Project completion date.

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

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner's Program Manager and Architect. If the work is not on schedule as determined by the Architect and the Contractor fails to take action to correct, then the Contractor shall be deemed in default and the progress of the Work shall be deemed unsatisfactory. Such default may be considered as a ground for termination by Owner for cause in accordance with Section 14.2.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. Contractor shall prepare and update as-built drawings on a monthly basis. These shall be in electronic form or paper copy, available to the Architect and Owner's Program Manager, and, before Final Payment is made, delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals.

Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

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

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

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect. Should the Contractor, subcontractor or sub-subcontractor install, construct, erect or perform any portion of the Work without approval of any required submittal, the Contractor shall bear the cost, responsibility and delay for removal, replacement and/or correction of any and all items, materials and/or labor.

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

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

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

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

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

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. The Contractor inspected the site prior to award and accepted the areas for parking, storage and lay-down of materials and access to the site and the Owner will not be required to alter or interrupt any other operations at the Project site.

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

§ 3.13.3 No sign shall be placed or erected on the Project site without the prior written consent of the Owner's representative.

§ 3.13.4 Without the prior written approval of the Owner, the Contractor shall not permit any workers to use any existing facilities or facilities under construction (lavatories, toilets, entrances or similar items) at the Project site other than those designated in the Contract Documents.

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project. For the Project Site, Contractor is responsible for vermin-control, grounds up-keep, sidewalk maintenance, lawn mowing, weed control and grounds cleaning.

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

§ 3.19 Log of Changes

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

§ 3.20 Failure to Perform Work

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

§ 3.21 Liens

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

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

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

§ 3.21.4 Prior to the receipt of any partial payment, or of Final Payment, Contractor shall provide the Owner a partial release or a final release, as appropriate, of all Liens and claims of any persons furnishing labor and/or materials to the Work, Contractor shall not receive Final Payment before providing to the Owner satisfactory evidence (i.e. clear lien certificate) that there are no other Liens or claims whatsoever outstanding against the Work or Contract.

ARTICLE 4 ARCHITECT

§ 4.1 General

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

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

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect shall remain an Owner's representative from time to time during the one-year period for correction of Work described in Section 12.2.2.1. The Owner may request the Architect's assistance and review any time during the five (5) year period following recordation of Substantial Completion, as allowed by La. R.S. 38:2189. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

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

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

§ 4.2.4 Communications

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

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

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

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

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work that do not involve changes in either the Contract Sum or the Contract Time, as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

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

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

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor. As applicable based upon the value of the Work, subcontractors shall be duly licensed in accordance with La. R.S. 37:2150, *et seq*. and local laws.

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

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

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, shall, prior to the Pre-Construction meeting (see § 13) furnish, in writing, to Architect the contact information of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Owner or Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection. No payment shall be made to the Contractor until the requested information specified in this subsection is provided to the Architect and the Owner.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection. The Contractor shall not be entitled to claims for additional time and/or an increase in the Contract Sum due to a problem with the performance or non-performance of a subcontractor. The Contractor is totally and solely responsible for any lost time or extra expense incurred due to a Subcontractor's and/or Material Supplier's failure to perform. Under no circumstances shall the Owner or Architect mitigate the Contractor's losses or reimburse the Contractor for losses caused by its Subcontractors and/or Material Suppliers.

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

§ 5.2.4 The Contractor shall notify the Architect at least five (5) calendar days prior to any change or substitution of any subcontractor or material supplier. Subcontractors and other persons or organizations selected by the Contractor and identified at the Pre-Construction Meeting and in connection with the Schedule of Values shall not be changed except with the written approval of both the Architect and the Owner's Program Manager.

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

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

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

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. In the event of assignment, the original Contractor shall be responsible for any additional costs incurred by the Owner as a result of the assignment.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised. The Contractor shall anticipate the Work of the Owner or other Contractors may delay, disrupt, or interfere with the Work and the progress schedule and Contractor shall do all cutting, fitting and patching of the Work required to make its several parts come together properly in a manner that will not endanger any Work of others by cutting, excavating or otherwise altering their Work without the written consent of the Owner.

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

§ 6.2 Mutual Responsibility

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

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

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

shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. A Request for Information (RFI) is not a change in the Contract Documents nor results in any changes to the Contract Sum or the Contract Time.

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

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

§ 7.1.4 The Contractor shall submit the following information for the Contractor at the Pre-Construction Conference, prior to the commencement of any Work. The Contractor shall require of any Subcontractor desiring to submit a Change Order to submit similar information to the Contractor no later than fourteen (14) days prior to the submission of that Subcontractor's first Change Order. Such Subcontractor's information shall be provided to the Architect and the Owner's representative with any requested Change Order involving any request to change the Contract Sum. The information shall be provided in a written document and the Chief Financial Officer ("CFO") of the Contractor or Subcontractor (or another officer if no CFO) shall certify its accuracy and sign such certification.

.1 Fixed job site overhead cost for the Contractor or Subcontractor, itemized with documentation to support daily rates. Fixed job sit overhead costs shall be limited solely to the items listed in Section 7.1.7 hereinbelow;

.2 Bond premiums with supporting information from the Contractor's or Subcontractor's carrier;

.3 Insurance rates with supporting information from the Contractor's or Subcontractor's carrier;

.4 Labor Burden by trade for the Contractor or Subcontractor, to include only:

- .1 Applicable payroll taxes;
- .2 Worker's Compensation;
- .3 Unemployment Compensation, both federal and State;
- .4 Social Security taxes.

.5 Fringe Benefits, to include only.

- .1 Sick Leave;
- .2 Vacation;
- .3 Health Insurance;
- .4 Life Insurance;
- .5 Union Dues;
- .6 Apprentice training.

.6 Internal Rate Charges for all significant company-owned equipment for the Contractor or Subcontractor.

Failure to submit this information at the Pre-Construction Meeting shall prohibit the Contractor from claiming these items on any Change Order.

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

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

§ 7.1.7 Fixed job site overhead costs, for all purposes under this Contract, shall be limited solely to the following actual costs. Said costs must be actually incurred to be included in the Project's fixed site overhead costs. If the Contractor or Subcontractor has no actual costs in a particular category, then no costs shall be allowed to the Contractor or Subcontractor in that category:

.1 Hourly billable rate for the on-site Project Management Team;
.2 Site office costs to include only, as applicable, (1) office trailer, (2) office equipment, (3) temporary phone, (4) reproduction, (5) postage/delivery, (6) project vehicles, and (7) fuel.
.3 Site general costs to include only, as applicable, (1) temporary water, (2) temporary electrical, (3) interim clean-up, (4) project toilets, and (5) safety.

§ 7.2 Change Orders

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

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

§ 7.2.2 A Change Order must comply with the requirements of La. R.S 38:2212(M). A Change Order is not final nor binding upon the Owner and may not be included in an Application for Payment, until signed by the authorized representatives of the Owner, Contractor and Architect. 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, stipulations, or other modifications made on the Change Order by the Contractor shall have no effect. A Change Order affecting the Contract Sum shall be based on the Cost of the Work, as set forth in section 7.2.3, and Overhead and Profit, as set forth in section 7.2.4, subject to approval of the Architect and the Owner.

§ 7.2.3 "Cost of the Work" for the purpose of Change Orders shall be costs actually required to be incurred in performance of the work and paid by the Contractor and Subcontractors. Such costs shall consist only of the following:

7.2.3.1 Actual wages paid directly to labor personnel, with a labor burden markup exclusively limited to applicable payroll taxes, worker's compensation insurance, unemployment compensation, and social security taxes for those labor personnel performing the Work. Wages shall be the basic hourly labor rate paid an employee exclusive of fringe benefits or other employee costs. The labor burden percentage for the "Cost of the Work" is limited to categories listed herein. Employer-provided health insurance, fringe benefits, employee training (whether a requirement of employment or not), vacation pay, etc., are examples of ineligible labor burden costs which ***shall not*** be included, as these costs are already compensated by the Overhead and Profit markup.

Supervision shall not be included as a line item in the "Cost of the Work", except when the change results in a documented delay in the critical path, as described in Section 7.2.7.

7.2.3.2 Cost of all materials and supplies necessary and required to perform the Work, identifying each item and its individual cost, including taxes. Incidental consumables are not eligible costs and shall not be included.

7.2.3.3 Cost of each necessary piece of machinery and equipment required to perform the Work,

identifying each item and its individual cost, including taxes. Incidental small tools of a specific trade (i.e., shovels, saws, hammers, air compressors, etc.,) and general use vehicles, such as pickup trucks even for moving items around the site, fuel for these general use vehicles, travel, lodging, and/or meals are not eligible and shall not be included.

7.2.3.4 Eligible Insurance costs shall be limited to documented increases in "Builder's Risk" insurance premium / costs only. Commercial General Liability, Automobile Liability, and all other required insurances, where referenced in the Contract shall be considered part of normal overhead. These costs are already compensated by the Overhead and Profit markup.

7.2.3.5 Cost for the General Contractor Performance and Payment Bond premium, where the documented cost of the premiums have been increased due to the Change Order.

§7.2.4 "Overhead and Profit" for the purpose of Change Order eligible costs for the Contractor and Subcontractor consists of (1) fixed job site overhead and home office fixed overhead, and (2) profits on the Cost of the Work, hereinafter called "Overhead and Profit," but such Overhead and Profit shall not exceed a combined total of 16% of the direct cost of the portion of the Work being added by the proposed Change Order. Credits 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. When a change results in both credits to the Owner and extras to the Contractor for related items, overhead and profit shall only be computed on the net extras cost to the Contractor.

§7.2.5 The cost to the Owner resulting from a change in the Work shall be the sum of: Cost of the Work (as defined at Section 7.2.3) and Overhead and Profit (as defined at Section 7.2.4), and shall be computed as follows:

7.2.5.1 When all of the Work is General Contractor Work; 8% markup on the Cost of the Work.

7.2.5.2 When the Work is all Subcontract Work; 8% markup on the Cost of the Work for Subcontractor's Overhead and Profit, plus 8% markup on the Cost of the Work, not including the Subcontractor's Overhead and Profit markup, for General Contractor's Overhead and Profit.

7.2.5.3 When the Work is a combination of General Contractor Work and Subcontract Work; that portion of the direct cost that is General Contract Work shall be computed per Section 7.2.5.1 and that portion of the direct cost that is Subcontract Work shall be computed per Section 7.2.5.2.

Premiums for the General Contractor's bond may be included, but after the markup is added to the Cost of the Work.
Premiums for the Subcontractor's Bond shall not be included.

7.2.5.4 Subcontract cost shall consist of the items in Section 7.2.3 above plus Overhead and Profit as defined in Section 7.2.4.

§ 7.2.6 The cost to the Owner resulting from a change in the Work shall be prepared and presented to the Architect and the Owner in a proposed Change Order, for their review and approval, as the sum of the "Cost of the Work" (as defined in section 7.2.3) and "Overhead and Profit" (as defined in section 7.2.4). Where a proposed Change Order results in only a credit to the Owner, credit will not be required for Overhead and Profit. Where a proposed Change Order results in both credits to the Owner and extra cost to the Contractor for related items, Overhead and Profit will only be computed on the net extra cost to the Contractor. The amount of the proposed Change Order so computed shall not be binding nor final until approved in writing by both the Architect and the Owner, as provided in section 7.2.2 above.

§ 7.2.7 Before a Change Order is prepared, the Contractor shall provide and deliver to the Architect and Owner's representative the following information concerning the Cost of the Work. The provision of said information is not subject to waiver, and shall be provided by the Contractor within a reasonable time after being instructed to prepare said Change Order:

.1 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.

.2 A detailed 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.

§ 7.2.8 After a Change Order has been finalized and approved by the Owner, the Contractor and the Architect, in accordance with section 7.2.2, above (as reflected by all required signatures), no future requests for extensions of time or additional cost shall be considered for the change in the Work related in whole or in part to the events that required that Change Order. The Change Order represents the full and final amount of the change in the Contract Sum and/or the Contract Time due to the Contractor for all additional Work related to the Change Order. Contractor waives any further claims for additional costs or additional time, whether direct or indirect, for the change in the Work related to said Change Order.

.1 Nothing contained herein shall be construed as a waiver of any rights the Contractor may have under La. R.S. 38:2216(H).
.2 Contractor shall bring any such claims identified in La. R.S. 38:2216(H), to which it may be legally entitled, in accordance with the provisions of Article 15 herein below entitled "Claims and Disputes."

§ 7.2.9 The Contractor will be eligible for extended fixed job-site overhead for time delays only when all the requirements listed herein below in this section are met. In all cases the Contractor shall notify the Architect and Owner's representative in writing and shall make a Claim pursuant to the provisions of Article 15 herein. Reasonable proof shall be required by the Architect and Owner of each of the required elements listed below.

.1 Complete stoppage of the Work occurs;
.2 Such complete stoppage of the Work also causes an extension of critical path activities (defined as such on the approved Baseline Schedule required by Section 3.10.1);
.3 Such complete stoppage of the Work also results in an extension of the Contract Time;
.4 The Contractor is unable to mitigate financial damages through replacement work;
.5 The complete stoppage of the Work is not related in whole or in part to acts or omissions attributable to the Contractor, its subcontractors or suppliers or its representatives; and
.6 The complete stoppage of the Work is due solely to acts or omissions attributable to the Owner or its representatives.

§ 7.2.10 "Cost of the Work" whether incurred by the Contractor or a Subcontractor shall not include the following:

.1 Salaries or other compensation of the Contractor's or Subcontractor's personnel at the Contractor's or Subcontractor's principal office and branch offices.
.2 Any part of the Contractor's or Subcontractor's capital expense, including interest on the Contractor's or Subcontractor's capital employed for the work.
.3 Overhead and general expenses of any kind or the cost of any item not specifically and expressly included in section 7.2.3 in Cost of the Work.
.4 Cost of supervision not specifically required by the Change Order.
.5 Cost of superintendent already on the Project, unless the Contract Time is being extended in the Change Order.

§ 7.2.11 When applicable, as provided in the Contract Documents, the cost to Owner for Change Orders shall be determined by quantities and unit prices. The quantity of any item shall be submitted by the Contractor and approved by the Architect and the Owner's representative. Unit prices shall cover costs of Material, Labor, Equipment, Overhead and Profit. When Unit prices (which include Overhead and Profit) are used as the basis for the added Cost of the Work to the Owner resulting from the Change Order, Overhead and Profit shall not be duplicated by adding it again under section 7.2.4.

§ 7.2.12 Any and all changes or adjustments in the Work that are the subject of a proposed Change Order shall be supported, in addition to the cost and schedule information required elsewhere in this Article 7, by detailed specifications, plans, and/or drawings that evidence the need for the change in the Work and the propriety of the proposed method to effectuate that change.

§ 7.2.13 Any and all changes or adjustments to the Contract Time requested or claimed by the Contractor as a result of a proposed Change Order shall require documentation and justification for the adjustment by a method analysis of the Contractor's most recent schedule in use prior to the change, which shows an extension in critical path activities. Changes that affect or concern activities containing float or slack time (i.e. not on the critical path) that can be accomplished within such float or slack time shall not result in an increase in the Contract Time.

§7.2.14 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.

§ 7.3 Construction Change Directives

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

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order. A Construction Change Directive may be used by the Owner to document the amount of Liquidated Damages assessed or fees due to the Architect for additional inspections.

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

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

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited as provided in Sections 7.2.3 and 7.2.4.

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

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

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

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

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

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

§ 7.4 Minor Changes in the Work

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

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 TIME IS THE ESSENCE OF THIS CONTRACT. Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement or such other date as may be stated in a Notice to Proceed.

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

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

§ 8.1.5 The Contract Time shall not be changed by submission of a schedule that shows an early completion date unless specifically authorized by a final, approved Change Order; and Contractor is specifically prohibited from submitting a schedule that shows an early completion date, unless specifically authorized by a final, approved Change Order.

§ 8.1.6 For all purposes of counting time provided in these Contract documents, Time shall be counted on a calendar day basis. However, unless otherwise specified, where the due date for any action, submittal or response falls on a Saturday, Sunday, or legal holiday (as identified in Section 8.1.7), such action, submittal, or response shall be considered due on the next business day which is not a Saturday, Sunday or legal holiday. The preceding sentence shall not apply to the date of Substantial Completion.

§ 8.1.7 For purposes of Section 8.1.6, legal holidays shall include the following:

New Year's Day	January 1
Martin Luther King Day	
Mardi Gras Day	
Good Friday	
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Thanksgiving Day	Fourth Thursday in November
Christmas Eve	December 24
Christmas Day	December 25
New Year's Eve	December 31

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. Substantial Completion of the Work must be achieved by the time stated in the Agreement between the Owner and Contractor, subject to such extensions that may be agreed to via Change Order. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

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

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

§ 8.2.4 The Contractor agrees to commence the Work not later than the date set forth in the Agreement or in the written Notice to Proceed issued by the Owner, and to achieve Substantial Completion of the Work within the time stated in the Contract Documents, and to achieve completion of the Punch List within the time stated in the Contract Documents. Further, the Contractor agrees to commence Onsite Construction Activities, as defined below in section 8.2.2.1, no later than fourteen (14) days after the date of commencement of the Work set forth in the Agreement or in the Notice to Proceed. The Contractor and Owner mutually agree that the Owner's operations will be negatively impacted, and the Owner will sustain damage that will be impracticable and extremely difficult to quantify if Substantial Completion of the Project and Punch List completion are not achieved within 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 liquidated damages, which shall not be considered a penalty, in the amount stated in the Contract Documents as fixed, agreed upon and Liquidated Damages for each calendar day (Saturdays, Sundays, and legal holidays included) that Substantial Completion is delayed beyond the time stated in the Contract Documents. The Owner shall be entitled to collect any and all sums that are due the Owner as Liquidated Damages in any manner available, including but not limited to withholding the amounts due to the Contractor for Progress Payments or Final Payment, deducting the Liquidated Damages due by a Change Order or Construction Change Directive, or collecting the amounts due from the Contractor or the Contractor's Surety.

1. Onsite Construction Activities are those activities beyond mobilization which include actual and physical progress of the Work on the Project site. By way of example, typical Onsite Construction Activities include, but are not limited to, clearing and grubbing of the Project site, Project site fill and pile driving.

2. Should Contractor fail to commence Onsite Construction Activities timely, as set forth in this section 8.2.4, then any future claim Contractor may submit for an extension of the Contract Time shall be directly reduced by the number of days Contractor was late in the commencement of Onsite Construction Activities as defined herein.

3.

§ 8.2.5 If all punch list items have not been completed by the end of the forty-five (45) lien period, through no fault of the Owner or Architect, the Owner may hold the Contractor in default. If the Owner finds the Contractor 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 Owner or Architect, the Owner may, at Owner's sole 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 the Owner's future projects. 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.

§ 8.3 Delays and Extensions of Time

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

Architect may recommend, if approved by the Owner. Any extension of time shall be memorialized in a Change Order.

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

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

§ 8.3.4 Time is the essence of the Contract. The Owner's operations will be impacted and delayed if the Project is not substantially complete within 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 (Saturday's, Sunday's and holidays included), of delay until the Work is substantially complete or, as applicable until the Work is finally complete. The Owner shall be paid the sum stated for liquidated damages in the Contract Document. Such liquidated damages shall be withheld by the Owner from the amounts due the Contractor for progress payments and deducted from the Contract Sum by a Construction Change Order or Construction Change Directive signed only by the Owner and the Architect.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

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

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, at the Pre-Construction Meeting or as otherwise agreed to by the Owner, the Contractor shall submit a schedule of values to the Architect, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect and the Owner. The Schedule shall include the costs for work for each section listed under each division. The costs for each section shall include labor, materials, overhead, and profit. The total of all items shall be equal to the total Contract Sum. In addition, the Contractor shall list and identify all subcontractors, all sub-subcontractors, and suppliers, as well as their contract amount. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.2.1 To facilitate the review of Applications for Payment, the Schedule of Values shall be submitted for review and approval on AIA Documents G702 and G703, and shall include the following:

.1 Contractor's cost for Contractor's fee (if applicable), bonds and insurance, mobilization, general conditions, etc. shall be listed as individual line items.

.2 Contractor's costs for various construction items shall be detailed. For example, concrete work shall be subdivided into footings, grade beams, floor slabs, paving, etc.

.3 On major subcontracts, such as mechanical, electrical and plumbing, the schedule shall indicate line items and amounts in detail (for example: underground, major equipment, fixtures, installation fixtures, start-up, etc.)

.4 Costs for subcontract work shall be listed without any additional mark-up of Contractor's costs for overhead, profit or supervision.

.5 If payment for stored materials is requested prior to installation, then material and labor shall be listed as separate line items.

.6 Contractor shall provide a report of actual versus project reimbursable expenses (general conditions), updated monthly.

.7 The Schedule of Values approved by the Architect and accepted by the Owner shall be used as a basis for reviewing the Contractor's Applications for Payment.

.8 A clear designation of any of the Work to be performed by the Contractor with its own employees.

.9 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 for a special design) proposed for the principal portions of the Work.

§ 9.2.2 The total of all items shall equal the total Contract Sum. For a multiple building site, multiple sites or multiple locations Contract, the Schedule of Values will be allocated for each separate building, site or location.

§ 9.2.3 The Contractor shall list and identify all Subcontractors, Sub-subcontractors and suppliers with their contract amount in the Schedule of Values.

§ 9.3 Applications for Payment

§ 9.3.1 Monthly, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values required under Section 9.2, for completed portions of the Work. The application shall be notarized and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. See section 9.3.1.3. Applications for Payment shall be submitted no later than the fifth (5^{th}) day 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 last day of the preceding month, less normal retainage, as set forth in Section 9.3.1.3. Offsite storage of materials may be allowed. See Section 9.3.2

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

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

§ 9.3.1.3 Normal retainage for Projects with a Contract Sum of less than $500,000.00 shall be 10% of the total Contract Sum. Normal Retainage for Projects with a Contract Sum of $500,000.00 or more shall be 5% of the total Contract Sum.

§ 9.3.1.4 The normal retainage shall not be due the Contractor until after all of the following have occurred: (1) Substantial Completion has been achieved; (2) the Architect has prepared and the Owner has approved and accepted a Certificate of Substantial Completion, including an attached Punch List meeting the requirements of Section 9.8.4 and 9.8.5; and (3) the Contractor has submitted an Application for Payment for the retainage, (4) the Contractor has provided the Owner with a fully completed, executed and notarized Contractor's Conditional Waiver of Lien for Current Progress Payment and Unconditional Waiver of Lien for Prior Progress Payments, in the form attached to the Agreement Between the Owner and Contractor, AIA Document A101; (5) the forty-five (45) day lien period in La. R.S. 38:2242 has expired; and (6) the Contractor has provided the Owner and the Architect with an original, certified clear lien and privilege certificate issued by the Clerk of Court for the Parish in which the Project is located. If there are insufficient funds remaining in the Contract Sum to both pay the normal retainage and cover the value assigned to the Punch List (as set forth in Section 9.8.5), then the Owner shall withhold payment of the normal retainage to the extent necessary to cover the shortfall. If the value of the Punch List (as set forth in Section 9.8.5) exceeds the funds remaining in the Contract Sum, including the normal retainage, Contractor shall not be entitled to the payment of any normal retainage. Instead, Contractor and/or its Surety shall be liable for and shall pay the shortfall to the Owner.

§ 9.3.1.5 Work performed and materials supplied under a Change Order may be included for payment only after the Change Order has been approved in writing by the Owner and all other appropriate parties, as more specifically set forth in section 7.2.1 herein above.

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

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

§ 9.3.4 Each Application for Payment for a Progress Payment may upon request of Owner be accompanied by a fully completed, executed and notarized Contractor's Conditional Waiver of Lien for Current Progress Payment and Unconditional Waiver of Lien for Prior Progress Payments, in the form attached to the Agreement Between the Owner and Contractor, AIA Document A101. The Application for Final Payment shall be accompanied by a fully completed, executed and notarized Contractor's Unconditional Waiver of Lien Upon Final Payment, in the form attached to the Agreement Between the Owner and Contractor, AIA Document A101. Payment Applications which omit these Waivers of Liens shall not be paid.

§ 9.3.5 The Contractor further expressly undertakes to defend the Owner at the Contractor's sole expense, against any actions, lawsuits or proceedings brought against Owner as a result of liens filed against the Work, the job site and any improvements thereon, any portion of the property of the Owner, or any payments due the Contractor (referred to collectively as "liens" in this Section 9.3) by those providing labor, material or equipment on behalf of Contractor. The Contractor hereby agrees to defend, indemnify and save Owner harmless against any such liens or claims and agrees to pay any judgment or lien resulting from any such actions, lawsuits or proceedings and all attorney fees.

§ 9.4 Certificates for Payment

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

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

§ 9.5 Decisions to Withhold Certification

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

.1 defective Work not remedied;

.2 third party claims/liens, in the amount of 125% of the claim/lien filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;

.3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;

.5 damage to the Owner, the Owner's property, or a Separate Contractor;

.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

.7 repeated failure to carry out the Work in accordance with the Contract Documents;

.8 the value of the Punch List (see Section 9.8.5) of incomplete or items to be corrected exceeds the balance remaining of the Contract sum including the amount allotted for the retainage as provided in Sections 9.3.1.2 and 9.3.1.4;

.9 if the Project is behind schedule, failure to submit a written plan indicating action by the Contractor to regain the time schedule for completion of the Work within Contract Time;

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

.11 rejection of any part of the Work by any governmental authority having jurisdiction over the Project.

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

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

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

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall, within thirty (30) days after the receipt of a valid Certificate for Payment, make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect. Erroneous Certificates of Payment may cause delays in the processing of a payment. Such delay(s) shall not constitute a cause for claims by the Contractor for additions to the Contract Sum or Contract Time.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to

the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. La. R.S. 9:2784(A) and (C) require a Contractor or Subcontractor to make payment due to each subcontractor and supplier within fourteen (14) consecutive days of receipt of payment from the Owner. If not paid, a penalty in the amount of one half of 1% per day is due, up to a maximum of fifteen percent (15%) from the expiration date until paid. The Contractor or Subcontractor, whichever is applicable, is solely responsible for the payment of any penalty.

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

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

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

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

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

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

§ 9.6.9 If the Owner receives any claim of nonpayment arising out of the Work from a Subcontractor, Sub-subcontractor, material or equipment supplier, or the like, the Owner shall deduct 125% of such claim from the remaining Contract Sum. The Contractor, or any interest party, may deposit security with the recorder of mortgages of the parish where the Work has been done, in accordance with La. R.S. 38:2242.2, guaranteeing payment of the claim. When the Owner receives original proof of such guarantee from the Recorder of Mortgages and/or Clerk of Court for the Parish in which the Project is located, the claim deduction will be added back to the Contract Sum.

§ 9.7 Failure of Payment

Deleted.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The Architect shall determine if the Project is Substantially Complete in accordance with this Article 9.8. In addition to the requirements of the first sentence of this Article 9.8.1, the following conditions must also be satisfied before the Work will be considered Substantially Complete, unless otherwise agreed to by the Owner:

.1 Where roofing work is part of the Contract, the Owner must receive the executed Roofing Contractor's and Roofing Manufacturer's guarantees;

.2 All required occupancy permits must have been issued and copies delivered to the Owner;

.3 All Project systems included in the Work must be operational as designed;

.4 All operations and maintenance data specified has been submitted and approved, including the provision of draft as-built drawings for training purposes;

.5 The Owner's personnel must have completed any required training in the Project's operations systems;

.6 All finishes required by the Contract Documents must be in place;

.7 The only remaining work must be minor in nature so that the Owner can occupy the building/construction and the Contractor's completion of that minor remaining work will not interfere with nor hamper the Owner's normal business operations;

.8 The Contractor must certify in writing that all remaining Work will be completed within forty-five (45) consecutive calendar days, unless the Owner consents to a different time, following the date of Substantial Completion. Any remaining Work required to be performed after the date of Substantial Completion at a school that is operating and open shall be done in a manner and during times that do not interfere with school operations, at no additional cost to Owner. Owner shall have the right to direct Contractor to perform said Work, at no additional cost during non-operating hours of the school, including nights and weekends.

.9 All warranties to be effective as of the date of substantial completion fully signed and dated.

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

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. Prior to inspection by the Architect, the Contractor shall notify the Architect that the Project is ready for inspection by the Louisiana 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 or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If the Architect determines that the Work still is not substantially complete, the Architect and each of the Architect's principal consultants shall be paid $200.00 per hour for their time to conduct each additional inspection, which amounts shall be withheld from the unpaid Contract funds. The payment shall be paid by the Owner and deducted from the Contract Sum via either a Change Order or a Construction Change Directive. If no funds remain, the Contractor and the surety shall pay the amount(s).

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

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Payment shall be adjusted for Work that is listed on a Punch List prepared by the Architect, incomplete, or not in accordance with the requirements of the Contract Documents. The Punch List of exceptions prepared by the Architect shall itemize additional Work remaining to be done by the Contractor, and the dollar value related thereto. The Cost of these items shall be prepared in the same format as the Schedule of Values. The monetary value assigned to this Punch List will be 125% of the sum of the cost estimate for each particular item of required work, and will be estimated by the Architect based on the mobilization, labor, material and equipment costs of correcting the item. The value assigned to the Punch List shall be retained from the monies owed the Contractor, above and beyond the normal retainage. No funds assigned for the Punch List value shall be due to the Contractor before the Punch List items are completed and accepted by the

Architect and the Owner. 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 accepted as Substantially Complete. If funds remaining in the Contract are less than that required to complete the Punch List Work, then the Contractor or its Surety shall pay the difference.

§ 9.8.6 The Contractor shall complete the Punch List items within forty-five (45) consecutive calendar days from the date of Substantial Completion. The Owner may, as its option, consent to a different time, but such consent shall be reflected in writing. If the Contractor fails to complete all Punch List items within this forty-five-day period, through no fault of the Owner or the Architect, the Contractor shall be assessed Liquidated Damages in the amount set forth in the Agreement between the Owner and Contractor (AIA Document A101), for each additional day beyond that forty-five (45) day period that the Punch List remains incomplete. Additionally, if the Contractor fails to complete all Punch List items within this forty-five-day period, through no fault of the Owner or the Architect, then the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification of the Surety by the Owner, the Surety has not completed the Punch List, through no fault of the Architect or Owner, the Owner may, at his option, contract with an outside party to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract Sum. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future Owner contracts. If the Surety fails to complete the Punch List within the stipulated time period, the Owner may choose to not accept bonds submitted from the Surety in the future.

§ 9.8.7 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. After such acceptance, and consent of surety, the Contractor may submit to the Owner a properly completed and supported Application for Payment seeking payment of completed Work, less the value assigned to the Punch List items, as set forth in and limited by Section 9.8.5 above. Such Application for Payment shall not request payment for Work that is incomplete and/or not in accordance with the requirements of the Contract Documents.

§ 9.8.8 After the Owner's receipt and approval of a fully executed Certificate of Substantial Completion and attached Punch List, the Owner may issue a Notice by Owner of Acceptance of Work. The Contractor shall record the Certificate of Substantial Completion or Notice by Owner of Acceptance of Work with the Clerk of Court for the Parish in which the Project is located, and shall provide written evidence of recordation to the Architect and the Owner's representative . If the Notice of Acceptance has not been recorded within seven (7) days after issuance, the Owner may record the Notice of Acceptance at the Contractor's expense.

§ 9.9 Partial Occupancy or Use

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

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

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

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

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

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

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

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. If the Architect does not find the Work acceptable in accordance with 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 $200.00 per hour for their time, for each additional inspection authorized by the Owner, to be withheld from the unpaid funds remaining of the Contract Sum. The payment shall be paid by the Owner and deducted from the Contract Funds. If no funds remain, Contractor or its Surety shall pay the amount. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 The Contractor shall deliver the following item to the Architect and the Owner within forty-five (45) days following Substantial Completion. Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.2.1 In addition to the items listed in Section 9.10.2, the Contractor shall deliver the following items to the Architect within forty-five (45) days following the date of Substantial Completion. Neither final payment nor any remaining retained percentage shall become due until the Contractor submits all of the required documents and information.

1. All close-out submittals specified in the Specifications.
2. All project record documents specified in the Specifications.
3. All approved submittals.
4. All approved Shop Drawings.
5. All final as-built Drawings, in both paper and electronic (pdf) format.
6. All operations and maintenance data specified in the Specifications.
7. All warranties as required on specific products or portions of the Work, including subcontractor warranty letters.
8. All spare parts, overages, and maintenance materials specified in the Specifications.
9. Certificates of Occupancy from authorities having jurisdiction.

10. Copies of all inspection tags from authorities having jurisdiction.
11. Executed Certificates of Substantial Completion.
12. A fully completed, executed and notarized Contractor's Unconditional Waiver of Lien Upon Final Payment, in the form approved by the Owner.
13. Clear lien certificate from the Clerk of Court.

§ 9.10.2.2 Upon receipt by the Architect of all Project close-out documents and a recommendation by the Architect of acceptance of Final Completion, a close-out meeting will be scheduled by the Architect, to include the Architect, the Owner and the Contractor for the review and acceptance of all of the required items identified in this Section 9.10.2. If all items are complete and accepted by the Owner, the Owner will then authorize the issuance of Final Payment.

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

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

.1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
.2 failure of the Work to comply with the requirements of the Contract Documents;
.3 terms of special warranties required by the Contract Documents;
.4 audits performed by the Owner, if permitted by the Contract Documents, after final payment;
.5 any Work found not to be done in accordance with the Contract Documents during the one-year Correction period;
.6 liquidated damages; or
.7 latent defects.

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

§ 9.11 Liquidated Damages

As more specifically set forth in AIA Document A101, Agreement Between Owner and Contractor, as modified by the Owner, the Contractor's failure to achieve Substantial Completion within the Contract Time, as set forth in the Contract Documents shall result in the imposition of Liquidated Damages upon the Contractor. As further set forth in the Agreement, and in Sections 8.2.4 and 9.8.6 above, it is mutually agreed by the Contractor and Owner that the Owner's operations will be negatively impacted and the Owner will sustain damage that will be impracticable and extremely difficult to quantify if Substantial Completion of the Project is not achieved within the time set forth in the Agreement. The Contractor and the Contractor's Surety shall be liable for and shall pay to the Owner Liquidated Damages, which shall not be considered a penalty, in the amount stated in the Contract Documents as fixed, agreed upon and Liquidated Damages for each calendar day (Saturdays, Sundays, and legal holidays included) that Substantial Completion is delayed beyond the time stated in the Agreement. The Owner shall be entitled to collect any and all sums that are due the Owner as Liquidated Damages in any manner available, including but not limited to withholding the amounts due to the Contractor for Progress Payments or Final Payment, deducting the Liquidated Damages due by a Change Order or Construction Change Directive, or collecting the amounts due from the Contractor or the Contractor's Surety. The Contractor and the Contractor's Surety hereby agree and will be held liable for any Liquidated Damages imposed in accordance with these Contract Documents.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

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

§ 10.2 Safety of Persons and Property

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

- **.1** employees on the Work and other persons who may be affected thereby;
- **.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- **.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction;
- **.4** the exhaust systems and existing fresh air intake devices to prevent dust or fume caused by the Work to enter such systems; and
- **.6** the Contractor expressly agrees that it is exclusively responsible for compliance with the Occupational Safety and Health Act ("OSHA") and State and local regulations for the construction in that it is the "employer" within the meaning of those regulations. It is the expressed intent of the parties that the Contractor, and not the Architect or the Owner, is in charge of the Work. Any provision in the Contract Documents in conflict with this paragraph shall be null and void.

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards. Contractor shall provide for the marking of all underground utilities prior to any digging, excavation or other disturbances of earth and provide the Louisiana One Call reference number to the Architect and the Owner's representative. The Contractor expressly agrees that it is exclusively responsible for compliance with the Occupational Safety and Health Act (OSHA) and state and local regulations for the construction in that it is the "employer" within the meaning of those regulations. It is the expressed intent of the parties that the Contractor, not the Architect nor the Owner, are in charge of the Work. Any provision in the Contract's Documents in conflict with this paragraph shall be null and void.

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

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

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect. Contractor shall immediately make an oral report to the Architect and the Owner's representative and promptly provide a written report to the Architect and the Owner's representative, about all accidents arising out of or in connection with the Work that cause death, personal injury, interrupt utility services or property damage.

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

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding three (3) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. This notice does not replace nor supplant the shorter notice required by Section 10.2.6 above.

§ 10.2.9 Security of Project Site

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

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area only and notify the Owner and Architect of the condition, in writing. Mold is not considered to be hazardous for the purposes of this Section; however, the Contractor should notify the Owner's representative and Architect of the presence of black mold on building components, in writing, in any affected area of a Project. The Owner is responsible to assess any area of a Project where mold is observed. The Owner will provide for remediation of mold in any affected area of a Project. The Owner will advise the Architect and Contractor upon completion of the remediation of any affected area due to the presence of mold in an area. There are no clear standards set regarding exposure levels for mold since mold is generally present everywhere. The presence of mold in an area of a Project does not affect the remaining areas of a Project and the Contractor shall continue with work in all unaffected areas of a Project.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance, such as asbestos, PCB, or lead, reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up, if any, of any affected area of the Project.

§ 10.3.3 Deleted.

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

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

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

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

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

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner may purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement, if any, or elsewhere in the Contract Documents. The Owner may maintain General Liability and Property Insurance for its interests and the Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in Louisiana.

§ 11.3 Waivers of Subrogation

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

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring

the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

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

§11.5 Adjustment and Settlement of Insured Loss

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

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

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's or Owner's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect or the Owner's Program Manager, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Sum or Contract Time.

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

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found by the Architect to be not in accordance with the requirements of the Contract Documents, the Contractor, at its sole expense, shall correct it promptly after receipt of notice from the Owner or Architect to do

so. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner or the Architect fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5. Additionally, if the Contractor fails to correct the non-conforming or defective Work, the Owner may hold the Contractor in default, notify the surety, and require the surety to perform and/or pay for the corrective work.

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

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

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

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

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations (see, La. R.S. 38:2189).

§ 12.2.6 The Owner shall have the right to operate non-conforming equipment until defects are corrected and warranties are met; and the Owner shall have the right to operate rejected equipment until replaced, without charge for depreciation, use, or wear.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 Successors and Assigns

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

§ 13.2.2 Deleted.

§ 13.3 Rights and Remedies

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

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

§ 13.3.3 The 22nd Judicial District Court in and for the Parish of Ascension, State of Louisiana shall have sole and exclusive jurisdiction in any action brought under the Contract or Bonds. In the event of diversity for purposes of federal court jurisdiction or any other cause of action that may allow for federal court jurisdiction or venue, the Contractor, its Surety, its Sub-contractors and suppliers specifically waive any right or cause of action to be filed, transferred or tried in any federal court. The sole court granted exclusive jurisdiction and venue of any action arising from this agreement or any dispute relating to the Project and/or Work is the 22nd JDC in the Parish of Ascension, State of Louisiana.

§ 13.3.4 The Contractor shall immediately record the signed Contract with the Owner (A101) and the Bonds in the office of the Clerk of Court, 22nd Judicial District Court for the Parish of Ascension and provide the recordation information to the Owner's representative and the Architect.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. The Contractor shall contact the Owner and Architect to make arrangements for such tests, inspections, and approvals with the Owner's designated independent testing laboratory or other entity acceptable to the Owner, or with the appropriate public authority. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals, except as provided in Section 13.4.3,. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

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

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

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

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

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

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear no interest.

§ 13.6 PRECONSTRUCTION, PROGRESS AND COORDINATION MEETINGS

§ 13.6.1 A Pre-Construction meeting shall be held prior to the Notice to Proceed. The following shall be in attendance: Owner, Architect and its Consultants, Contractor and Superintendent, major Subcontractors and representatives of separate Contractors, when applicable. The Contractor shall submit to the Architect and the Owner's representative prior to or at the preconstruction meeting the following: (1) list of major Subcontractors and their phone numbers, (2) a list of Subcontractors' Superintendent and Project Manager with 24 hour phone numbers, (3) (CPM) Construction Progress Schedule both in the written and electronic formats (both native and pdf) submittal schedule, and (4) Schedule of Values.

§ 13.6.2 Progress and coordination meetings will be held monthly or more often as designated by the Owner or Architect on site or as changed in writing by the Owner's representative or Architect. The Contractor shall distribute minutes of each meeting to all participants within seven (7) days of each meeting. The following are expected to attend: The Contractor represented by its Project Manager or principal, the Contractor's Project Superintendent, the Sub-contractors and material suppliers requested by the Owner's representative or Architect

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

.1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;

.2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; or

.3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work as to the portion of the Work that was installed, performed and/or stored on the Project site and costs incurred by reason of such termination, and costs incurred by reason of such termination. The Contractor shall not be entitled nor allowed consequential damages or loss of profit or overhead or attorney fees for any portion of the Work of the Contract that has not been performed.

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

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

.1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;

.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents; or

.5 fails to complete the Punch List within the time as specified.

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

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract or for one or more sites of a multi-site Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. Termination by the Owner shall not suspend assessment of liquidated damages against the Contractor or Surety.

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

§ 14.2.5 Liquidated damages have been established and termination by the Owner pursuant to this Article shall not relieve the Contractor and/or the surety of their obligations under the liquidated damages provisions; and the Contractor and/or surety shall be liable to the Owner for per diem liquidated damages.

§ 14.3 Suspension by the Owner for Convenience

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

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

.1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

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

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

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

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

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

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement. The Contractor is not entitled to recover consequential damages nor attorney fees.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

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

Contract Documents. Comments made at progress meetings, walk-throughs, inspections, in emails, voicemails, and other non-written communications shall not meet the requirements of a claim.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law (see, La. R.S. 38:2189), but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 15 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. The Architect may provide a written decision to the Contractor and the Owner within 21 days of receipt of the Claim. The Architect may (1) approve the Claim, (2) reject the Claim in whole or part, or (3) suggest a compromise. The Architect's decision is binding on the parties but subject to mediation and/or litigation by any party. 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. A written decision of the Architect is required as a condition precedent to mediation or litigation, unless 21 days have passed after claim has been referred to the Architect with no decision having been rendered by the Architect.

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

§ 15.1.4 Continuing Contract Performance

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

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision 15. The Architect will issue Change Orders and Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

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

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. Adverse weather conditions on a scheduled work day shall only result in claims for additional time, and not constitute grounds for adjustment to the Contract Sum. No monetary damages for weather-related days shall be allowed or granted. A claim for an increase in the Contract Time for adverse weather will only be considered when said weather affected critical path activities, as identified on the approved baseline schedule.

§ 15.1.6.2 If adverse weather conditions or unsuitable ground conditions at the Project Site are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, prevented the execution of major items of work on the site, and had an adverse effect on the scheduled construction. Contractor shall anticipate and include in its construction schedule, rain days due to adverse weather conditions in accordance with the table below. An adverse

weather day is defined as a day when rainfall at the Project site exceeds 0.50 inches during a 24-hour period, or temperatures that do not rise above that required for the day's construction activity, if such temperature requirement is specified or accepted as standard industry practice, or sustained wind in excess of twenty-five (25) m.p.h., and prevents proceeding with execution of any major items of Work for 5 continuous hours of the day or 65 percent of the normal working day. The Contract Time already considers the following as reasonably anticipated days of adverse weather on a monthly basis and are presented for informational purposes only:

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

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

§ 15.1.6.3 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. Contractor's first Claim for Additional Time due to adverse weather may be submitted only after the total adverse weather days exceed the allowable days as stated in Section 15.1.6.2 above. The claim must be submitted within seven (7) calendar days of the end of the month in which the cumulative total is first exceeded and is fully document for the cumulative total of adverse weather delays resulting in the total exceeded allowed days. Thereafter, Contractor shall submit any such claim for additional time due to adverse weather monthly within seven (7) calendar days of the end of the month. Adverse weather conditions on a scheduled work day shall only result in claims for additional time and an adjustment in the Contract Time only. Adverse weather delay days will not be granted for weekends or holidays. A claim for an increase in the Contract Time will only be considered for critical path activities, as identified on approved baseline schedule.

§ 15.1.6.4 If unsuitable ground conditions are the result of Contractor's failure to properly grade and/or maintain the grounds, no additional time shall be granted.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor waives Claims against the Owner for consequential damages arising out of or relating to this Contract. This waiver includes

.1 Deleted

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, attorney's fees, and for loss of profit, except anticipated profit arising directly from the Work.

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

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 21 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within 21 days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, or (4) suggest a compromise.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision.

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

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

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

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation.

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

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

§ 15.3 Mediation

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

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by a mediation service located in West Feliciana Parish, or as otherwise agreed to by the Parties. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation.

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

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

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, file a lawsuit.

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

§ 15.4 Arbitration
§ 15.4.1 Deleted.

§ 15.4.1.1 Deleted.

§ 15.4.2 Deleted.

§ 15.4.3 Deleted.

§ 15.4.4 Consolidation or Joinder
§ 15.4.4.1 Either party may consolidate a mediation or litigation with any other mediation or litigation to which it is a party provided that the law permits consolidation.

§ 15.4.4.2 Deleted.

§ 15.4.4.3 Deleted.

ARTICLE 16 EQUAL OPPORTUNITY
§ 16.1 Contractor and all Sub-contractors shall not discriminate against any employee or applicant for employment because of race, color, sex or national origin. The Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not limited to the following; employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices setting forth the policies of non-discrimination.

§ 16.2 The Contract and all Sub-contractors shall in all solicitations or advertisement for employees place by them or on their behalf state that they qualified applicants will receive consideration for employment without regard to race, religion, sex or national origin.

ARTICLE 17 VERIFICATION OF EMPLOYEES INVOLVED IN PUBLIC CONTRACT WORK

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

SPECIAL CONDITIONS OF THE CONTRACT

The Special Conditions of the Contract are meant to be viewed as a compliment to the General Conditions of the Contract. Should any discrepancy or ambiguity be noted, the Special Conditions of the Contract shall apply, and the General Conditions of the Contract shall defer to Special Conditions of the Contract. The term "Design Consultant" shall be construed to mean "Architect". The terms "Owner" shall be construed to mean the Parish of Ascension Government. Where General Conditions refer to owner; it shall be recognized to include owner's representative (PM) as per owner/owner representative contract.

1. INTENT OF DRAWINGS AND CONTRACT DOCUMENTS

A. Clarification of any conflict in or between Contract Documents shall be made only by written Addenda during the bid period and sent to all perspective Bidders. The Design Consultant shall not be responsible for verbal answers regarding intent or meaning of the Contract Documents, or for any verbal instructions, by whomsoever made, prior to the award of the Contract.

B. All designed systems and/or assemblies are to be proposed and bid as complete assemblies or operational systems. Drawings are to be construed as an indication of intent and not attempting to fully obtain or detail required work.

2. COPIES OF DRAWINGS AND SPECIFICATIONS

A. As specified in the Special Instructions to Bidders, the Contractor shall have determined the number of sets of Contract Documents required for the construction of the specified work. The cost of all Contract Documents required for the construction of the specified work, as determined by the Contractor, shall have been included in his Proposal.

3. NOTICE TO PROCEED

A. The Contractor may proceed to award subcontracts, assemble materials, etc., at any given time after Award of Contract and the Notice to Proceed with the work has been issued. For the purpose of liquidated damages, the Contractor's official time for the starting of construction work shall be the actual date of the Notice to Proceed.

4. SHOP DRAWINGS AND SUBMITTALS

A. The General Contractor shall submit a schedule of submittals for approval to the Design Consultant, itemizing all required submittals within ten (10) days of receiving the Notice to Proceed.

B. All shop drawings and/or submittals shall be dated and numbered sequentially. A re-submittal shall be designated by adding an "R" to the original submittal number.

C. All shop drawings and submittals shall be coordinated with all respective trades and approved by the General Contractor as so coordinated prior to submission to Design Consultant. Shop drawings and/or submittals not approved and stamped by the General Contractor shall be returned to Contractor.

D. Truss design submittals shall be specifically approved by the General Contractor and mechanical subcontractor prior to Design Consultant's review.

E. Six copies of all shop drawings and submittals shall be presented to the Design Consultant with a completed Material Approval Submittal form containing the project name, number of items, name of vendor/supplier and sufficient description to identify said submittal.

F. The Contractor shall email Copies of all Material Approval Submittal forms to the Program Manager at the time each Submittal is delivered to the Design Consultant.

G. All shop drawings and/or submittals shall be submitted sufficiently in advance of construction requirements to allow checking, correcting, resubmitting, and rechecking.

H. Unless specifically requested by the Design Consultant, submittals marked "Approved as Noted" or "Approved as Corrected", need not be resubmitted.

5. REQUESTS FOR INFORMATION

A. Request for Information (RFI) shall be sequentially numbered and submitted to the Design Consultant.

B. The RFI shall contain sufficient, specific, information to provide the Design Consultant with a clear understanding of the item or concerns in question. The Contractor may include additional information in the form of photographs, diagrams, or other pertinent documentation, to assist in the clarification of the RFI.

C. The Design Consultant shall provide an answer to the Contractor in the space provided on the RFI form. Should additional information be required for the Design Consultant response, that information shall be attached to the RFI form.

D. Failure to submit a written RFI to the Design Consultant may negate a Contractor's claim for additional time or money should a Design Consultant fail to respond to an RFI in a timely manner.

6. PROGRESS SCHEDULE

A CPM Project Schedule for Construction, as described below, shall be prepared and is the responsibility of the Contractor. Subcontractors and suppliers participating in the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved project schedule shall be used to measure the progress of the work, aid in evaluating time extensions, and to provide the basis for all progress payments.

A. The CPM schedule shall be the basis for measuring Contractor progress. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire project schedule submission and the inability of the Design Consultant to evaluate Contractor progress for payment purposes.

B. Project Schedule - General Requirements

1. There will be a pre-scheduling conference to be conducted at the project site to review the project schedule requirements. The pre-scheduling conference shall include but not be limited to reviewing the Contractor's software, verifying the availability of qualified personnel to create and maintain the schedule, review schedule updating and reporting requirements, and review time extension and delay claim procedures.

2. In preparation of the schedule, the Contractor shall comply with the procedures outlined in AGC's "Construction Planning & Scheduling".

3. The schedule shall be a Critical Path Method (CPM) schedule and shall be provided in Gantt Chart format.

4. The schedule's time frame should be extended from the date of Notice to Proceed through the date of Substantial Completion and Final Completion as established by the contract documents.

5. The schedule shall include an appropriate and reasonable level of detail to allow for accurate monitoring of project progress. Items to be included in

the schedule shall be further described below.

6. The schedule shall be prepared using input from the General Contractor's subcontractors and suppliers.

7. The initial schedule shall be submitted within 15 calendar days of Notice to Proceed.

8. The schedule shall be updated a minimum of once per month with Design Consultant approved time extensions, as necessary. An updated schedule shall be submitted with the Contractor's application for payment. Failure to submit an updated schedule with the application for payment may cause the application for payment to be rejected.

9. Level of Detail and Items to be Included in Schedule.
   a. Activity Duration: Define activities so that no activity has a duration of more than 30 days unless specifically approved by Design Consultant.

   b. Procurement and Submittal Activities: Include procurement process activities for long lead time items. A long lead-time item is defined as one with a lead-time of more than 60 days. Procurement activities are to be broken down into submittals (submittal review and approval time should be incorporated into the submittal activity duration), purchasing and fabrication / delivery.

   c. Start-up and Testing Time: Include activity line items for start-up and testing.

   d. Owner Activities: Owner activities that could impact progress shall be included as separate activities in the project schedule. An example of an owner activity would be delivery and set-up of portables.

   e. Milestones: Include milestones for critical days or events in the schedule. As a minimum, milestones should be established for Notice to Proceed, Substantial Completion and Final Completion.

C. The schedule shall be updated a minimum of once per month and should coincide with the submission of the Contractor's application for payment. Failure to submit an updated schedule with the application for payment may cause the application for payment to be rejected.

   1. Should the Design Consultant deem that the project is running behind schedule, the Design Consultant can request that the schedule be updated more frequently.

2. The initial approved schedule shall be designated as the baseline schedule and shall represent the anticipated sequencing and activity duration of the construction project. The baseline schedule will be the schedule referenced against the updated schedule to determine schedule progress and the effect of changes. Each update will become the baseline for the subsequent update.

3. When performing the schedule update, actual start and finish dates for each activity shall be used. Automatic updates using default settings inherent in the scheduling software will not be allowed.

4. When reporting the schedule, the baseline and updated schedules shall be displayed on the same chart in order for the as-built condition to be easily compared against the baseline.
5. Activity progress shall be clearly indicated on the activity bar as a superimposed progress bar.

6. With the updated schedule provide a report of every change including, but not limited to changes in logic, actual start and finish dates and activity durations.

D. Requests for Time Extensions

1. The CPM schedule shall be the basis by which a determination will be made as to whether or not the Contractor is due an extension of time under the provisions of the contract.

2. For each delay or time extension claim, the Contractor shall submit a justification report that should include the following items:

   a. A brief explanation of the cause of the change.

   b. A CPM schedule incorporating the change and clearly depicting the impact to the final completion date of the project using the latest updated schedule as a baseline.

   c. Delays that are the sole responsibility of the contractor will not be considered as reason to grant time extension to the final completion date for the contract.

7. METHOD OF RECOVERY

A. A Progress Meeting shall be held at the end of each month. The purpose of this meeting shall be for the Design Consultant and the Owner to discuss alternate solutions for updating and/or compressing construction schedules. At this meeting, if the Project is behind schedule in any area, the Contractor shall submit to the Design Consultant, a Method of Recovery. The Contractor shall, with due diligence, make every effort to adhere to this construction schedule. Slippage of construction schedules shall not be tolerated. Schedule slippage without alternate solutions that shall allow the schedule to be met are grounds for Contract cancellation. Method of Recovery shall not increase the Contract amount.

8. SCHEDULE OF VALUES

A. Prior to submitting the first Application for Payment, the Contractor shall provide to the Design Consultant a schedule of values allocated to various portions of the Work, prepared in such form, and supported by all such data substantiating its accuracy, as the Design Consultant may require. This schedule shall be used as a basis for reviewing the Contractor's Applications for Payment.

9. ELECTRICAL POWER AND JOB SITE UTILITIES

A. The General Contractor shall be responsible for the cost of all electrical power and other utilities necessary for construction until such time as a substantial completion date is established and agreed upon by all parties at which time; said utilities shall transfer to the Owner.

10. APPLICATION FOR PAYMENT/PAY REQUESTS

A. All Applications for Payment shall be submitted to the Design Consultant for consideration, monthly on or about the 25th of each month. The Design Consultant shall then review all work and agree as to the percentage of completion of each phase of work in question. No approval of any pay requests shall be made until all the involved parties agree as to the stage and/or percentage of completion.

B. Two original sets of each application are required.

C. The Design Consultant shall maintain the option to “red line” at their discretion, those items which, having been submitted for payment, are not properly

documented or which are not properly documented as to support costs of Change Orders.

D. With each Application for Payment the Contractor is required to submit the following:
1. Contract Notice to Proceed Date
2. Original Contract Completion Date
3. Current Revised Contract Completion Date
4. Number of Days Elapsed
5. Percent of Time Elapsed
6. Percentage of Contract in Place (Stored materials may be included)
7. FEIN #

E. Such application shall be notarized and supported by such data as the Design Consultant may require as substantiating the Contractor's right to payment. Utilizing forms provided by the Architect, a graph indicating the monthly projected and actual construction schedule shall be submitted each month with the Contractor's Application for Payment.

F. With the monthly Application for Payment, the General Contractor shall submit a Waiver of Lien for the value of the work completed.

G. Payment for materials stored off-site may not be requested unless materials are stored in an insured and bonded warehouse. Certificates of Insurance must be attached to the pay request. Copies of both the purchase order and copies of material invoices shall be submitted with the Request for Payment on which the stored materials are listed.

H. The Contractor's FEIN number must appear on all Applications for Payment.

11. UNKNOWN CONDITIONS

A. If, in the performance of the Contract, subsurface or latent conditions are found to be materially different from those indicated by the Drawings and/or Project Manual, or unknown conditions of an unusual or impractical nature are disclosed differing materially from conditions usually inherent in work of the character shown and specified, the attention of the Design Consultant shall be called immediately to such conditions before they are disturbed. Upon such notice, or upon such observation of conditions, the Owner may instruct the Design Consultant to promptly make such changes in the Drawings and/or Project Manual as he finds necessary to conform to the different conditions, and any increase or decrease in the cost of the Work resulting from such changes shall be adjusted as provided under CHANGES IN THE WORK or EXTRA WORK as set forth in the GENERAL CONDITIONS. All costs and claims including time extension are

required to be included in the Contractor's response to Change Order Request or Request for Proposal. Claims for additional costs and/or time arising after approval shall be disallowed and this condition is accepted by the Contractor upon executing Owner/Contractor Agreement.

12. CHANGES IN THE WORK

A. All Requests for Change Order shall be submitted to the Design Consultant complete with substantiating documentation for review and approval. The Design Consultant shall determine whether, in his opinion, the request should be approved or disapproved, with or without additional time, and submit the Request for Change Order to the Owner for review. No Request for Change Order should be submitted to the Owner without the prior written review and determination by the Design Consultant. Not all changes shall constitute a time extension. Time extensions shall be evaluated based upon criteria established in item 6G of The Special Condition of The Contract.

B. Should the Design Consultant concur as to the approval of a Request and/or time, additional monies shall be added to the Contract through the execution of Contract Change Order Document with or without additional time.

C. If the Design Consultant refuse to approve a Change Order Request, no additional work shall be initiated, no additional time granted, and no additional monies shall be added to the Contract.

D. Should the Design Consultant determine that work detailed in a Change Order Request is included in the Contract Documents, and therefore should have been included in the Contractor's bid, the Request for Change Order shall be disapproved, and no additional monies or time shall be added to the Contract Documents. If it is deemed that said work is required as indicated by the Contract Documents, the Design Consultant reserve the right to require that the Contractor perform all said work in the Request for Change Order necessary for the completion of the work in accordance with the Contract Documents. The Contractor shall perform this work at no additional cost to the Owner and with no additional funds nor time added to Contract.

E. When work specified in a Change Order Request entails the use of a subcontractor(s), the subcontractor(s) must provide to the Contractor a detailed breakdown of costs. This shall include labor, materials, including units, and any other specific costs entailed for the completion of the work. The subcontractor shall also indicate his OH&P. This information shall be submitted in full for each subcontractor as part of the substantiating documentation required for each Request for Change Order. Bonding, insurance, administrative, supervisory, or other related

overhead costs are considered a part of a subcontractor's overhead and shall not be included as additional costs.

F. No money for general conditions will be considered where time only is added to contract by change order.

13. INSPECTIONS BY GENERAL CONTRACTOR

A. The Contractor's Job Superintendent shall submit to the Design Consultant, daily construction reports detailing all construction activity taking place each day. The report shall be submitted by 10:00 a.m. the following day on the form provided in the specifications.

B. The General Contractor's Superintendent or designated representative shall inspect all work performed by the General Contractor and all Subcontractors. Upon his approval of the work, and after any and all required corrections to the work have been completed, the Design Consultant shall be notified in writing that the construction is ready for inspection. All items found by the Design Consultant which are not in conformance with the Contract Documents shall be corrected before local officials are called to perform inspections or tests.

14. TESTING

A. The Owner/Design Consultant reserves the right to require additional testing. In the event that the item tested does not meet the requirements of the Contract Documents, initial tests and any additional testing shall be paid by the General Contractor.

15. COMPLETION OF FINAL PUNCH LIST ITEMS

A. The Project Superintendent shall remain on site, on a full time basis, until such time as the punch list items have been verified as 100% complete, by the design consultant.

DRAFT

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor

where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

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

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»
« »

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

«»« »
« »
« »
« »

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

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»
« »

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

«Quality Engineering & Surveying, LLC»« »
«18320 Hwy. 42»
«Port Vincent, LA 70726»
« »

The Owner and Contractor agree as follows.

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

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

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

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

TABLE OF ARTICLES

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, the Owner's Modified AIA Document A201-2017 Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

[« »] The date of this Agreement.

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

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

« »

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

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

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[« X »] Not later than « One Hundred Fifty » («150») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

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

Portion of Work	Substantial Completion Date
« Completion of Turf Infields and Backstops »	February 29th, 2024

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

ARTICLE 4 CONTRACT SUM

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

§ 4.2 Alternates

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

Item	Price

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

Item	Price	Conditions for Acceptance
« »		

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

Item	Price
« »	

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

Item	Units and Limitations	Price per Unit ($0.00)
« »		

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

« It is mutually agreed by the Contractor and the Owner that time is an essential part of this Contract and in case of the Contractor's failure to complete the Project within the time specified above and agreed upon, the Owner will be damaged thereby; and because it is difficult to definitely ascertain and prove the amount of said damages, it is hereby agreed that the amount of Liquidated Damages shall be the sum of Five Hundred Dollars ($500.00) for each consecutive calendar day of delay for which the Project is not substantially complete beginning with the first day of

beyond the completion time stated above. Contractor hereby agrees that said sum(s) shall be deducted from monies due Contractor by a Construction Change Directive under this Contract or if no money is due Contractor, the Contractor hereby agrees to pay to the Owner as liquidated damages, and not by way of penalty, such total sum as shall be due for each delay, computed as stated above. Further, the contractor agrees to pay as Liquidated Damages the sum of Five Hundred Dollars ($500.00) for each consecutive calendar day for which the list of items to be completed or corrected (Punch List) is not complete beginning with the forty-sixth (46) day after the date of substantial completion. Contractor hereby agrees that said sum(s) shall be deducted from monies due the Contractor by a Change Order or a Construction Change Directive under this Contract or if no money is due Contractor, the Contractor herby agrees to pay the Owner as Liquidated Damages, and not by way of penalty, such total sum as shall be due for each delay, computed as stated above. »

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

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

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

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

«Not Applicable »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the «10th » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than thirty (30) days following Owner's receipt of a certified Application of Payment from the Architect. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « thirty » (« 30 ») days after the Architect receives the Application for Payment. . Erroneous Applications for Payment may cause delay in processing of a payment, however, such delays shall not constitute cause for claims for compensation for any addition to the Contract Sum nor for adjustment of the Contract Time.
(Federal, state or local laws may require payment within a certain period of time.)

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

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

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

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

.1 That portion of the Contract Sum properly allocable to completed Work;

.2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a bonded location agreed upon in writing; and

.3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

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

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of the Owner's Modified AIA Document A201–2017;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of the Owner's Modified AIA Document A201–2017; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

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

« Five percent (5%) for a Contract Sum of $500,000,00 or more. Ten percent (10%) if the Contract Sum is less than $500,000.00. »

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

«Not Applicable »

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

«Not Applicable »

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

«. Retainage shall not become due until the Contractor submits a Clear Lien Certificate issued by the Ascension Parish Clerk of Court forty-six (46) days or later following the recordation of the Certificate of Substantial Completion or as otherwise provided by La. R.S. 38:2248(B). »

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

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

§ 5.2 Final Payment

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

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct non-conforming Work as provided in Article 12 of the Owner's Modified AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

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

« The Contractor has furnished all close out documents to the Owner's representative and all such documents including as-builts are accepted by the Owner. See, for reference only, Sections 9.10.2, 9.10.2.1, and 9.10.2.2 of the Owner's Modified AIA Document A201-2017. »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear no interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

« Zero » % «0 »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of the Owner's Modified AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »
« »
« »

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of the Owner's Modified AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

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

[« X »] Litigation in the 22nd Judicial District Court for the Parish of Ascension, State of Louisiana.

[« »] Other *(Specify)*

« »

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

ARTICLE 7 TERMINATION OR SUSPENSION

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

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of the Owner's Modified AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

«No Termination Fee is provided. »

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

ARTICLE 8 MISCELLANEOUS PROVISIONS

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

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

« »
« »
« »
« »
« »
« »
« »

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

« »
« »
« »
«»
«»
«»

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

§ 8.5 Insurance and Bonds

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

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

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

« N/A »

§ 8.7 Other provisions:

«§8.7.1 This Agreement shall be governed by the laws of the State of Louisiana. Further the mandatory and exclusive venue for any dispute or claim shall be the 22nd Judicial District Court in and for the Parish of Ascension, in which the Owner's administrative office is located.

§8.7.2 As a material consideration of making this Agreement, the modifications of this Agreement shall not be construed against the maker of said modifications.

§8.7.3 Notwithstanding anything to the contrary in this Agreement or in any document that forms a part hereof, there shall be no mandatory arbitration for any dispute arising hereunder.

§8.7.4 Contractor shall require all construction workers and laborers, whether the Contractor's own employees or forces or the employees or forces of Subcontractors to wear identification tags on the front of their person all times that they are on the Owner's property. All such personnel may be subject to a criminal background check at Contractor's expense.»
»

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

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

.2 EXHIBIT A to A101 (12202017, Insurance Requirements for New construction, Additions and Renovations

.3 The Owner's Modified AIA Document A201™–2017, General Conditions of the Contract for Construction.

« »

.4 Drawings

Exhibit B – Index of Drawings:

Number	Title	Date
« »		

.5 Specifications:

Exhibit C – Specifications Table of Contents

Section	Title	Date	Pages
« »			

.6 Addenda, if any:

Number	Date	Pages
« »		

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

.7 Other Exhibits:

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

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

« »

[« »] The Sustainability Plan:

Title	Date	Pages
« »		

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

Document	Title	Date	Pages
« »			

.9 Other documents, if any, listed below:

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

«The Project Manual
Advertisement for Bids
Instructions to Bidders
Contractor's Bid Form
Signed Non-Collusion Affidavit
Signed Affidavit of No Convictions
Signed Non-Solicitation/No Debarment Affidavit
Signed Affidavit Employee Status Verification »

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

« »	« »
OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
«Clint Cointment »«Parish President»	« »« »
(Printed name and title)	*(Printed name and title)*

EXHIBIT A to A101 (12202017)

INSURANCE REQUIREMENTS FOR
NEW CONSTRUCTION, ADDITIONS AND RENOVATIONS

The Contractor shall be responsible for the procurement of the following insurance coverage:

11.1 CONTRACTOR'S LIABILITY INSURANCE

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 insurance shall be from the inception of the contract until expiration of the one-year period for correction of Work.

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 laws of the State of Louisiana. Employers Liability is included with a minimum limit of $1,000,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included. 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 Premise-Operations, use of Independent Contractors and Subcontractors, Personal and Advertising Injury, Liability and Products and Completed Operations Liability shall have a minimum limit per occurrence of $5,000,000. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form 04 13 approved for use in Louisiana), or equivalent, is to be used in the policy. Any Claims-made form is unacceptable. Total required liability limits may be secured through a combination of General Liability and Umbrella policies.

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 10 13) approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include coverage for bodily injury and property damage liability for owned, hired and non-owned automobiles.

11.2.4 Umbrella

Umbrella Insurance may be used to meet the minimum requirements for General Liability and Automobile Liability only. In no event shall any umbrella liability insurance provide narrower coverage than the primary policy. The umbrella policy shall not

require the exhaustion of the underlying limits only through the actual payment of the underlying insurance.

11.2.5 Builder's Risk

Builder's Risk Insurance shall be in an amount equal to 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 30, Special 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.

The policy must include coverage for the Owner, the Owner's Program Manager, 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 $2,000,000 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 if the policy is not renewed. 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 the payment of all deductibles and self-insured retentions.

11.3 OTHER INSURANCE PROVISIONS

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

11.3.1 Worker's Compensation and Employers Liability Coverage

11.3.1.1 To the fullest extent allowed by law, coverage shall include a Waiver of Subrogation in favor of the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.

11.3.1.2 The policy shall include the Alternate Employer endorsement.

11.3.2 Commercial General Liability Coverage

11.3.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insureds for 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 (for ongoing work) AND CG 20 37 (for completed work) (current forms 04 13 approved for use in Louisiana), or equivalent, are to be used.

11.3.2.2 The Contractor's insurance shall be primary and non-contributory for any and all losses that occur under the contract. 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.

11.3.2.3 CGL insurance must also contain an endorsement providing that the aggregate loss limit must apply to each project. ISO form CG 25 03 (current form 05 09 approved for use in Louisiana), or equivalent, shall also be submitted. The Owner's project number, including the Owner's project name shall be included on the endorsement.

11.3.3 All Coverages

11.3.3.1 All policies must be endorsed to require 30 days written notice of cancellation 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. In addition, Contractor is required to notify the Owner of any policy cancellations or reductions in limits.

11.3.3.2 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 3.3 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.

11.3.3.4 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.

11.3.4 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 within 30 days.

11.3.5 Verification of Coverage

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates are to be received by the Design Consultant and approved

by the Owner before Work commences and upon any contract renewal or insurance policy renewal thereafter. The Certificate Holder must be listed as follows:

Ascension Parish Government
615 East Worthey Street
Gonzales, LA 70737
Attn: Project # _____

The Owner reserves the right to request complete certified copies of all required insurance policies at any time. Upon request, the Contractor shall within thirty days deliver the certified copies of any requested insurance policies to the Owner.

Upon failure of the Contractor to furnish, deliver and maintain required insurance, 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.

11.3.6 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.

11.3.7 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 shall have no cause of action against, and shall not assert a claim against, the Owner, 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 Owner, its departments, agencies, agents and employees shall 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 Owner, its agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

11.3.8 Indemnification/Hold Harmless Agreement

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the Owner, 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, subcontractors, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Owner 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 Owner, 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, attorney fees, and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The Owner may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling and expenses of all claims.

11.4 PERFORMANCE AND PAYMENT BONDS

11.4.1 Each bond is to be in the full amount of the Contract Price.

11.4.2 Recordation of Contract and Bond [La R.S. 38:2241 thru 38:2241.1]

The Contractor shall record within thirty (30) days of signing the Contract Between Owner and Contractor and Performance and Payment Bonds with the Clerk of Court in the 22nd Judicial Court, Parish of Ascension, Louisiana.

DRAFT

AIA® Document A312™ – 2010

Performance Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »
Modifications to this Bond: « » None « » See Section 16

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

«»
«»
«»
«»
«»
«»

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

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

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

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

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

.1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

.2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

.3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to

the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

.2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and

.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

§ 14 Definitions

§ 14.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

« »

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

DRAFT

AIA® Document A312™ – 2010

Payment Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Ascension Parish Government»«»
«615 East Worthey Street
Gonzales, La 70737»

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)

«Butch Gore Park Renovations»
«14550 Harry Savoy Road
St. Amant, LA 70774»

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »
Modifications to this Bond: [« »] None [« »] See Section 18

CONTRACTOR AS PRINCIPAL
Company: *(Corporate Seal)*

Signature: _____
Name and Title: « »« »

SURETY
Company: *(Corporate Seal)*

Signature: _____
Name and Title: « »« »

(Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

«»
«»
«»
«»
«»
«»

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

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

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

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

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- **.1** have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- **.2** have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

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

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- **.1** the name of the Claimant;
- **.2** the name of the person for whom the labor was done, or materials or equipment furnished;
- **.3** a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- **.4** a brief description of the labor, materials or equipment furnished;
- **.5** the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- **.6** the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- **.7** the total amount of previous payments received by the Claimant; and
- **.8** the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

« »

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

SECTION 010000 - GENERAL REQUIREMENTS

A. GENERAL

1. CONTRACTOR SUBMITTALS: At the Pre-Construction Meeting, the following shall be submitted for approval by the A/E and review by the Owner:
   a. Progress Schedule.
   b. Schedule of Values.
   c. List of ALL Subcontractors, Principal Suppliers & Fabricators.
   d. List of Contractor's staff assignments and principal consultants.
   e. Schedule of Submittals.

2. PROGRESS SCHEDULE: Contractor shall submit his/her proposed Construction Progress Schedule to the Owner and the A/E at the Pre-Construction Meeting. The Schedule shall clearly identify the following:
   a. The Substantial Completion of the project within the Contract Time; include consideration for Weather Days.
   b. Milestone Date to complete synthetic turf playing field.
   c. Shall be UPDATED concurrent with each Progress Payment Application.

3. SCHEDULE OF VALUES: Contractor shall prepare his/her Schedule of Values for each Work Line Item in accordance with the General Conditions.

4. CONTRACTOR'S INITIAL PAYMENT APPLICATION:
   a. Cover data submitted on AIA Document G702 (no substitutions) with all required information, signatures, and notarization.
   b. Allowed to use legible computer printouts outlining Work Line Items and Schedule of Values and Stored Materials in format similar to AIA Document G702 Continuation Sheets.
   c. Must bear A/E approval signature prior to review/approval action by the Owner.
   d. Owner will not approve for payment until all data listed in item #2 above has been submitted and approved.
   e. Payment will be made in accordance with Owner's published schedule pending timely receipt & approval action.

5. CONTRACTOR'S PROGRESS PAYMENT APPLICATIONS:
   a. Shall comply with items #4a, 4b, 4c, and 4e above.
   b. Contractor shall concurrently submit UPDATED Progress Schedules and Submittal Schedules.
   c. Shall include payment adjustments for FULLY EXECUTED Change Orders.
   d. Affidavits of major subcontractors for no claims.

6. CONTRACTOR'S FINAL PAYMENT APPLICATION:
   a. Shall comply with items #4a, 4b, 4c, and 4e above.
   b. Shall be clearly marked "FINAL".
   c. Payment will be made ONLY after satisfactory completion of all Contract Close-Out items.
   d. Payment after submission of clear lien and privilege certificate.
   e. Shall be submitted at closeout meeting with all closeout documents.

7. SHOP DRAWINGS & SUBMITTAL DATA:
   a. During the progress of the Work, the A/E shall promptly act upon submittal data & provide the Program Manager ONE copy of each "APPROVED" or "APPROVED AS NOTED" shop drawing, catalog data sheet, brochure, etc. as action is taken & returned to the Contractor for the Owner's information and file.
   b. The A/E shall promptly advise the Program Manager of:
      1. Any submittal data which is delinquent to the Contractor's published Submittal Schedule, OR,
      2. Has been returned for RESUBMITTAL which could delay progress of construction.

8. RECORD DOCUMENTS:
   a. Contractor shall maintain one clean set of Contract Documents at the project site for the sole purpose of identifying by date and/or authority all As-Built conditions and authorized modifications as they occur during the progress of the Work. Particularly important is the documentation of locations for underground items.
   b. Contractor shall maintain an orderly file at the project site of all "APPROVED" and "APPROVED AS NOTED" submittals, shop drawings, etc.
   c. At each site visit, the A/E shall review the Contractor's As-Built Documents to see that they are correct and current; A/E shall advise the Owner accordingly.
   d. At completion of the project, the Contractor shall transmit the on-site As-Built Documents to the A/E; the A/E shall transcribe all information to create one set of RECORD DOCUMENTS to be sent to the Owner for file.

9. OPERATION & MAINTENANCE ("O&M") MANUALS:
   a. Owner requires one hard copy set and one electronic set.
   b. Contractor shall logically organize (using index tabs) into sets of manageable size, heavy-duty, transparent spine label, three-ring binders clearly identifying the Project Name, EBRPSS Project Number, and general content of each binder.
   c. The A/E shall review the O&M manuals for completeness & correctness prior to transmitting to the Owner for file.

10. CONTRACTOR CLOSE-OUT DOCUMENTS:
    a. Owner requires one hard copy set and one electronic set.
    b. Contractor shall logically organize similar to O&M manual criteria.
    c. A/E shall review (and sign where required) prior to transmitting to the Owner at the closeout meeting for further action & file.
    d. Required documents include, but may not be limited to, originals and copies (put all originals in one notebook; put copies in the other two notebooks) of the following:
        1. General Contractor's Warranty.
        2. All Subcontractor & Specialty Contractor Warranties.
        3. All Manufacturer Warranties.
        4. All Extended (longer than 1 year) Warranties.
        5. Executed Consent of Surety.
        6. Executed Waivers of Liens.
        7. Acknowledgement of satisfactory completion of Punch List Items.

11. HAZARDOUS MATERIALS:
    a. Contractor shall include in the Close-Out Documents a Certification Warranty Statement that no hazardous materials (containing asbestos, PCB, etc.) were incorporated into the Work.
    b. Contractor is advised that the Owner will perform post-construction verification analyses of the project to confirm the Contractor-certified absence of hazardous materials. If hazardous materials are found to exist, the Contractor shall pay ALL costs for the testing, abatement, and replacement with non-hazardous materials.

END OF SECTION

SECTION 013000 - SUBMITTALS

PART ONE - GENERAL

1.01 DESCRIPTION:

A. Submittals: General term including samples, shop drawings and product data, as applicable and as defined by the General Conditions.

B. General Provisions:
1. Provisions in this section are mandatory procedures for review, approval and submitting samples, shop drawings and product data in accordance with the General Conditions.
2. Submittals which are received directly from sources other than through the General Contractor's office will be returned to the General Contractor "without action".
3. Job delays occasioned by requirement of re-submission of samples, shop drawings and product data not in accord with Contract Documents and/or submittals sequenced contrary to the agreed schedule are Contractor's responsibility and will not be considered valid justification for extension of contract time or increase in the contract sum.

1.02 SAMPLE PREPARATION:

A. Prepare samples in sizes, shape, and finish in accord with provisions of individual specification sections.

B. Samples shall be submitted for the Architect's selection and approval in accordance with the Contractor's submittal schedule or sooner as needed to maintain construction progress. Approvals and color selections will not be made unilaterally where samples or selections of adjacent materials must be made for the purpose of aesthetics. Submit samples for adjacent and interrelated materials concurrently. The Owner will approve all colors before the Architect can take action.

1.03 SHOP DRAWING PREPARATION:

A. Drawing shall conform to the following requirements:
1. Number sheets consecutively.
2. Indicate working and erection dimensions and relationships to adjacent work.
3. Show arrangements and sectional views, where applicable.
4. Indicate material, gauges, thicknesses, finishes and characteristics.
5. Indicate anchoring and fastening details, including information for making connections to adjacent work.

6. Indicate working and erection dimensions and relationships to adjacent work. Concurrent submittals of different aspects of work may be required by the Architect as deemed necessary to demonstrate Contractor's ability to understand these relationships and coordinate the Work.
7. Provide 6" x 6" clean space in the lower right-hand area for entry of approval stamps.
8. Cross-reference drawing details and specification paragraphs applicable to the submittal data.

B. Form: Submit information electronically in PDF format.

1.04 PRODUCT DATA PREPARATION:

A. Include product manufacturer's standard printed material, dated, with product description and installation instructions indicated. Data not related to this project shall be deleted or marked "VOID" as applicable.

B. Form: Submit information electronically in PDF format.

C. Printed material shall be:
1. Legible.
2. Sized no larger than 8-1/2" x 11", suitable for opaque reproduction.
3. Stamped (either on a clean-area space or the reverse side) with the Contractor's approval action.

D. All submitted data shall bear the Contractor's approval action stamp plus his review notes, comments, and corrections as required.

1.05 CONTRACTOR'S REVIEW:

A. Review submittals and stamp with approval prior to submission to the Architect; Contractor's stamp shall bear the Contractor's name, the word "Approved", the signed initials of the approving agent, and the date of his approval action. By so noting, the Contractor indicates that he has reviewed and approves the materials, equipment, quantities, and dimensions represented by the particular submittal.

B. Where work is indicated "By others", Contractor shall indicate responsibility for providing and coordinating such work.

C. Submissions made without Contractor's approval indicated thereon will be returned without being reviewed for compliance with this requirement.

D. Date each submittal and indicate name of Project, Architect, Contractor, Sub-Contractor, as applicable, description or name of equipment, material or product and identify location at which it is to be used in the Work. Cross-reference to specific drawing and specification references.

E. Accompany submittal with transmittal letter containing project name, Contractor's name, number of samples or drawings, titles, and other pertinent data. Transmittal shall outline deviations, if any, in submittals from requirements of Contract Documents.

1.06 ARCHITECT'S REVIEW AND APPROVAL:

A. Architect's Review will be in accordance with the General Conditions.

B. Architect will return only the following submittal data to the Contractor for his further reproduction and distribution.
   1. Reviewed information will be transmitted electronically in PDF format.

1.07 RESUBMISSION:

A. Make corrections and changes indicated for unapproved submissions and resubmit in same manner as specified above, until Architect's approval is obtained.

B. In resubmission transmittal direct specific attention to revisions other than corrections requested by Architect on previous submissions, if any.

C. Contractor shall be responsible for bearing all costs associated with the review and approval process of resubmitted (and/or substituted) submittal data.

1.08 DISTRIBUTION:

A. Contractor is responsible for obtaining and distributing copies of submittals to his subcontractors and material suppliers after, as well as before, final approval.

B. Contractor shall maintain a file of approved submittals for duration of project, which shall be delivered to Owner as a part of project close-out documents.

C. The Contractor shall maintain a file of all approved submittals, bearing the Stamp of the Architect, at the project site. In the event the Architect or Owner should question the installation of any aspect of the work requiring approved submittal data, the inability of the Superintendent to produce the required approved submittal data upon demand shall constitute cause for a "stop work" order to be issued on that questioned aspect of the work and all relevant appurtenant work. The cause shall be equal to the Contractor's not having received required approval of the submittal data. If so issued, such "stop orders" shall not be considered valid justification for extensions of contract time and/or claims for additional monetary compensation.

1.09 SCHEDULE OF SUBMITTALS:

A. The Contractor shall, within ten (10) calendar days following award of the Contract, submit his proposed schedule of submittals to the Architect for review.

B. The purpose of the schedule is to:
   1. Demonstrate that all submittals, shop drawings, data, and samples required for the Work are addressed by the Contractor.
   2. Demonstrate consistency with the Contractor's proposed Construction Schedule.
   3. Assist the Architect in scheduling timely review/approval action of submittals.

C. The schedule shall contain the description of the submitted item, the proposed date of submittal and the proposed date of requested return by the Architect.

D. After the Architect's receipt of the Contractor's submittal schedule, the Architect and the Contractor shall jointly review the schedule and mutually agree to acceptability or necessary modifications.

E. Contractor shall submit his final accepted schedule within five (5) calendar days after the date of the joint review.

END OF SECTION

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1. General project coordination procedures.
2. Administrative and supervisory personnel.
3. Project meetings.
4. Coordination drawings.

1.3 COORDINATION

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

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

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

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

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

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.

1.4 SUBMITTALS

A. Staff Names: Within 15 days of Notice to Proceed, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities, list address and telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within **3** days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than **15** days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments. Contractor shall provide Schedule of Values, list of Subcontractors and Material Suppliers, and Construction Schedule at this time.

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

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.

D. Progress Meetings: Conduct progress meetings at intervals determined at preconstruction conference. Coordinate dates of meetings with preparation of payment requests.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

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

3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a summary, in narrative form, of progress since the previous meeting and report.

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 014000 - TESTING LABORATORY SERVICES

PART ONE - GENERAL

1.01 DESCRIPTION:

A. An independent Testing Laboratory will be provided by the Owner or his representative to inspect and test the materials and methods of construction as hereinafter specified for compliance with the specification requirements of the Contract Documents and to perform such other specialized technical services as may be required by the Owner or his representative.

B. The Owner will pay for the initial laboratory services for testing of materials for compliance with the requirements of the Contract Documents. The Contractor will pay for testing and re-testing of materials that do not comply with the requirements of the Contract Documents.

C. Tests and Inspections shall be conducted in accordance with specified requirements, and if not specified, in accordance with the applicable standards of the American Society for Testing and Materials (ASTM) or other recognized and accepted authorities in the field.

1.02 QUALIFICATION OF LABORATORY:

A. The Testing Laboratory selected should meet the basic requirements of ASTM E329 "Standard of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction", shall be inspected and approved by the ELF, FC & PA Joint Technical Committee, Inc. or by an equivalent recognized national authority and shall submit to the Owner, Architect, and the Engineer, a copy of the report of inspection of their facilities.

B. The Testing Laboratory selected shall meet "Recommended Requirements for Independent Laboratory Qualification", latest edition, as published by the "American Council of Independent Laboratory Qualification".

C. Testing machines shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards or accepted values of natural physical constants. The testing laboratory shall submit a copy of certificate of calibration made by an accredited calibration agency.

D. The Testing Laboratory is only required to have testing facilities for work included in this project.

E. The agent of the Testing Laboratory performing field sampling and field testing of concrete shall be certified by the American Concrete Institute as a Concrete Field-Testing Technician – Grade 1, or by an equivalent recognized national authority for an equivalent level of competence or shall be a Licensed Professional Engineer.

1.03 AUTHORITIES AND DUTIES OF THE LABORATORY:

A. The Testing Laboratory shall obtain and review the project plans and specifications with the Architect and Engineer six (6) weeks prior to the start of construction. The Laboratory shall attend pre-construction conferences with the Architect, Engineer, Project Manager, General Contractor, and Material Suppliers, to coordinate materials inspection and testing requirements with the planned construction schedule. The Laboratory will participate in such conferences throughout the course of the project.

B. The Testing Laboratory shall be responsible for outlining a written detailed testing program conforming to the requirements as specified in the Contract Documents and in consultation with the Owner, Architect, and Engineer. The testing program shall contain an outline of inspections and tests to be performed with reference to applicable sections of the specifications or drawings and a list of personnel assigned to each portion of the work. Such testing program shall be submitted to the Owner, Architect, and Engineer five (5) weeks in advance of the start of construction so as not to delay the start of construction. It shall be the Testing Laboratory's responsibility that such program conforms to the requirements of the Specifications and falls within the Owner's budget for testing laboratory services. If the allocated budget is not sufficient to cover the services as outlined in the Specifications, it shall be the responsibility of the Laboratory to notify the Architect, Engineer, and Owner, so the start of Laboratory services can be modified accordingly prior to the start of construction. Furthermore, the Testing Laboratory shall monitor its expenditures throughout the course of the job and notify immediately the Owner, Architect and Engineer, of any significant divination from the planned testing program and budget.

C. The Laboratory shall cooperate with the Architect, Engineer, and Contractor, and provide qualified personnel promptly on notice.

D. The Laboratory shall perform the required inspections, sampling, and testing of materials as specified under each section and observe methods of construction for compliance with the requirements of the Contract Documents.

E. The Laboratory shall notify the Architect and contractor first by telephone, and then in writing, of observed irregularities and deficiencies of the work and other conditions not in compliance with the requirements of the Contract Documents.

F. The Laboratory shall submit copies of all reports of inspections and test promptly and directly to the parties named below. All reports shall contain at least the following information:
1. Project Name
2. Date report issued.
3. Testing Laboratory name and address.
4. Name and signature of inspector.
5. Date of inspection and sampling.
6. Date of Test.
7. Identification of product and Specification section.
8. Location in the project.
9. Identification of inspection or test.
10. Record of weather conditions and temperature (if applicable).
11. Results of test regarding compliance with Contract Documents.

G. The Laboratory shall send certified copies of test and inspection reports to the following parties:
   1. Two (2) copies to the Owner or his representative.
   2. Two (2) copies to the General Contractor.
   3. One (1) copy to the Architect.
   4. One (1) copy to the Engineer of responsibility
   5. One copy to the Supplier of the material tested.

H. Upon completion of the job, the Testing Laboratory shall furnish to the Owner, Architect, and Engineer of responsibility, a statement certified by a Notary Public that all required tests and inspections were made in accordance with the requirements of the Contract Documents.

I. The Testing Laboratory is not authorized to revoke, alter, relax, enlarge upon, or release any requirements of the Specifications or to approve or accept any portion of the work or to perform any duties of the General Contractor and his Subcontractors.

1.04 CONTRACTOR'S RESPONSIBILITY:

A. The Contractor shall cooperate with Laboratory personnel, provide access to the work, and to manufacturer's operations.

B. The Contractor shall provide to the Laboratory representative, samples of materials proposed for use in the work in quantities sufficient for accurate testing as specified.

C. The Contractor shall furnish casual labor, equipment, and facilities as required for sampling and testing by the Laboratory and otherwise facilitate all required inspections and tests.

D. The Contractor shall be responsible for notifying Owner's representative who will then contact the Testing Laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.

E. The Contractor shall arrange with the Testing Laboratory and pay for any additional samples and tests above those required by the Contract Documents as requested by the Contractor for his convenience in performing the work.

F. The Contractor shall pay for any additional inspections, sampling, testing, and re-testing as required when initial tests indicate work does not comply with the requirements of the Contract Documents.

G. The Contractor shall furnish and pay for the following items:
   1. Soil survey of the location of borrow soil materials, samples of existing soil materials, and delivery to the Testing Laboratory.
   2. Samples of concrete aggregates and delivery to the Testing Laboratory.
   3. Concrete Coring, tests of below-strength concrete, and load tests, if ordered by the Owner, Architect, and/or Engineer.
   4. Certification of Portland cement.

5. Tests, samples, and mock-ups of substitute material where the substitution is requested by the Contractor, and the tests are necessary in the opinion of the Owner, Architect, or Engineer to establish equality with specified items.
6. Any other tests when such costs are required by the Contract Documents to be paid by the Contractor.

H. The Contractor shall be responsible for notifying the Owner, the Architect, the Engineer, and the Testing Laboratory when the source of any material is changed after the original tests or inspections have been made.

I. If in the opinion of the Owner, Architect or Engineer, any of the work of the contractor is not satisfactory, the Contractor shall make all tests that the Owner, Architect, or Engineer deem advisable to determine its proper construction. The Owner shall pay all costs if the tests prove the questioned work to be satisfactory.

1.05 EXTENT OF SERVICES FOR EARTHWORK:

A. Moisture Density Relationship for Natural and Fill Materials:
1. The Testing Laboratory will provide one (1) optimum moisture density curve for each type of soil, natural, imported fill, or on-site fill, encountered in subgrade and fills under building slabs and paved areas. Curves shall be generated in accordance with ASTM D698.

B. Quality Control Testing Required During Construction:
1. The Testing Laboratory shall inspect and approve the following subgrades and fill layers before further construction work is performed there on:
   a. Paved Area Subgrade: Make at least one (1) field density test of the natural density test of the natural subgrade for every 2,500 square feet of paved area or building slab, but in no case less than three (3) tests. In each compacted fill layer, make one (1) field density test for every 2,500 square of building slab on paved area, but in no case less than three (3) tests.
2. Field Density Test shall be run according to ASTM D1556 (Density of Soil in Place by the Sand Cone Method), ASTM D2167) (Density of Soil in Place by the Rubber Balloon Method) or ASTM D2922 (Density of Soil and Soil Aggregate in Place by Nuclear Methods) as applicable.
3. The results of field density tests by the Testing Laboratory will not be considered satisfactory unless their value meet the required density.
4. The Testing Laboratory shall submit all moisture density curves and results of field density tests to the parties listed under Section 1.03G.
5. If reports by the Testing Laboratory indicate field densities lower than specified above, additional tests will be run by the Testing Laboratory with at least the frequencies scheduled above on re-compacted fill and/or natural subgrade. The Testing Laboratory shall notify the Contractor on a timely basis for any required re-testing so as not to delay the work. The costs of such tests shall be borne by the Contractor.
6. The Geotechnical Engineer shall provide inspection service of each dug footing subgrade prior to pouring foundation concrete. Such inspection shall verify that field conditions are consistent with soil report test results and that the foundation is being installed in the proper soil strata at the proper elevation.

The Geotechnical Engineer shall submit written field inspection reports promptly after inspection to all parties listed in 1.3 G and report his findings after each inspection by telephone to the Structural Engineer.

1.06 EXTENT OF SERVICE FOR CONCRETE MATERIALS AND POURED IN-PLACE CONCRETE:

A. Concrete Test Cylinders:

1. Cylinders for strength tests shall be molded and laboratory cured in accordance with ASTM C31 "Method of Making and Curing Concrete Test Cylinders in the Field" and tested in accordance with ASTM C39 "Method of Testing for Compressive Strength of Cylindrical Concrete Specimens".
2. Field samples for strength tests shall be taken in accordance with ASTM C172 "Method of Sampling Fresh Concrete".
3. Frequency of Testing: Each set of test cylinders shall consist of a minimum of four (4) standard test cylinders. A set of test cylinders shall be made according to the following frequency:
   a. One (1) set for each class of concrete taken not less than once a day.
   b. For all other concrete, a minimum of one (1) set for each 100 cubic yards or fraction thereof.
   c. No more than one (1) set of cylinders at a time shall be made from any single truck.
   d. If the total volume of concrete is such that the frequency of testing as specified above would provide less than five (5) strength tests for a given class of concrete, tests shall be made from at least five (5) randomly selected batches or from each batch if fewer than five batches are used.
   e. The above frequencies assume that one (1) batch plant will be used for each pour. If more than one (1) batch plant is used, the frequencies cited above shall apply for each plant used.

The cylinders shall be numbered, dated, and the point of concrete placement in the building recorded. Of the four (4) cylinders per set, break one at seven days, two at 28 days, and one automatically at 56 days if either 28-day cylinder break is below required strength. One (1) additional cylinder per set will be required for formed slab and pan joist floors for the purpose of evaluating the concrete strength at the time of form stripping.

The cylinder shall be stored on the floor where form removal is to occur under the same exposure conditions as the floor concrete.

This cylinder shall be cured under field conditions in accordance with ASTM C31 "Method of Making and Curing Concrete Test Specimen in the Field". Field cured test cylinders shall be molded at the same time and from the same samples as laboratory cured test specimens. This cylinder shall be broken at the time of form removal as directed by the Contractor.

4. For concrete with design strength in excess of 5,000 PSI, the Contractor shall be responsible for providing a temperature controlled and protected concrete cylinder storage box at a point on the job site mutually agreeable with the Testing Laboratory for the purpose of storing concrete cylinders until they are transported to the Laboratory.
5. The Testing Laboratory shall be responsible for transporting the cylinders to the Laboratory in a protected environment such that no damage or ill effect will occur to the concrete cylinders.
6. The Testing Laboratory shall make and distribute concrete test reports after each job cylinder is broken. Such reports shall contain the following information:
    a. Truck number and ticket number.
    b. Concrete Batch Plant
    c. Mix design number.
    d. Accurate location of pour in the structure.
    e. Strength requirement.
    f. Date cylinders made and broken.
    g. Technician making cylinders.
    h. Concrete temperature at placing.
    i. Air temperature at point of placement in the structure.
    j. Amount of water added to the truck at the batch plant and at the site.
    k. Slump
    l. Unit weight.
    m. Air Content
    n. Cylinder compressive strengths with type of failure if concrete does not meet Specification requirements. Seven (7) day breaks are not to be flagged if they are less than 70% of the required 28-day strength. 28-day breaks are to be flagged if either cylinder fails to meet Specification requirements.

B. Other Tests of Concrete Required by the Testing Laboratory:
1. Slump tests (ASTM C143) shall be made at the beginning of concrete placement for each batch plant and for each set of test cylinders made.
2. Air entrainment (ASTM C233) tests shall be made at the same time slump tests are made as cited above.
3. Concrete Temperature at placement at the same time slump tests are made as cited above.

B. Evaluation and Acceptance of Concrete:
1. A strength test shall be defined as the average strength of two (2) 28-day cylinder breaks from each set of cylinders.
2. The strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:
    a. The average of all sets of three (3) consecutive strength tests equal or exceed the required concrete strength.
    b. No individual strength tests (average of two (2) 28-day cylinder breaks) fall below the required strength by more than 500 PSI.
    c. If either of the above requirements is not met, the Testing Laboratory shall immediately notify the Engineer by telephone. Steps shall immediately be taken to increase the average of subsequent strength tests.

D. Investigation of Low Strength Concrete Test Results:

1. If any strength test of laboratory cured cylinders fall below the required strength by more than 500 PSI, the Contractor shall take steps immediately to assure that the load carrying capacity of the structure is not jeopardized.
2. The Testing Laboratory shall, under the direction of the Engineer, perform non-destructive field test of the concrete in question using Swiss Hammer, Windsor Probe, or other appropriate methods and report the results the same as for cylinder test reports.
3. If the likelihood of low strength concrete is confirmed and computations indicate that the load carrying capacity of the structure has been significantly reduced, tests of cores drilled from the area in question under the direction of the Engineer will be required in accordance with ASTM C42 (Method of Obtaining and Testing Drilled Cores and Saws Beams of Concrete). In such case, three (3) cores shall be taken for each strength test more than 500 PSI below required PSI. If concrete in the structure will be dry under service conditions, cores shall be air dried (temperature 60 degrees to 80 degrees, relatively humidity less than 60 percent) for seven (7) days before test and shall be tested dry.If concrete in the structure will be more than superficially wet under service conditions, cores shall be immersed in water for at least 48 hours and tested wet. The Contractor shall fill all holes made by drilling cores with an approved dry-pack concrete.
4. Concrete in an area represented by core test shall be considered structurally adequate if the average of three (3) cores is equal to at least 85% of PSI and if no single core is less than 75% of PSI. To check testing accuracy, locations of erratic core strengths may be re-tested.
5. If the above criteria are not met, and the structure adequacy remains in doubt, the Engineer may order a load test, as specified in ACI 318 for the questionable portion of the structure.
6. If the structural adequacy of the affected portion of the structure remains in doubt, the Engineer may order the structure to be strengthened by an appropriate means or torn down and re-built.
7. The costs of all investigations of low strength concrete shall be borne by the Contractor.

E. Job Site Inspection by the Testing Laboratory: The scope of the work to be performed by the inspector on the job site shall be as follows:

1. Verify that air temperatures at the point of placement in the structure are within acceptable limits defined in Section J prior to ordering of concrete by the Contractor.
2. Inspect concrete upon arrival to verify that the proper concrete mix number, type of concrete, and concrete strength is being placed at the proper location.
3. Inspect plastic concrete upon arrival at the job site to verify proper batching. The responsibility for adding water to trucks at the job site shall rest only with a duly appointed representative mutually agreeable to the Contractor, Owner, and Engineer, prior to the start of any concrete operations.
4. Obtain concrete test cylinders as specified in Sections D.1 and D.2.
5. Perform slump tests and air entrainment tests as specified in Section D.6.
6. Record information for concrete test reports as specified in Section D.6

7. Verify that all concrete being placed meets job Specifications. Reject concrete not meeting the requirements of Section K and immediately notify the Contractor, Batch Plant Inspector, Architect, Engineer, and Owner.
8. Pick up and transport to Laboratory, cylinders cast the previous day.
9. Check concrete placing techniques to determine that concrete deposited is uniform and that vertical drop does not exceed six feet.
10. The job site inspector shall report any irregularities that occur in the concrete at the job site or test results to the Contractor, Architect, Owner, and Engineer.

F. Causes for Rejection of Concrete Delivered to the Site:

A duly appointed representative agreeable to the Architect, Owner, and Engineer, shall reject all concrete delivered to the site for any of the following reasons:

1. Wrong class of concrete (incorrect mix design number).
2. Air Temperature: Air temperature limits shall be as follows:
   a. Cold Weather: Air temperature must be 40□F. and rising.
   b. Hot Weather: Air temperature must be cooler than 100□F. Concrete may be placed at other air temperature ranges only with approval to the duly appointed representative.
3. Concrete with temperatures exceeding 95□ F. may not be placed in the structure without approval of the job inspector for the Testing Laboratory or other duly appointed representative.
4. Air contents outside the limits specified in the mix designs.
5. Slumps outside the limits specified in Section C.6 or the mix designs.
6. Excessive Age: Concrete shall be discharged within 90 minutes of plant departure or before it begins to set if sooner than 90 minutes unless approved by the Laboratory job inspector or other duly appointed representative.

END OF SECTION

SECTION 016300 - SUBSTITUTIONS

PART ONE - GENERAL

1.01 REQUIREMENTS INCLUDED: Substitutions for products specified shall be allowed only under the conditions stated in this section.

1.02 SUBSTITUTIONS/PRIOR APPROVALS:

A. If it is desired to use products different from those indicated in the Contract Documents, the party requesting the substitution shall make written application as described herein. The burden of proving equality of proposed substitutions rests on the party making the request for substitution.

Requests for substitution shall reach the Architect not less than seven (7) working days prior to the date for opening of bids. Requests received by the Architect after this date will not be considered.

1.03 SUBMITTALS:

A. Submit a separate request for each substitution. Support each request with:

1. Date of request.
2. Name of party proposing substitution.
3. Project name.
4. Specification reference.
5. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:
   a. Product identification, including manufacturer's name and address.
   b. Manufacturer's literature, identify:
      (1) Product description.
      (2) Reference standards.
      (3) Performance and test data.
      (4) Manufacturer's recommendations for use and installation.
   c. Samples, as applicable.
   d. Name and address of similar projects on which product has been used, and date of each installation.
6. Itemized comparison of the proposed substitution with product specified, list all variations.
7. Data relating to changes in construction schedule.
8. Any effect of substitution on separate contracts.
9. List of changes required in other work or products.
10. Designation of required license fees or royalties.
11. Designation of availability of maintenance services, sources of replacement materials.

B. If a proposed substitution is approved by the Architect, an addendum will be issued to prospective bidders not less than three (3) days prior to the date set for opening bids. If a substitution does not appear in an addendum it shall mean that the Architect has not approved the product and the successful bidder shall be responsible for furnishing materials and products in accordance with the Contract Documents. Following the receipt of bids, no further requests for substitution of products or materials will be considered.

1.04 CONTRACTOR'S REPRESENTATION: In connection with the use of any substitute item approved by the Architect it shall be the General Contractor's responsibility to see that such items meet all space requirements, and that any alterations to connecting items necessitated by use of the alternate items are properly made at no increase in cost to the Owner, and that all items are following the specification requirements. Contractor shall waive all claims for additional costs caused by substitutions which may subsequently become apparent.

END OF SECTION

SECTION 016500 - PROJECT RECORD DOCUMENTS

PART ONE - GENERAL

1.01 REQUIREMENTS INCLUDED:

A. Maintain at Project Site for Owner, one (1) record copy of:
1. Drawings.
2. Project Manual/Specifications.
3. Addenda.
4. Change Orders and other Modifications to Contract.
5. Field Orders or written instructions.
6. Approved and Approved as Noted Shop Drawings, Product Data and Samples.
7. Field Test Records.

B. Make Record Documents available to Architect.

C. Submit final Record Documents with Closeout Documents.

1.02 QUALITY ASSURANCE:

A. Make entries within twenty-four (24) hours after receipt of information except note dimensional corrections and new dimensional data immediately upon determination.

B. Do not permit record sets to be used for any other purpose.

1.03 RECORD DOCUMENTS:

A. Field Record Drawings: One complete set of Drawings upon which all changes to Work are recorded daily with colored pencil to provide accurate, information relative to Work as constructed, both visible and concealed. Entries shall be made online prints provided by Architect with each sheet bearing rubber stamp impression reading "Record Drawings".
1. Identify entry by "cloud" type circle around affected Work. Initial and date each entry.
2. Record the following:
a. Horizontal location and elevation of underground portions of Work.
b. Changes and corrections to dimensions.
c. Changes to materials, products, equipment and finishes.
d. Changes and deviations in Work from that indicated in Contract Documents.

B. Field Record Specifications: One complete set of Project Manual/Specifications within which changes to materials, products, equipment, and systems are recorded; also, note which specified manufacturer was used. Make corrections with colored pencil and mark the Manual "Record Specifications" on outside back binding.

END OF SECTION

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

1.2 DEFINITIONS

A. Protection Zone: Area surrounding individual trees, groups of trees to be protected during construction as indicated on Drawings.

1.3 SUBMITTALS

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

B. Samples: protection-zone fencing

C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

D. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.

E. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

F. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.

1.4 QUALITY ASSURANCE

A. Arborist Qualifications: Certified Arborist as certified by ISA, licensed arborist in jurisdiction where Project is located, current member of ASCA, or registered Consulting Arborist as designated by ASCA.

B. Pre-installation Conference: Conduct conference at Project site. Coordinate with all appropriate parties.

1.5 PROJECT CONDITIONS

A. The following practices are prohibited within protection zones:

Storage of construction materials, debris, or excavated material.
Parking vehicles or equipment.
Foot traffic.
Erection of sheds or structures.
Impoundment of water.
Excavation or other digging unless otherwise indicated.

7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

B. Do not direct vehicle or equipment exhaust toward protection zones.

C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other non-soil materials.

B. Organic Mulch: Shredded hardwood free from deleterious materials.

C. Chain-Link Fencing:

1. Chain-Link Protection-Zone Fencing: Galvanized-steel fencing fabricated from minimum 2-inch (50-mm) opening, 0.148-inch- (3.76-mm-) diameter wire chain-link fabric; with pipe posts, minimum 2-3/8-inch- (60-mm-) OD line posts, and 2-7/8-inch- (73-mm-) OD corner and pull posts; with 1-5/8-inch- (42-mm-) OD top rails and 0.177-inch- (4.5-mm-) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
2. Height of Fencing: 6 feet (1.8 m)
3. Gates: Swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones.

D. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with non-fading lettering.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

C. Protection Zones: Mulch areas inside protection zones and other areas indicated with 4-inch (100-mm) average thickness of organic mulch. Do not place mulch within 1' of tree trunks.

3.2 PROTECTION ZONES

A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones in a manner that will prevent people from easily entering protected area except by entrance gates.

1. Chain-Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.
2. Posts: Set without concrete footings per plan details.

B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Architect.

C. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

D. Maintain protection-zone fencing and signage in good condition as acceptable to Landscape Architect and remove when construction operations are completed, and equipment has been removed from the site.

3.3 EXCAVATION

A. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.

B. Do not allow exposed roots to dry out before placing permanent backfill.

3.4 ROOT PRUNING

A. Prune roots that are affected by temporary and permanent construction. Prune roots as follows:

1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
2. Temporarily support and protect roots from damage until they are permanently covered with soil.
3. Cover exposed roots with burlap and water regularly.
4. Backfill as soon as possible according to requirements in Division 31 Section "Earth Moving."

B. Root Pruning at Edge of Protection Zone: Prune roots by cleanly cutting all roots to the depth of the required excavation.

C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

3.5 CROWN PRUNING

A. Prune branches that are affected by temporary and permanent construction. Prune branches as follows:

1. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
2. Pruning Standards: Prune trees according to ANSI A300 (Part 1)
3. Cut branches with sharp pruning instruments; do not break or chop.
4. Do not apply pruning paint to wounds.

B. Chip removed branches and spread over areas identified by campus arborist and owner's agent.

3.6 REGRADING

A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

C. Minor Fill within Protection Zone: Where existing grade is 2 inches (50 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single un-compacted layer and hand grade to required finish elevations.

3.7 FIELD QUALITY CONTROL

A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.8 REPAIR AND REPLACEMENT

A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

1. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
2. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
3. Perform repairs within 24 hours.
4. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Landscape Architect.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 022000 - SITE PREPARATION AND RESTORATION

PART ONE - GENERAL

1.1 DESCRIPTION

A. This section includes all materials, labor, tools, etc., necessary for the removal and relocation or disposal of site improvements as required for the new work and as indicated on the drawings. At completion of the project, restoration of remaining site items damaged by the work to original conditions.

B. The CONTRACTOR'S attention is directed to any Soil Erosion and Sediment Control Ordinances in force in the Parish. The CONTRACTOR shall comply with all applicable sections of these ordinances.

1.2 RELATED DOCUMENTS

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

1.3 SECTION REQUIREMENTS

A. Inspection of site: Carefully examine the premises to determine the extent of work and the conditions under which it must be done. No extra payments will be allowed for claims for additional work that could have been determined or anticipated by such inspection.

B. Protections:
Existing work – Take necessary precautions to protect existing areas of compacted fill, etc., that are to remain on this or adjacent sites from any sort of damage due to these operations.
Utilities – Support and protect any existing active sewers, water, gas, electric, telephone and similar utilities from damage due to these operations.
Removal of protections – Temporary protections shall be removed at completion of the project.
Responsibility for repair of damage – If, for any reason, damage to existing work or utilities is unavoidable, submit written notification of this before signing the Contract. In the absence of such notification, the Contractor assumes full responsibility for damage and the cost of satisfactorily repairing or replacing the damaged work.

1.4 REMOVALS

A. Paving, walks, curbs, site improvements: Where shown to be removed or required to be removed by new construction, removal shall be to earth.

1.5 CLEARING AND STRIPPING

A. Obstructions: Submit prompt notification of any existing obstruction, not specifically shown or specified to be removed, that will interfere with construction operations.

1.6 SITE AND WORK DESCRIPTION

A. Any trees removed shall be properly disposed of by the CONTRACTOR. Burning of trees will not be permitted. CONTRACTOR is to clear and grub only minimum areas, removing and disposing of trees and stumps.

B. CONTRACTOR shall not impede natural drainage patterns. Any areas overfilled by the CONTRACTOR or with drainage patterns impeded by the CONTRACTOR'S work shall be graded and repaired by the CONTRACTOR. CONTRACTOR shall perform this repair work immediately after being instructed by the ENGINEER.

C. CONTRACTOR shall not remove or damage any trees on private properties adjacent to the work site. CONTRACTOR is to backfill all holes and to fill, compact and grade the work area.

1.7 RESTORATION

A. Original Condition Record: At start of work contractor shall submit photographs and a narrative of all found defects in site improvements shown to remain, to record damage and/or defects not attributable to the work. All unrecorded damage and/or defects found in such work at completion shall be restored as specified following, with matching work of like kind to conditions originally found, and as otherwise additionally shown.

B. Earth Work: Rough grade all areas disturbed by the work beyond the boundaries of contract improvements to their original contours in accordance with Spec. Earthwork. Restore topsoil, fine grade and sprig and strip sod with matching grass and fertilize and maintain to final completion all such lawn areas in accordance with Spec. Landscape or acceptable practice. Leave all new lawns and existing lawns within the construction site and along its boundaries mowed to match owners' practice at Substantial Completion.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CLEARING

A. The surface of the ground, for the area to be cleared and grubbed, (if applicable) shall be completely cleared of all trees, timber, brush, stumps, roots, grass, weeds, rubbish, and all other objectionable obstructions resting on or protruding through the surface of the ground. However, those trees which are designated by the ENGINEER shall be preserved as hereinafter specified. Clearing operations shall be conducted to prevent damage to existing structures and installations, and to those under construction, so as to provide for the safety of employees and others.

3.2 GRUBBING

A. Grubbing shall consist of the complete removal of all stumps, roots larger than 1-1/2 inches in diameter, matted roots, brush, timber, logs, and any other organic or metallic debris not suitable for foundation purposes, resting on, under, or protruding through the surface of the ground to a depth of eighteen (18) inches below the subgrade. All depressions excavated below the original ground surface for or by the removal of such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

3.3 STRIPPING

A. In areas so designated, topsoil shall be stockpiled. Topsoil so stockpiled shall be protected until it is placed as specified. Any topsoil remaining after all work is in place shall be stockpiled and/or spread on-site at a location designated by the Owner.

3.4 DISPOSAL OF CLEARED AND GRUBBED MATERIAL

A. The CONTRACTOR shall dispose of all material and debris from the clearing and grubbing operation by hauling such-material and debris off site. The cost of disposal (including hauling) of cleared and grubbed material and debris. shall be considered a subsidiary obligation of the CONTRACTOR; the cost of which shall be included in the contract prices for the various classes of work.

3.5 PRESERVATION OF DEVELOPED PRIVATE PROPERTY

A. Trees, shrubbery, gardens, lawns, and other landscaping, which in the opinion of the ENGINEER must be removed, shall be replaced, and replanted to restore the construction site to the condition existing prior to construction.
B. Improvements to the land, such as fences, walls, outbuildings, and other structures which of necessity -must be removed, shall be replaced with equal quality materials and workmanship.
C. The CONTRACTOR shall clean up the construction site directly after construction is completed, upon approval of the ENGINEER.

END OF SECTION 022000

SECTION 022100 - GRADING

PART ONE - GENERAL

1.1 DESCRIPTION

A. This section includes all grading work required for the construction of the facilities shown on the Drawings within the project area. Grading operations shall include rough and finish grading as indicated on the Drawings to provide adequate drainage for the project area.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GRADING

A. Site shall be graded to meet existing contours of the construction site so as to provide positive drainage into existing catch basins or other drainage structures.

END OF SECTION 022100

SECTION 024100 – SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Selective demolition of building elements for alteration purposes.

1.2 RELATED REQUIREMENTS

A. Section 01 10 00 – Summary: Limitations on Contractor's use of site and premises.

B. Section 01 10 00 – Summary: Description of items to be salvaged or removed for re-use by Contractor.

C. Section 01 50 00 – Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

D. Section 01 60 00 – Product Requirements: Handling and storage of items removed for salvage and relocation.

E. Section 01 73 00 – Execution and Closeout Requirements: Project conditions; protection of benchmarks; survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.3 REFERENCES STANDARDS

A. 29 CFR 1926 – U.S. Occupational Safety and Health Standards; current edition.

B. NFPA 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 SCOPE

A. Remove other items indicated, for salvage, relocation, and recycling.

B. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   3. Provide, erect, and maintain temporary barriers and security devices.
   4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   5. Do not close or obstruct roadways or sidewalks without permit.
   6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
   7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Protect existing structures and other elements that are not to be removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

3.3 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record document only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Engineer before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.

C. Services (including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
   2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in services until new systems are complete and ready for service.
   3. Verify that abandoned services serve only abandoned facilities before removal.
   4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

D. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch as specified for patching new work.

3.4 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION 024100

SECTION 029990 – MISCELLANEOUS WORK AND CLEANUP

PART ONE - GENERAL

1.1 SCOPE OF WORK

A. This section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent of work involved. The CONTRACTOR shall furnish all labor, materials, equipment, and incidentals to complete the work under this section.

B. The work of the section includes, but is not limited to, the following:
   1. Restoring of fences
   2. Crossing utilities
   3. Restoring easements (servitudes) and rights-of-way
   4. Cleaning up
   5. Incidental

1.2 WORK SPECIFIED UNDER OTHER SECTIONS

A. All work shall be completed in a workmanlike manner by competent workmen in full compliance with all applicable sections of these specifications.

PART TWO - PRODUCTS

2.1 MATERIALS

A. Materials required for this section shall be of at least the same type and quality as materials which are to be restored. Where possible, the CONTRACTOR shall reuse existing materials which are removed and then replaced, except for paving.

PART THREE - EXECUTION

3.1 RESTORING OF FENCES AND GUARDRAILS

A. At several locations it may be necessary for the CONTRACTOR to remove, store, and replace existing fences during construction. Only the section directed by the ENGINEER shall be removed. If any section of fence is damaged due to the CONTRACTOR'S negligence, it shall be replaced with fencing equal to or better than that damage at no cost to the OWNER, and the work shall be satisfactory to the ENGINEER.

3.2 CROSSING UTILITIES

A. This item shall include any extra work required in crossing culverts, water courses, drains, water mains, and other utilities, including all sheeting and bracing, extra excavation and backfill, or any other work required for the crossing, whether shown on the drawings.

3.3 CROSSING OR WORKING AJACENT TO EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, AND CABLE TV LINES

A. The CONTRACTOR shall notify the proper authority of the utility involved when work adjacent to these lines is required. The CONTRACTOR shall coordinate all work by the utility so that the progress of construction will not be hampered. CONTRACTOR is to notify the utility company at least forty-eight (48) hours in advance.

3.4 RESTORING THE EASEMENTS (SERVITUDE) AND RIGHTS-OF-WAY

A. Existing lawn surfaces damaged by construction shall be regraded and resodded. These areas shall be maintained until all work under this contract has been completed and accepted.

3.5 CLEANING UP

A. The CONTRACTOR shall remove all construction material, excess excavation, buildings, equipment, and other debris remaining on the job as a result of construction operations and shall render the site of the work in a neat and orderly condition.

3.6 INCIDENTAL WORK

A. Do all incidental work not otherwise specified, but obviously necessary, for the proper completion of the contract as specified and as shown on the drawings.

END OF SECTION 029990

SECTION 033053 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Design Mixtures: For each concrete mixture.

1.3 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. Comply with ACI 301 (ACI 301M).

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.

2.3 CONCRETE MATERIALS

A. Cementitious Materials:

1. Portland Cement: ASTM C 150/C 150M.
2. Fly Ash: ASTM C 618, Class C or F.

B. Normal-Weight Aggregate: ASTM C 33/C 33M, 1-1/2-inch (38-mm) nominal maximum aggregate size.

C. Air-Entraining Admixture: ASTM C 260/C 260M.

D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

E. Water: ASTM C 94/C 94M.

2.4 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

2.6 CONCRETE MIXTURES

A. Normal-Weight Concrete:

1. Minimum Compressive Strength: 3500 psi at 28 days.
2. Cementitious Materials: Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of trowel-finished floor slabs to exceed 3 percent.

2.7 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116 and furnish batch ticket information.

1. When air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. Design, construct, erect, brace, and maintain formwork according to ACI 301.

3.2 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 STEEL REINFORCEMENT INSTALLATION

A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:

C. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.

3.5 CONCRETE PLACEMENT

A. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

B. Consolidate concrete with mechanical vibrating equipment according to ACI 301.

3.6 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections exceeding 1/2 inch.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch.

1. Apply to concrete surfaces exposed to public view and to receive a rubbed finish.

C. Rubbed Finish: Apply the following rubbed finish, defined in ACI 301, to smooth-formed-finished as-cast concrete where indicated:

1. Smooth-rubbed finish.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.7 FINISHING UNFORMED SURFACES

A. General: Comply with ACI 302.1R for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.

1. Do not further disturb surfaces before starting finishing operations.

C. Slip-Resistive Broom Finish: Apply a slip-resistive finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.8 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.

B. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

C. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:

1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.

3.9 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Tests: Perform according to ACI 301.
1. Testing Frequency: Obtain at least one composite sample for each 100-cu. yd. or fraction thereof of each concrete mixture placed each day.

END OF SECTION 033053

SECTION 116600 – ATHLETIC EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Softball Batter's Box Forming System
2. The Hall Base Set
3. In-Ground Double White & Orange First Base
4. Four-Sided Professional Pitching Rubber
5. Hollywood Anchor Access Frame with Infill Retainer System
6. Hollywood Dual Anchor Access Frame with Infill Retainer System
7. Ground Sleeve Foul Pole with Wing
8. Pole to Pole Tension backstop Netting System

1.2 SUBMITTALS

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

B. Samples: For each exposed finish.

C. Material Certificates: Signed by manufacturers.

D. Maintenance Data.

1.3 QUALITY ASSURANCE

A. Fabrication and installation of site improvements by experienced craftsmen with excellent record of performance on completed projects of comparable size, scope, and quality.

1.4 FIELD MEASUREMENTS

A. Contractor shall verify position and layout of all athletic field equipment. Verify dimensions by field measurements.

PART 2 - PRODUCTS

2.1 SOFTBALL BATTER'S BOX FORMING SYSTEM

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Softball Batter's Box Forming System (Model # BBFSS)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.2 THE HALL BASE SET

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Champro The Hall Base Set (Model # VB001PW)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.3 IN-GROUND DOUBLE WHITE & ORANGE FIRST BASE

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Champro In-Ground Double White & Orange First Base (Model # VB004)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.4 FOUR-SIDED PROFESSIONAL PITCHING RUBBER

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Champro Four-Sided Pitching Rubber (Model # VB043)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.5 HOLLYWOOD ANCHOR ACCESS FRAME WITH INFILL RETAINER SYSTEM FOR SYN. TURF

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Hollywood Anchor Access Frame with Infill Retainer System for Synthetic Turf (Model # SHAFIT)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.6 HOLLYWOOD DUAL ANCHOR ACCESS FRAME WITH INFILL RETAINER SYSTEM FOR SYN. TURF

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Hollywood Dual Anchor Access Frame with Infill Retainer System for Synthetic Turf (Model # SHAFPRIT)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.7 GROUND SLEEVE FOUL POLE WITH WING

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Ground Sleeve Foul Pole with Wing (Model # FPW415 – Softball)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

2.8 POLE TO POLE TENSION BACKSTOP NETTING SYSTEM

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

1. Sportsfield Specialties (1-888-975-3343) – Pole to Pole Tension Backstop Netting System (Model # TNPPUC)

2. Alternate Products:

American Super Sports (1-800-543-9020)
Jaypro Sports (1-800-243-0533)
Hahn Enterprises (1-504-488-3536)

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

END OF SECTION 116600

SECTION 133400 – FABRICATED ENGINEERED STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Pre-engineered, fabricated restroom structure

1.2 SUBMITTALS

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

B. Samples: For each exposed finish.

C. Material Certificates: Signed by manufacturers.

D. Maintenance Data.

E. Stamped Shop Drawings by Louisiana Licensed Architect/Engineer.

F. Building System Warranty (1 Year labor/installation with 5 Year Structure)

1.3 QUALITY ASSURANCE

A. Fabrication and installation of building and building systems by experienced craftsmen with excellent record of performance on completed projects of comparable size, scope, and quality.

PART 2 - PRODUCTS

2.1 FLOOR / FOUNDATION

A. The floor / foundation for the modular restroom shall be a prefabricated 8-inch thick monolithic 6,000 psi concrete mat slab shipped integral with the restroom building. The slab reinforcing shall be #3 and #5 grade 60 deformed rebar, placed and tied per the structural engineered drawings continuously throughout. #3 grade 60 vertical rebar for

CMU walls shall be incorporated into the slab reinforcing rebar to a minimum length of 18", bent to vertical 90 degrees and extended above the concrete slab a minimum of 24" unless otherwise noted on plan. Doweling of the vertical CMU reinforcing steel into the mat slab is not permitted. The slab shall be designed to allow relocation of the slab and building intact at any future date with built-in lifting hardware.

B. Concrete shall cure for a minimum of 7 days before moving and have a minimum 28 day compressive strength of 6,000 psi.

C. The floor / foundation shall contain a concrete encased electrode consisting of 20' of bare copper conductor (No. 4 AWG) located near the bottom of the foundation and encased in a minimum of 2" of concrete. Ground conductor to be stubbed up through the foundation near the panel board location.

D. Structural engineering drawings shall supersede specifications.

2.2 WALL SYSTEMS

A. Walls to 7'-4" above finish floor (AFF) shall be hollow load-bearing concrete masonry units and shall conform to UBC Standard 21-4, Grade N, and ASTM C-90. All units shall be medium weight. Wall system to be solid grout filled and to receive steel reinforcement throughout according to structural engineer drawings.

B. Walls above 7'-4" shall be framed with 2x kiln dried, #2 or better SPF at 16" on center, nominal. Framing to be coated with Techwood 4400 (TW4400) which is a proprietary broad spectrum anti-fungal, mold and termite blend with fire inhibiting chemicals, OR ACCEPTED SUBSTITUION. Series 4400 by Chemical Technologies Holding Corporation is an approved product treatment through testing in accordance with ICC-ES Acceptance Criteria demonstrating full compliance as stated with an Engineering Services Report.

C. Exterior framed walls to be dual sheared for wind and seismic loads with 5/8" and ½" structural rated exterior grade OSB (TW4400 coated), nailed and glued to walls in pattern per code.IN-GROUND DOUBLE WHITE & ORANGE FIRST BASE

2.3 INTERIOR FINISHES (OR ACCEPTED SUBSTITUTION)

A. Restroom floors to receive one coat H&C Colortop solvent based stain, and one coat H&C Colortop Clearshield Sealer.

B. Chase / storage floor to receive a light broom finish with Insul-X Sure Step anti-slip acrylic latex coating. Color to be Gray.

C. Restroom walls to 7'-4" AFF to be CMU block, standard finish. To receive one coat of prime and fill acrylic block filler, one coat of 100% acrylic primer, and two finish coats of 100% block / stucco paint. Color to be White.

D. Restroom walls above 7'-4" to be fiber reinforced cement (FRC) panels. Panels to be installed with factory finish visible, and to manufacturers specifications. To receive one coat of 100% acrylic primer and two finish coats of 100% acrylic semi-gloss enamel paint. Color of paint to be White.

E. Restroom ceilings to be exposed 2"x6" T&G planks over engineered wood beams. Plank and beams to receive two coats of Superdeck stain or equal. Color of stain to be Classic Barn Red.

F. Chase walls to 7'-4" AFF to be CMU block, standard finish. To receive one coat of acrylic primer. Color to be Gray.

G. Chase walls above 7'-4" to be open framing. To receive one coat of 100% acrylic primer. Color to be Gray.

2.4 DOORS (OR ACCEPTED SUBSTITUTION)

A. Restroom and Chase doors to be 1 ¾" thick, full-flush, 16 gauge steel face with stiffening ribs. Door jambs shall be 16 gauge steel. Doors and jambs to receive one coat of DTM acrylic urethane Gray primer and two coats of DTM acrylic urethane tint base. Owner to make color selection from manufacturer's provided color chart.

B. Door hardware is as follows (or equal):

<u>Single-User Restroom Door</u>
Select Products Ltd. SL2483CLH continuous hinge
B660P deadbolt
Ives 8111-5 pull handle Dorma 8616DST door closer
Ives 8400, 10" high stainless steel kick plate (push side only)

<u>Multi-User Restroom Doors</u>
Select Products Ltd. SL2483CLH continuous hinge
Schlage B663 classroom deadbolt
Ives 8111-5 pull handle Dorma 8616DST door closer
Ives 8400, 10" high stainless steel kick plate (push side only)

<u>Chase / Storage Door</u>
Select Products Ltd. SL2483CLH continuous hinge

Schlage B660P deadbolt
Ives 8111-5 pull handle
Wright Door Retainer chain stop

C. Restroom doors to receive electronic door lock system using magnetic locks on a digital timer with battery backup.

2.5 ROOF (OR ACCEPTED SUBSTITUTION)

A. Roof structure to be 2x6 v-joint, tongue and groove, kiln dried #2 or better SPF decking over 4x6 kiln dried #2 or better SPF rafters at 48" on center, nominal unless otherwise noted on plan.

B. Roof finish to be Metal Sales Image II or equal 26 gauge standing seam metal panels over 30 lb. felt paper or equal. Owner to make color selection from Manufacturers provided color chart.

C. Rake and fascia to be 2"x8" Widsor 1 material with 24 gauge galvanized metal drip edge below roofing material. To receive on coat of DTM acrylic urethane Gray primer and two coats of DTM acrylic urethane tint base. Owner to make color selection from manufacturer's provided color chart.

2.6 EXTERIOR FINISHES (OR ACCEPTED SUBSTITUTION)

A. Exterior of block to be split face. To receive one coat of prime and fill acrylic block filler, one coat of 100% acrylic primer, and two finish coats of block / stucco paint. Owner to make color selection from manufacturers provided color chart.

B. Exterior finish above 7'-4" to be James Hardie Hardiplank or equal fiber reinforced cement horizontal lap siding with 7" weather. To receive one coat of 100% acrylic primer and two finish coats of 100% acrylic semi-gloss enamel paint. Owner to make color selection from manufacturer's provided color chart.

2.7 VENTILATION

A. Vent screens shall be 1/8" thick, 9 gauge expanded ¾"x1-1/4", type 304 stainless steel, in a flattened de-burred pattern.

2.8 ACCESSORIES AND SIGNAGE (OR ACCEPTED SUBSTITUTION)

A. All wall mounted accessories to be installed with stainless steel tamper-resistant screws.

B. Toilet partitions to be 1" high-density polyethylene plastic (HDPE). Partitions to receive stainless steel mounting hardware. Each toilet stall door to receive one (1) coat hook. Color of partitions and doors to selected from manufacturer's provided color chart.

C. Accessories are as follows (or equal):

36" Stainless Steel Grab Bar	Bobrick B6806.36
48" Stainless Steel Grab Bar	Bobrick B6806.48
Stainless Steel 3-Roll TP Holder	Royce Rolls TP-3
18"x30 Stainless Steel Mirrors	Bobrick B-1556 1830
Baby Changing Station	Koala KB300-01
Soap Dispenser, Surface Mounted	Bobrick B-2111

D. Signage to be in compliance with local, State, and / or ADA regulations for restroom entrances.

2.9 PLUMBING (OR ACCEPTED SUBSTITUTION)

A. Plumbing drain, waste, and vent piping shall be schedule 40 PVC with solvent welded connections. All vents through roof shall be cast iron.

B. Water lines shall be Pex B above ground and Type K copper below ground. Water supply in building shall have a built-in valve combo including a pressure-reducing valve to 80 psi, an in-line 30-micron filter, and two 160 psi pressure gauges.

C. Incoming water service shall be a 1-1/2" line, 50 gpm and 60 psi minimums.

D. Each fixture shall be isolated with a ball valve or plumbing fixture flush valve. All flush valves and P-traps shall be concealed in the chase.

E. Plumbing fixtures shall be vitreous china as follows (or equal):

Water Closet	American Standard 2634.101.020 Sloan Flushometer 992 Valve

Urinal	American Standard 6515.001.020 Sloan Flushometer 995 Valve
Lavatory	American Standard 0356.421.020 T&S B-0712-VF05 Metering Faucet

F. A single hose bibb shall be mounted in the plumbing chase and shall be installed with a vacuum breaker, to code. Hose bibb to be Woodford 24 ¾" or equal.

G. Floors shall drain to an integral floor drain with trap primers. Floor drains to be MIFAB 112-T-5-1 with 5" B strainer or equal.

H. A commercial grade hose reel with 50' of hose shall be installed in the chase.

I. Tankless on-demand electric water heater(s) to be located in chase to provide tempered water to the lavatories or other fixtures as needed. Water heater to be Chromite 20L/208-MM or equal and as needed.

2.10 ELECTRICAL (OR ACCEPTED SUBSTITUTION)

A. Building shall have a 125 amp, 120/240V, 1-phase, 3-wire, 30-space, NEMA type 1 load center with snap-in breakers. Panel to be a Siemens PN3030B1125C or equal.

B. Restroom lights shall be LED light bar(s) at 4.2 Watts per foot, as shown on plans.

C. Restroom lights to be controlled by manual switch, wired to motion sensor.

D. Exterior lights shall be RAB BRISK S17L-740 or BRISK S17L-740/PCU. Color of housing to be Dark Bronze.

E. Exterior light(s) shall be controlled by a Tork 3010 photo cell, and a Tork E101B time clock (or equal).

F. Chase / Storage light(s) shall be Galco TCPGPS4UZDA850K 4', 32 watt LED.

G. Each restroom shall receive one high speed, energy efficient, ADA compliant, vandal resistant World Slimdri hand dryer with built in automatic activation. Color to be White.

H. Each restroom shall receive one Fastaire HD03 manually operated hand dryer with cast aluminum nozzle, universal type 1/6 hp motor with lubricant ball bearings, 2-stage blower and filter, 30 second activated timer after start, 50 cfm airflow and 120VAC, 60Hz, 7.5A power. Motor and blower to be located in chase.

I. Building shall have one Leviton 7899W or equal, 20 amp, 125 volt, GFCI duplex receptacle located in chase. Color to be White.

J. Building to be grounded per local code.

2.11 EXTERNAL UTILITY CONNECTIONS

A. Building Vendor will provide underground piping for electrical, sewer, and water, extending up to 6 feet from slab perimeter. General Contractor shall provide licensed contractors to install manufacturer supplied underground plumbing kit, manufacturer supplied water line, and manufacturer supplied electrical conduit to pre-established tie-in points. Contractors will also make connections between underground plumbing kit stub-ups to internal plumbing of building located in the chase, as well as pulling and connecting supply wire to pre-installed electrical panel.

B. General Contractor shall be responsible for final connections to utilities.

2.12 FINAL SPECIFICATIONS

A. Final specifications will be listed on stamped shop drawings to be reviewed and approved by landscape architect.

PART 3 - EXECUTION

3.1 SURVEY STAKES

A. Provide ten foot offset stakes and locate front corners of building, existing utilities, and inverts within the area of construction. Locate and mark final slab elevation.

3.2 SUBGRADE PAD

A. Detailed instructions to prepare the building site are as follows:

i. Excavate down ten inches below the finish floor elevation (the slab is eight inches thick on top of a two-inch sand bed).

ii. Import six inches of ¾ - road base rock and pour for a footing and/or piers.

iii. Compact to 95%, or to local code requirement. If RFL installer questions 95% compaction Client will be required to sign off on approval of setting of the building.

iv. Compact one foot over in all directions (over build).

v. Supply approximately five cubic yards of clean sand, on the side of site, for fine grading.

vi. Excavate and backfill trenches up to and within building pad for RFL supplied underground utility service kits.

vii. Provide water and inspection for RFL supplied underground sewer kit.

viii. All irrigation should be turned off prior to delivery to allow the surrounding soil to dry and bear the weight of the truck and crane. Any damage to area after verification of path in is the responsibility of the Client.

ix. Check corner locations against plans for proper sizing.

x. Verify finish floor elevation for concrete slab (shipped fully attached to the building.)

xi. Excavate one foot perimeter footing if required by local code to specified depth.

xii. Verify that pad is level and flat and at correct elevation.

3.3 SITE ACCESS AND STORAGE

A. Provide suitable safe clear access to allow a crane (minimum 110 tons), and the building on a semi-trailer (up to 40 tons) to reach site (14' width, 70' length, and 14' in height). If path to site is over existing utilities, sidewalks, or other damageable areas, proper marking, plating or other appropriate protection must be provided by and PROVIDED BY GC. GC is responsible for removing any overhead obstructions (i.e. power lines, trees). GC is responsible for scheduling and paying for the de-energizing of any power lines. GC is responsible for rerouting or blocking of traffic to ensure safe and clear access, or if required by local or State jurisdiction, to delivery site and will be responsible for associated costs. Upon agreed delivery schedule GC will be responsible for additional crane and trucking charges if any delays are incurred due to weather, lack of inspections, lack of pad being prepared, or any other cause for delay.. This proposal provides for a 110 ton crane with access to within 25' of the building pad. The proposal is based on four (4) hours of crane time.

3.4 UTILITIES

A. GC shall bring water, sewer, and power (if applicable) utilities into point of connection Christy boxes (supplied by BUILDING VENDOR), within six feet of the building line at the location shown on our plan.

i. Water: BUILDING VENDOR will furnish a water point of connection (isolation valve), from mechanical chase to a Christy box six feet from the building line. GC must have a licensed plumber install and connect service to valve.

ii. Sewer: BUILDING VENDOR will furnish a sewer point of connection from mechanical chase to a Christy box six feet from the building line. GC must have a licensed plumber install and connect service. Depth of sewer line (below finished floor elevation) will be approximately 30" at bottom of sewer line at a distance of 6' from building. It is the responsibility of the GC to meet up with BUILDING VENDOR's supplied sewer line at this depth. GC will be responsible for hiring of licensed plumber to acquire appropriate plumbing permit, to install prefabricated underground plumbing kit into pre dug trench, and to make connections between underground stub-ups and internal building plumbing located in plumbing chase within the building. BUILDING VENDOR installer will be on site to answer any questions or give direction as to proper installation of said plumbing kit as requested by licensed plumber or GC.

iii. Electrical: BUILDING VENDOR will furnish and install a PVC conduit and a Christy box to the point of connection six feet from the building line. GC to pull the electrical service line through the conduit and connect to the main panel lugs inside the building. All electrical inside the building will be furnished and installed by BUILDING VENDOR, except as noted above in exclusions.

iv. A minimum 1½" line with 50 gpm at 60 psi pressure minimum is required to ensure that water closets will operate as designed. If this is not available an auxiliary holding tank may be required.

3.5 SPECIAL CONDITIONS AND COSTS

A. If specifications and / or local ordinances by owner and / or local jurisdiction require any testing, work by licensed plumbers, work by licensed electricians, or special inspections, costs, if any, shall be borne by GC.

3.6 PERMITS AND FEES

A. All building permits and fees shall be borne by GC.

3.7 INSPECTIONS

A. BUILDING VENDOR to require that all inspections be scheduled with adequate notice to ensure that the underground plumbing and electrical work is approved prior to placement of building. BUILDING VENDOR to require that final inspection and acceptance by owner and building officials be performed immediately following BUILDING VENDOR'S completion of installation. BUILDING VENDOR to also require final inspection and acceptance immediately following BUILDING VENDOR conclusion of any correction items.

3.8 SITE CLEANUP AND DEBRIS REMOVAL

A. GC shall provide an on-site trash bin for disposal of one pick up load of debris. All excess spoils shall be the responsibility of the GC. All rough and final grading shall be by GC.

3.9 VERIFICATION OF PREPARED PAD

A. GC must verify elevation, compaction of pad as well as the pad being flat and level prior to delivery of building(s).

END OF SECTION 133400

SECTION 260000 – ELECTRICAL SYSTEMS

PART ONE - GENERAL

1.1 DESCRIPTION

A. These Specifications are intended to provide for labor, materials, equipment, and services and performing all operations required for the complete electrical system as specified herein or shown on the accompanying drawings. Obtain all necessary permits and work orders required and pay for all fees for such permits. Include all such fees in bid.

1.2 GENERAL CONDITIONS

A. The Instructions to Bidders, General Conditions and Special Supplementary Conditions all contained in the General Specifications, shall be part of this section of the Specifications the same as if attached hereto. The Electrical Contractor is instructed to read and be thoroughly familiar with all provisions of the General Specifications.

1.3 MANUFACTURERS OR TRADE NAMES

A. The Electrical Contractor shall furnish the items as specified or an equal as listed by addendum. Review of substitutions shall be requested in writing with hard copies sent to electrical consultant and architect. The substitution submittal shall contain specification sheets for all equipment being substituted to indicate equality to product that was specified. No electronic or faxed substitution request will be reviewed. All items shall be new unless specifically noted otherwise.

1.4 PRIOR REVIEW

A. The Electrical Contractor shall submit six copies of manufacturer's data and descriptive literature and drawings, including complete model numbers, for all equipment and material. This literature shall contain all pertinent information necessary for the Architect to properly evaluate the item. No item of equipment or material shall be placed on order until Final Review is received from the Architect. Unless noted otherwise, all distribution equipment, transformers, fire alarm equipment, wiring devices and lighting fixtures, all as applicable, shall be submitted for review. Requests for review shall comply with the above or will not be considered for review.

1.5 ORDINANCES, RULES AND REGULATIONS

A. All work shall conform to the requirements of all building codes, the latest edition of the National Electrical Code and laws and ordinances in force in the locality in which the work is to be done. All work and all equipment used shall conform to the requirements of the National Fire Protection Association and Underwriter's Laboratories.

B. Work called for in these Plans and Specifications shall be executed by competent workmen.

C. The drawings show approximate locations only of feeders, branch circuits, outlets, etc., except where specific routing or dimensions are indicated. The Architect reserves the right to make reasonable changes in locations

indicated, before roughing-in, without additional cost to the Owner.

1.6 EXISTING CONDITIONS

A. The Electrical Contractor shall visit the building site to determine existing conditions and will be held responsible for allowing for these conditions in his bid.

B. Note that this area of work will have storm drainage, mechanical and electrical utilities located underground and within and under the buildings. It is part of this work for the Electrical Contractor to determine the scope and location of all utilities to be installed with this project and arrange his work around others. There will be no extra consideration for work discovered as being hidden after the bid, and no change orders for extra cost that may be caused by unknown after bid conditions.

1.7 GUARANTEE

A. The Electrical Contractor shall guarantee the work installed by him for one year from the date of final acceptance of the project and shall furnish free of cost to the Owner materials and labor necessary to repair or replace defective items or workmanship. The Electrical Contractor shall guarantee all equipment to be of the quality and capacity specified.

1.8 PROTECTION OF APPARATUS

A. The Electrical Contractor shall always take precautions necessary to properly protect his apparatus from damage. Failure on the part of the Contractor to comply with the above to the Architect's satisfaction shall be sufficient cause for the rejection of the piece of apparatus in question.

1.9 OPERATING AND MAINTENANCE INSTRUCTIONS

A. Provide three copies of typewritten systems operating instructions and three copies of operating and maintenance brochures for each piece of equipment including manufacturer's descriptive bulletins with wiring diagrams, parts lists and specific maintenance instructions, warranties and guarantees. Brochures shall be bound in permanent type binders and suitably indexed.

B. At project completion and before the final observation of the work, provide to the Owner written, oral and hands-on demonstrations of the operation, function, and maintenance of each piece of equipment provided under this contract. Instruction to the Owner should be sufficient for the Owner to completely understand the operation and maintenance for each piece of equipment.

PART TWO – PRODUCTS

2.1 EQUIPMENT LABELS

A. Panelboards, safety switches, equipment cabinets, motor starters and other equipment shown on the drawings and furnished and/or installed under this section of the Specifications shall be labeled with laminated plastic nameplates inscribed to identify equipment with description shown on the drawings for panels, the name of the equipment controlled for motor starters or the system or function involved for other equipment. Nameplates shall be white with black etched letters. Provide typewritten panelboard directories indicating the equipment served, final approved room numbers, etc., as shown on the Plans or as directed by the Architect.

PART THREE – EXECUTION

3.1 COORDINATION OF TRADES

A. Where work is near the work of other contractors, the Electrical Contractor shall review plans of other contractors and coordinate his work with theirs. The Electrical Contractor shall verify the location of lighting fixtures, light switches, beams, structural members, conduit, ductwork, pipes or other obstructions before beginning his work in the area. The Electrical Contractor to coordinate all light switch locations with Architectural room layouts to provide light switch installation on strike side of door. Notify the Architect where proper clearances do not occur or where the work of others would interfere with the safe and/or proper operation of this work.

3.2 SUPPORTS AND FOUNDATIONS

A. Support all items covered by this Specification directly from building structural members independent of any ceilings or any other installed item. Panelboards and switches may be attached to suitably reinforced walls. Ground or slab mounted equipment to be mounted on a separate four-inch-high concrete slab.

B. Do not attach items of this Specification to HVAC ductwork, ceiling grids and ceiling support members, piping or other equipment unless specifically shown otherwise. Where applicable, all equipment including conduit is to be supported from overhead wall, floor or roof structures using galvanized channel or angle members for a rigid support. Position supports and equipment such that access through lay-in ceilings or panels is not impaired and all Code required clearances are maintained.

C. Where applicable, under no circumstances is the Electrical Contractor to attach to or support from any bar joist bridging. Any supports to the bar joists or any structural systems are to be approved by the Architect.

D. All supplemental angle or channel iron required to support equipment of this Specification is to be furnished by the Electrical Contractor.

3.3 EQUIPMENT LAYOUT

A. The physical location and arrangements of electrical equipment is shown on the Plans and is to be used by the Electrical Contractor as a guideline in construction. It is the responsibility of the Electrical Contractor to review the Plans with the proposed equipment and equipment of other contractors that are affected, and to ensure that all Code required clearances, wiring distances and maintenance accesses, including equipment heights, of all items are maintained. Alternate arrangements to accomplish the above due to field conditions or changes in physical size of the equipment proposed for the project are to be submitted to the Architect for review before any work is begun or equipment ordered. The alternate arrangement is to be presented in a 1/4-inch scaled drawing showing all equipment, including those of other contractors. Include shop drawing cut sheets and applicable information. Indicate on the drawing by dimension all required Code clearances, wiring distances and maintenance access requirements. Where equipment heights are required to be coordinated with architectural or other items, indicate revised heights. Refer to "MOUNTING HEIGHTS."

END OF SECTION 260000

SECTION 260050 – MINOR ELECTRICAL DEMOLITION FOR REMODELING

PART ONE - GENERAL SCOPE

1.1 DESCRIPTION

A. Provide demolition of existing electrical installation as required to suit project intent. Extend existing installation and repair/replace existing equipment as specified herein.

PART TWO - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work shall be as specified in individual Sections.

PART THREE - EXECUTION

3.1 EXAMINATION

A. Verify field measurements and existing circuiting arrangements. Verify that abandoned wiring and equipment serve only abandoned facilities. Demolition Drawings are based on casual field observation. Report discrepancies to Architect/Engineer before disturbing existing installation. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

A. Disconnect electrical systems scheduled for removal.
B. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
   1. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner and Architect/Engineer at least 7 days before partially or completely disabling system. Minimize outage duration.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Remove, relocate, and extend existing installations to accommodate new construction. Remove abandoned wiring to source of supply.
B. Remove exposed abandoned conduit, including abandoned conduit. Cut conduit flush.
C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed.
D. Disconnect and remove electrical devices and equipment serving equipment that has been removed.
E. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.
F. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.4 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused. Expose and inspect existing branch circuit wiring terminations. Correct any deficient methods or materials to bring the installation into first class working condition.

B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

END OF SECTION 260050

SECTION 310000 - EARTHWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Staking and grades

B. Existing utilities

C. Earthwork general requirements

D. Subsurface extraction

E. Excavation

F. Subgrade preparation

G. Foundation preparation

H. Compaction

I. Backfilling

J. Finish grading

K. Field quality control

1.2 RELATED SECTIONS

A. Trenching and Backfilling for Utilities is specified in Section 31 23 33 – Excavation, Trenching and Backfilling.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM C 131 Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
   2. ASTM C 136 Test Method for Sieve Analysis of Fine and Coarse Aggregates
   3. ASTM C 535 Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
   4. ASTM D422 Method for Particle-Size Analysis of Soils
   5. ASTM D653 Terminology Related to Soil, Rods, and Contained Fluids
   6. ASTM D1140 Test Method for Amount of Material in Soils Finer Than the 200 (75-urn) Sieve
   7. ASTM D1557 Test Methods for Moisture-Density Relations of Soils and Soil- Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop
   8. ASTM D2216 Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures.
   9. ASTM D2487 Test Method for Classification of Soils for Engineering Purposes

10. ASTM D2922 Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
11. ASTM D2974 Test Method for Moisture, Ash, and Organic Matter of Peat and Other Organic Materials
12. ASTM D3017 Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
13. ASTM D4253 Test Methods for Maximum Index Density of Soils Using a Vibratory Table
14. ASTM D4254 Test Methods for Minimum Index Density of Soils and Calculation of Relative Density
15. ASTM D4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

1.4 DEFINITIONS

A. Earthwork Terminology: Terms used in this Section and not defined herein shall be interpreted in accordance with the definitions given in ASTM D653.

B. Soil Classification: Soil classification is based on the Unified Soil Classification system given in ASTM D2487. Group symbols, when used, conform with the symbols of ASTM D2487.

C. Fill: Soil or soil-rock material placed to raise the subgrade or natural grade of the site.

D. Backfill: Soil or soil-rock material used to backfill excavations and to backfill excavated spaces around foundation walls, building walls, retaining walls, head walls, and abutments.

E. Embankment: Soil or soil-rock material for embankment construction. Embankment construction includes constructing embankments and dikes, including the preparation of the areas upon which they are to be placed, and the construction of temporary surcharge embankment above the grading plane.

F. Borrow: Soil or soil-rock material used for fill, backfill, embankment, or other construction that is excavated from an off-site location and hauled in.

G. Unsuitable Material: Excavated material or material below the natural ground surface in embankment areas or below sub grade elevation in excavated areas, which is unsuitable for its planned use. Unsuitable material is further defined as material determined to be:
   1. Of such unstable nature as to be incapable of being compacted to specified density using ordinary methods at optimum moisture content; or
   2. Too wet to be properly compacted and circumstances prevent suitable drying prior to incorporation into the work; or
   3. Otherwise unsuitable for the planned use.

H. The presence of excessive moisture in a material is not, by itself, sufficient cause for determining that the material is unsuitable. The existence of unsuitable material may be indicated in the Contract Documents or may be determined by the Engineer during the progress of the work.

I. Relative Compaction: The ratio, expressed as a percentage, of the in-place dry density of material as compacted in the field to the maximum dry density of the same material as determined by laboratory test ASTM D1557.

J. Optimum Moisture Content: The water content at which a soil can be compacted to a maximum dry unit weight by a given compactive effort

K. Relative Density: Mass per unit volume as specified in ASTM D4253 and ASTM D4254, as applicable to the soil and test method employed.

1.5 CLASSIFICATION OF EARTHWORK

A. For specification purposes, earthwork shall be classified as follows:
   1. Excavation-Common: All excavation involved for demolition of the existing walls and construction of new retaining walls is classified as common excavation. Excavation- Common includes excavation of pavements and other obstructions visible on ground surface and other items indicated to be demolished and removed; together with earth and other materials encountered that are not classified as rock or unauthorized excavation.
   2. Excavation - Rock: Includes removal of material in place which cannot be loosened or broken down with one pass of a crawler tractor weighing not less than 55,000 pounds, with a maximum draw-bar pull of not less than 56,000 pounds-force, pulling a single 24-inch hydraulic ripper tooth approved by the tooth manufacturer for use with the tractor under full hydraulic down pressure, or equipment of equivalent ripping capacity at one mile per hour (Caterpillar D8K or larger) or excavated by a front-end loader with a minimum bucket breakout force of 25,600 pounds (Caterpillar 977 or larger).
      a. Typical of materials classified as rock are solid rock, rock in ledges, and rock-hard continuous aggregate deposits.
      b. Intermittent drilling or ripping performed to increase production and not necessary to permit excavation of material encountered will be classified as earth excavation.
      c. Do not perform rock excavation work until material to be excavated has been cross- sectioned and classified by Owner. Such excavation will be paid on basis of contract conditions relative to changes in work.
      d. Rock payment lines are limited to the following:
         1) Two feet outside of concrete work for which forms are required, except footings.
         2) One-foot outside perimeter of footings.
         3) In pipe trenches, 6" below invert elevation of pipe and 2 ft. wider than inside diameter of pipe, but not less than 3 ft. minimum trench width.
         4) At outside dimensions of concrete work where no forms are required.
         5) Under slabs on grade, 6" below bottom of concrete slab.
   3. Structure Backfill: Structure backfill includes furnishing structural fill material and placing and compacting structural fill material around structures to the lines and grades indicated. Structure backfill includes borrow excavation and material when required.
   4. Fill for Raising Grade: Includes raising of sub grade or grade to indicated elevation with structural fill, including moisture conditioning and compaction of placed fill material. Structural fill material includes borrow excavation and material when required.
   5. Pervious Backfill: Includes furnishing, placing, and compacting pervious backfill material behind abutments, wingwalls, and retaining walls, as indicated.

6. Salvaging Topsoil: Salvaging topsoil is the removal of topsoil, stockpiling the material on-site, and maintaining the stockpile until the material is reused in the work. Salvaging of topsoil shall be classified as Excavation - Common.
7. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Owner. Unauthorized excavation, as well as remedial work directed by Owner, will be at Contractor's expense.
    a. Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending indicated bottom elevation of footing or base to excavation bottom, without altering required top elevation. Lean concrete fill may be acceptable if approved by Owner.
    b. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Owner.

1.6 DESCRIPTION

A. Provide excavation for pavement; excavation and placement of compacted fill and backfill for structures and subsurface and surface drainage; placement of pervious backfill; construction of embankments; sub grade and foundation preparation; subsurface extraction of miscellaneous structures and facilities indicated or required to be removed; and finish grading.

1.7 SUBMITTAL

A. General: Refer to Section 01 30 00 Administrative Requirements for submittal requirements and procedures.

B. Test Reports: Contractor shall coordinate quality control testing to be performed by Testing Laboratory engaged by the Owner.

C. Samples: Furnish and deliver samples of fill and backfill materials for testing and analysis.

D. Delivery Tickets: Submit a delivery ticket with each load of imported borrow material delivered to the site, stating the type of fill material and the quantity.

1.8 QUALITY CONTROL

A. Quality Control: The Contractor shall provide proper quality control measures to assure compliance with specified requirements. Foundation and sub grade preparation and the placement and compaction of fills shall be performed under the surveillance of a Louisiana registered geotechnical engineer employed by the Owner. Contractor shall coordinate quality control inspections and testing to be performed by Testing Laboratory engaged by the Owner.

B. Tests: The Owner shall engage the services of an approved independent soils testing laboratory to perform tests.
   1. Testing Requirements:
      a. Compaction tests in accord with ASTM D-698.
      b. Field density tests for area fills for each 1'-0" lift, in accord with ASTM D-698, one test for each 2,500 sq. ft. of fill. A minimum of three (3) tests for fill placed in isolated areas.
      c. Field density tests for trench excavations for each 1'-0" lift, in accord with ASTM D-698, one test for each 100 linear feet of trench under buildings and pavement, one test for each 200 linear feet otherwise.
      d. Inspection and testing subgrades and proposed fill materials.
      e. Inspection of excavation bracing system, including furnishing, installing and monitoring slope indicator devices and settlement gauges.
      f. Contractor's duties relative to testing include:
         1) Provide representative fill soil samples to Testing Agency for test purposes. Provide 50 lb. samples of each fill soil.
         2) Advise Testing Agency sufficiently in advance of operations to allow for completion of quality tests and for assignment of personnel.
         3) Be responsible for paying costs of additional testing if initial tests reveal nonconformance with specified requirements.
            a) Test report on borrow material.
            b) Verification of each footing subgrade.
            c) Field density test reports.
            d) Verification of classification of soil type used in fill and backfill.
            e) One optimum moisture-maximum density curve for each type of soil encountered.
            f) Report of actual unconfined compressive strength and/or results of bearing tests of each strata tested.

C. Tolerances:
   1. Construct finished surfaces to plus or minus 1/2-inch of the elevations indicated.
   2. Complete embankment slopes to plus or minus 6 inches of the slope line indicated. Do not encroach on the roadbed.
   3. Maintain the moisture content of fill material as it is being placed within plus or minus two percent of the recommended moisture content of the material.

1.9 SITE CONDITIONS

A. Unfavorable Weather Conditions:
   1. Excavating, filling, backfilling, and grading work shall not be performed during weather conditions which might damage or be detrimental to the condition of existing ground, in-progress work, or completed work. When the work is interrupted by rain, excavating, filling, backfilling, and grading work shall not resume, until the site and soil condition (moisture content) are suitable for compaction.
   2. Sub grade shall be free from mud, snow, ice, and deleterious material when work is resumed.
   3. Soil material that is too wet for compaction shall be left to drain, to be aerated and dried by disking and harrowing or other approved methods until the moisture content of the area is uniform and within the specified limits.

B. Prevention of Erosion: Comply with requirements specified in Section 31 25 00 Erosion and Sediment Controls, and the following:
   1. Prevent erosion of stockpiles, ditches, embankments, filled, backfilled, and graded areas until such time as permanent drainage and erosion control measures have been installed.
   2. Perform protective grading to provide positive drainage and to minimize ponding of surface water.
   3. Any repairs or mitigation due to erosion will be the responsibility of the Contractor.

PART 2 - PRODUCTS

2.1 FILL AND BACKFILL MATERIALS - GENERAL REQUIREMENTS

A. Material used for fill, backfill, and embankment construction shall be an inert, inorganic soil, free from deleterious substances, and of such quality that it will compact thoroughly without the presence of voids when watered and rolled. (Inorganic soil is defined as soil containing less than two percent by weight of organic material when tested in accordance with ASTM D2974.) Excavated on-site material will be considered suitable for fill, backfill, and embankment construction if it is free from organic matter and other deleterious substances and conforms to the requirements specified herein.
   1. Satisfactory soil materials are defined as those with no organics, a plasticity index of less than 20 and a maximum particle size of four inches, with not more than 30% greater than 3/4 inch. It shall be clean material and rock no larger than 1/2 cu. ft. Fill material shall be tested and approved by Testing Agency for degree of compaction required by its intended use.
   2. Unsatisfactory soil materials are defined as those complying with ASTM D 2487 soil classification groups OH and PT or soil materials not capable of being compacted to density and moisture requirements of this section, debris, organic material and soil containing organic material.

B. Excavated material that is suitable for fill, backfill, and embankment construction shall be conditioned for reuse and properly stockpiled for later filling and backfilling operations. Conditioning shall consist of spreading material in layers not to exceed 8 inches and raking free of debris and rubble. Rocks exceeding 6 inches in largest dimension and deleterious material shall be removed from the site and disposed of as specified herein under Disposal of Surplus Material.

C. Where conditions require the importing of fill or backfill material, the material shall be an inert soil or soil-rock material free of organic matter and meeting or exceeding the minimum requirements specified herein for the location.

D. All material to be used for filling, backfilling, and embankment construction requires written approval of the Engineer.

2.2 SOURCE QUALITY CONTROL

A. Fill, backfill, and embankment materials proposed to be used in the work shall be tested in the laboratory for compliance with specified requirements as follows:
   1. Moisture-Density Relationship: ASTM DI 557.
   2. Moisture Content: ASTM D2216.
   3. Liquid Limit: ASTM D4318.
   4. Plastic Limit and Plasticity Index: ASTM D43 18.
   5. Percentage of Wear: ASTM C131 or C535 as applicable.
   6. Sieve Analysis: ASTM D422, and ASTM C136, as applicable.
   7. Percent Passing No 200 sieve: ASTM DI 140.
   8. Sand Equivalent: California Test 217.
   9. Organic Content of Soils: ASTM D2974.

B. Where classification of soils is necessary to meet specified requirements, perform laboratory tests in accordance with ASTM D2487.

C. Submit certified test reports of all tests as herein specified under Submittals.

D. Provide samples as requested by the Engineer for preparing checklists. Provide three samples of each type of material proposed for use from locations selected by the Engineer.

PART 3 - EXECUTION

3.1 STAKING AND GRADES

A. Lay out the work, establish all necessary markers, benchmarks, grading stakes, and other stakes as required. Layout work shall be done under the supervision of an engineer or land surveyor, registered in the State of Louisiana, familiar with construction layout work, at no additional cost to the Owner.

B. Protect all grade stakes during the grading and filling operations and reset any grade stakes and line stakes destroyed.

C. Verify and flag all property corners and benchmarks within 50 feet of any clearing or grading operations. Protect same during construction. If disturbed or destroyed, replace. If found at variance with Drawings, notify Owner before proceeding to layout work.

3.2 EXISTING UTILITIES

A. Verify on site the location and depth (elevation) of all existing utilities and services before performing any excavation work. Excavation within 2 feet of an active utility line shall be performed by hand. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.

1. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Engineer and then only after acceptable temporary utility services have been provided.
   a. Provide minimum of 48-hour notice to Owner and notify LA One Call (Dial 811) and comply with provisions of Part VII of Chapter 8 of Title 40 (RS 40: 1750 to 1761 by Acts 1988, No 923, 51). Utility service to be provided to the facility at all times.

B. Abandoned sewers, piping, and other utilities encountered in the progress of the excavating shall be removed and the ends plugged. Coordinate with utility companies for shut-off of services if lines are active. All trench excavations resulting from removal of utility lines shall be backfilled with Structural Fill.

C. Active utility lines encountered, which are not indicated in the Contract Documents, shall be reported immediately to the Engineer and utility owners involved. The Engineer and utility owners shall be permitted free access to determine the measures deemed necessary to repair, relocate, or remove the utility. Cooperate with Owner and utility companies in keeping respective services and facilities in operation.

   Repair damaged utilities to satisfaction of utility owner.

3.3 EARTHWORK GENERAL REQUIREMENTS

A. Dust Control: Refer to Section 31 25 00 Erosion and Sedimentation Controls, for dust control requirements.

B. Erosion Protection: Prevent erosion of the site at all times. Construct temporary berms and dikes and cut temporary swales to promote natural drainage of site. Refer to Section 31 25 13 Erosion Controls, for additional requirements.

C. On-Site Excavation or Borrow Pits: Do not excavate or remove any material from the project site or right-of-way which is not within the designated excavation, as indicated by the slope and grade lines, without written authorization from the Engineer.

D. Salvaging Topsoil:
   1. Salvage topsoil from stripped and excavated areas, and stockpile on the site at appropriate locations. Prevent topsoil from contamination by other materials and provide adequate drainage and erosion protection.
   2. Place stockpiled topsoil in areas to be landscaped as indicated on the Contract Drawings or as directed by the Engineer.

E. Stockpiling of Fill and Backfill Material:
   1. Excavate and separately stockpile suitable fill and backfill material, as indicated, during the progress of the excavation work. Save sufficient suitable excavated material, if available, for later filling, backfilling, and embankment construction. Place, grade and shape stockpiles for proper drainage.
   2. Store materials from required excavations that are suitable for fill, backfill, and embankment as excavated, in stockpiles segregated by type.
   3. Establish excavated material stockpiles on site only in locations where they will not interfere with the progress of the work.
   4. Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.

F. Maintenance of Excavations, Slopes, and Embankments:
   1. Excavate and remove material outside the limits of the excavation which is unstable and constitutes potential slides, and material which comes into excavations for any reason including from the driving of piles.
   2. Maintain slopes and embankments until substantial completion and acceptance of the work. Promptly repair slides, slipouts, washouts, settlements, and subsidences that occur for any reason, and refinish the slope or embankment to the indicated lines and grades. Any settlement or washing that occurs during and until completion of project and prior to acceptance of the work shall be repaired immediately and grades reestablished to the required elevations and slopes. Fill to required subgrade levels any areas where settlement occurs.
   3. Temporary Grading and Drainage: Provide effective drainage at all times. No impoundment of water shall be permitted except as provided. Pools, puddles or inundated excavations shall be drained immediately. The Contractor is fully responsible for any and all water damage within the Limit of Work and all water damage to the site or installed work.
   4. Safeguarding of Structure Walls: Heavy equipment shall not be operated within 4 feet of structure walls.

G. Use of Explosives: The use of explosives is not permitted unless approved by the Owner.

H. Protection of Persons and Property:
   1. Barricade open excavations occurring as part of this work and post with warning lights.
   2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

I. Codes and Standards: Perform excavation work in compliance with applicable requirements of Standard Building Code (International Building Code) with Louisiana Title 40 Amendments.

3.4 SUBSURFACE EXTRACTION

A. Remove subsurface facilities and obstructions to the extent indicated.

B. When subsurface facilities are encountered during excavation which interfere with new construction, and such facilities are not indicated, notify the Engineer promptly for corrective determination.

3.5 EXCAVATION

A. General Excavation Requirements:
   1. Perform excavating as indicated and required for roadway and parking lot beds, for concrete footings, foundations, retaining walls, exterior paving, floor slabs, concrete walks, and for site levels and grading, and provide shoring, bracing, underpinning, cribbing, pumping, and planking as required.
   2. The bottoms of excavations shall be level, firm, undisturbed earth, clean and free from loose material, debris, and foreign matter.
   3. Excavate to the lines and grades indicated on the Contract Drawings.

4. Excavations shall be supported and maintained by providing structural support of earth walls as specified in Section 31 50 00 - Excavation Support and Protection, so that sides are stable and will not move. Excavations may be maintained by sloping cut faces where space permits, if calculations, sealed and signed by a civil or structural engineer currently registered in the State of Louisiana, show that the slopes are safe. Calculations shall consider all existing conditions, including adjacent traffic, construction loading, and other local effects.
5. Limits of excavations shall allow for adequate working space for installing forms, wall waterproofing, and as required for safety of personnel. Cut excavations in solid rock accurately to the lines indicated on the Contract Drawings, or to the width of the ductbank or concrete encasement.
6. Dewater excavation as specified in 3.06.C. - Dewatering. Construct berms around excavations as required to prevent surface water and runoff from entering the excavation.
7. Remove unstable bottom material. Remove large stones, debris, and compressible soils from excavation bottoms to a minimum depth of 12 inches. Where required to excavate to rock, it shall be understood to mean sound bedrock. Remove loose and unsound material.
8. Except as otherwise indicated, preserve the material below and beyond the lines of excavations. Where an excavation is carried below the indicated grade, backfill to the indicated grade as herein specified.
9. Place excavated material at a sufficient distance from edge of excavation to avoid causing cave-ins or bank slides, but in no case closer than 3 feet from the edge of excavations.
10. Unauthorized over excavations for footings and foundations shall be filled with lean concrete to indicated elevations.
11. Excavated earth material that is suitable for fill, backfill, or embankment shall be conditioned for re-use and properly stockpiled for later filling and backfilling operations as herein specified. Test, screen, and mix as necessary to meet specified requirements.

B. Rock Excavation:
1. Rock, which cannot be broken up and removed by ripper equipment, shall be excavated and removed by drilling and blasting. The use of explosives requires written approval of the Engineer.
2. Where footings or foundations are to be placed on rock which is not horizontal, key the center of the foundation approximately 12 inches in depth throughout an area approximately equal to the dimensions of the column or footing to be placed on the rock, or the entire width of the slab, at not more than 10-foot intervals. Remove loose fragments, and clean and fill all seams with lean concrete.
3. Rock excavation beyond or below the indicated cross section shall be at the Contractors expense. Fill overbreakage to required invert with lean concrete at no additional expense to the Owner.
4. Leave the side slopes of rock cuts with reasonably uniform faces whether the excavation is carried beyond the specified side slopes or not. Remove all loose rock on cut slopes immediately after blasting. Sloped surfaces shall conform to the typical section indicated or to natural cleavage planes, where these are compatible with the typical section.
5. Exposed rock faces shall be mapped by a Contractor-employed, Louisiana registered geotechnical engineer or engineering geologist. If structural mapping indicates that unstable planes or other features are exposed which jeopardize the stability of the slope, the Contractor shall modify the slope as required.

C. Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
   1. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
   2. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rainwater and water removed from excavations to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

3.6 SUBGRADE PREPARATION

A. Remove vegetation, unsuitable soil materials, obstructions and deleterious materials from ground surface prior to placement of fills. Break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.

B. Perform all cutting, blading, and shaping as required to cut and shape the subgrade to the grades and elevations indicated. Sub grade preparation includes fine grading, reworking as necessary, and preparation of cut, fill, or embankment upon which the structure will be placed.

C. Finish subgrade to straightedge or template within specified tolerances with the finished surface bladed to a uniform, dense, smooth texture.

3.7 FOUNDATION PREPARATION

A. Complete construction of the excavation support and dewatering systems prior to construction of structure and equipment foundations.

B. Avoid disturbing bottom of excavation. If bottom is disturbed, restore and stabilize the bearing foundation with compacted pervious backfill material as specified herein.

C. If material at bottom of the excavation is rock, remove loose material and roughly level the bearing foundation to indicated elevation. If the bottom contains occasional rock outcroppings or rock in only a portion of the area, remove such rock to a depth of 6 inches below indicated subgrade and backfill with lean concrete.

D. Where unsuitable material is encountered at the elevations indicated for foundations, all soft, loose, or unsuitable material shall be removed. The area shall be scarified to a minimum depth of 12 inches, and the planned elevation shall be re-established by backfilling with structural backfill, moisture-conditioning, and compacting to a minimum dry density of 95 percent of the maximum laboratory dry density as determined in accordance with ASTM D l557.

3.8 COMPACTION

A. Compaction Density: Compact each layer of embankment, fill, and backfill material to not less than the indicated or specified compaction. Required compactions are defined as Class I and Class II, as follows:
   1. Class I Compaction: 95 percent relative compaction as determined by ASTM D698.
   2. Class II Compaction: 98 percent relative compaction as determined by ASTM D698.

B. Required Compactions:
   1. Embankment or Fill where the Surface will be Bearing Foundation: Class II for full depth. Where embankment construction exceeds 8 feet in depth, provide minimum Class I compaction below the top 8 feet.
   2. Backfill around Structures: Class I below top 36 inches; Class II for top 36 inches.
   3. Where not otherwise indicated or specified and where structures are not involved, provide Class I compaction to minimize settlement.

C. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.
   1. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
   2. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value.
   3. Perform moisture density determinations for each soil type used, to provide data for quality control. The natural moisture content at the time of compaction must be within moisture content limits that will allow the specified compaction to be obtained, but not in excess of 3% above or below the optimum moisture content.

3.9 COMPACTION (NON-STRUCTURAL FILL)

A. Perform compaction of soil materials for fills using mechanical soil compaction equipment for type and size materials to be compacted. Hand compact materials in areas inaccessible to machinery and within 5'-0" of below grade walls.

B. Percentage of Maximum Density Requirements: Provide not less than the following percentages of maximum dry density by the Standard Proctor test, ASTM D698.
   1. Lawn or Unpaved Areas: Compact top 6" of subgrade & each layer of backfill or fill material at 90% maximum dry density.

C. Moisture Control: Where subgrade or soil layer must be moisture conditioned before compaction, apply water to surface of subgrade or soil layer. Scarify and air-dry soil material that is too wet to permit compaction to specified density. Control soil moisture content of in place fill to within 3% of optimum moisture content.

D. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread where directed by Owner and permitted to dry, until moisture content is reduced to satisfactory value, as determined by moisture density relation tests. When accepted by Testing Agency, soil material may be used in compacted backfill or fill.

3.10 BACKFILLING

A. Use materials removed from site excavations if such material meets specified requirements.

B. Backfilling is required around all substructures. Fill all abandoned vaults, shafts, airways, holes, pits, and other voids.

C. Place backfill in layers not to exceed eight inches of loose material and compact each layer to specified density before the next layer is placed.

D. Place backfill material in such manner that unbalanced horizontal loads will not be applied to a newly placed structure or portion of structure, utility, or pipeline. Do not backfill around portions of structures requiring backfill on only one side or on less than all sides, until the concrete has reached the specified 28-day strength to withstand the earth pressures on structures.

E. When placing material for backfill around waterproofed structures, protect such structures and the waterproofing thereof with a shield when necessary to prevent displacement or injury by stones or other hard substances in the backfill.

F. Do not backfill on or against structural concrete until the specified 28-day concrete strength has been attained.

3.11 FINISH GRADING

A. Finish grade all areas to elevations and grades indicated. In areas to receive topsoil and landscape planting, finish grading shall be performed to a uniform 7 to 8 inches below the grades and elevations indicated.

B. Place and spread stockpiled topsoil to a uniform thickness, approximately 1/2 inch below finish grades indicated.

C. Coordinate with the landscape requirements of Division 32.

D. Finish grade entire site obtaining uniform levels or slopes between points where elevations are shown or between such points and existing grades.

E. At completion of finish grading operation, entire site is to be ready for grassing.

F. Where finish grading meets or abuts curbs, walks or pavements, uphill grades are to be slightly higher than pavements to permit drainage.

G. Protection of graded areas: Protect newly graded surfaces from traffic and erosion. Keep free of debris. Where graded or compacted surfaces are damaged by subsequent operations, return to indicated grade and state of compaction.

3.12 FIELD QUALITY CONTROL

A. Regulatory Requirements: In compliance with the International Building Code, the Contractors earthwork operations shall be performed under the observance and inspection of an Owner employed geotechnical engineer currently registered in the State of Louisiana, as follows:
   1. Site preparation, cutting and shaping, excavating, filling, backfilling, and embankment construction shall be carried out under the inspection of the geotechnical engineer, who will perform appropriate field and laboratory tests, as determined by the geotechnical engineer, to evaluate the suitability of fill and backfill material, the proper moisture content for compaction, and the degree of compaction achieved. Fill or backfill that does not meet the specified requirements shall be removed or recompacted until the requirements are satisfied.
   2. Cutting and shaping, excavating, conditioning, filling, backfilling, and compacting procedures require approval of the geotechnical engineer as they are successively performed. Work found to be unsatisfactory or work disturbed by subsequent operations before approval is granted shall be corrected in an approved manner as approved by the geotechnical engineer.

B. Density Tests: Compacted fill, backfill, and embankment shall be tested to verify compliance with specified requirements in accordance with ASTM D2922. Frequency of tests shall be in accordance with the Contractors Quality Plan, but not less than the following:

C. Compaction Tests: Tests for compaction shall be performed in accordance with test procedures specified in ASTM DI557, Method D, as applicable. Field-testing of soils or compacted fill in place shall be performed in accordance with applicable requirements of ASTM D2922.

D. Moisture Content Tests: Compacted fill, backfill, and embankment shall be tested to verify compliance with specified requirements in accordance with ASTM D3017. Minimum frequency of tests shall be as specified above for density tests.

END OF SECTION 310000

SECTION 311000 - SITE CLEARING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Protecting existing vegetation to remain.
   2. Removing existing vegetation.
   3. Clearing and grubbing.
   4. Stripping and stockpiling topsoil.
   5. Removing above- and below-grade site improvements.
   6. Disconnecting, capping or sealing, site utilities.
   7. Temporary erosion and sedimentation control.

B. Related Requirements:

   1. Section 015000 "Temporary Facilities and Controls" for temporary erosion- and sedimentation-control measures.

1.3 DEFINITIONS

A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; and free of weeds, roots, toxic materials, or other non-soil materials.

D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.

E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction.

F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
   1. Do not proceed with work on adjoining property until directed by Engineer.

C. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.

D. Utility Locator Service: Notify LA One Call: 811 (1-800-272-3020) for area where Project is located before site clearing.

E. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

F. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earth Moving."
   1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 – EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protection zones have been identified and enclosed according to requirements in Section 015639 "Temporary Tree and Plant Protection."

C. Protect existing site improvements to remain from damage during construction.
   1. Restore damaged improvements to their original condition, as acceptable To Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 EXISTING UTILITIES

A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
   1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
   1. Arrange with utility companies to shut off indicated utilities.
   2. Owner will arrange to shut off indicated utilities when requested by Contractor.

C. Locate, identify, and disconnect utilities indicated to be abandoned in place.

D. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Engineer not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Engineer's written permission.

3.4 CLEARING AND GRUBBING

A. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
   1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm) and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches (150 mm) in a manner to prevent intermingling with underlying subsoil or other waste materials.
   1. Remove subsoil and non-soil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
   1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
   2. Do not stockpile topsoil within protection zones.
   3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
   4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Excavating and filling for rough grading the Site.
   2. Preparing subgrades for walks, pavements, turf and grasses, and plants.
   3. Drainage course for concrete slabs-on-grade.
   4. Subbase course for concrete walks and pavements.
   5. Subsurface drainage backfill for walls and trenches.
   6. Excavating and backfilling trenches for utilities and pits for buried utility structures.
   7. Shaping berms.

1.3 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
   1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the topmost surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

PART 2 - EXECUTION

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification [Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487] [Groups A-1, A-2-4, A-2-5, and A-3 according to AASHTO M 145], or a combination of these groups; free of rock or gravel larger than 3 inches (75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
1. Liquid Limit: N/A
2. Plasticity Index: N/A

C. Unsatisfactory Soils: Soil Classification [Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487] [Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145], or a combination of these groups.
1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 1- 1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 294/D 2940M 0; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; except with 100 percent passing a 1-inch (25- mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

H. Drainage Course: Narrowly graded mixture of crushed stone or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and zero to 5 percent passing a No. 8 (2.36-mm) sieve.

I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and zero to 5 percent passing a No. 4 (4.75-mm) sieve.

J. Sand: ASTM C 33/C 33M; fine aggregate.

K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored as follows:
1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches (750 mm) deep; colored as follows:
1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.

B. Protect and maintain erosion and sedimentation controls during earth-moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
   1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
   1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.
   1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit unless otherwise indicated.
   1. Clearance: 12 inches (300 mm) each side of pipe.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
   1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
   2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
   3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
   4. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

D. Trench Bottoms: Excavate trenches 4 inches (100 mm) deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.
   1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

E. Trenches in Tree- and Plant-Protection Zones:
   1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
   2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
   3. Cut and protect roots according to requirements in Section 015639 "Temporary Tree and Plant Protection."

3.6 UNAUTHORIZED EXCAVATIONS

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Engineer.
   1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer.

3.7 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.8 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:
   1. Construction below finish grade including, where applicable, sub-drainage, damp-proofing, waterproofing, and perimeter insulation.
   2. Surveying locations of underground utilities for Record Documents.
   3. Testing and inspecting underground utilities.
   4. Removing concrete formwork.
   5. Removing trash and debris.
   6. Removing temporary shoring, bracing, and sheeting.
   7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.9 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings

D. Backfill voids with satisfactory soil while removing shoring and bracing.

E. Initial Backfill:
   1. Soil Backfill: Place and compact initial backfill of subbase material free of particles larger than [1 inch (25 mm)] in any dimension, to a height of 12 inches (300 mm) over the pipe or conduit.
      a. Carefully compact initial backfill under pipe haunches and compact evenly upon both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
   2. Controlled Low-Strength Material: Place initial backfill of controlled low-strength material to a height of 12 inches (300 mm) over the pipe or conduit. Coordinate backfilling with utilities testing.

3.10 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under walks and pavements, use satisfactory soil material.
   3. Under steps and ramps, use engineered fill.
   4. Under building slabs, use engineered fill.
   5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
   2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than [8 inches (200 mm)] in loose depth for material compacted by heavy compaction equipment and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698
   1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
   2. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 92 percent.
   3. Under turf or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 85 percent.
   4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:
   1. Turf or Unpaved Areas: Plus or minus [1 inch (25 mm)]
   2. Walks: Plus or minus [1 inch (25 mm)].
   3. Pavements: Plus or minus [1/2 inch (13 mm)].

C. Grading inside Building Lines: Finish subgrade to a tolerance of [1/2 inch (13 mm)] when tested with a 10-foot (3-m) straightedge.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
   1. Shape subbase course and base course to required crown elevations and cross-slope grades.
   2. Place subbase course and base course 6 inches (150 mm) or less in compacted thickness in a single layer.
   3. Place subbase course and base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
   4. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95percent of maximum dry unit weight according to ASTM D 698.

3.15 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
   1. Place drainage course 6 inches (150 mm) or less in compacted thickness in a single layer.
   2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.16 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Engineer.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.17 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
   1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactorily soil, trash, and debris, and legally dispose of them off owner's property.

B. Transport surplus satisfactory soil to designated storage areas on owner's property. Stockpile or spread soil as directed by Engineer.
   1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off owner's property.

END OF SECTION 312000

SECTION 312200 – GRADING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and all applicable specification sections, apply to this section.

1.2 DESCRIPTION

A. This Section specifies the requirements for earthwork, including excavation, utility protection, filling, backfilling compaction, stabilization, grading and disposal of unacceptable and excess excavated material including but not limited to the following.

B. Provide subbase materials, drainage fill, and common fill materials for slabs, pavements and site improvements.

C. Provide suitable fill from off site if on site quantities are insufficient or unacceptable. Stockpile excess excavated material at a location designated by the Owner's Representative.

D. Refer to Section 01010-Summary of Work for sequence of construction.

1.3 QUALITY ASSURANCE

A. Reference Standards Applicable to this Section:

1. ASTM: American Society for Testing and Materials
   a. D 698: Test Methods for Moisture-Density Relations of Soils and soil Aggregate Mixtures Using 5.5 lb. Rammer and 12 in. Drop.
   b. D 1785: Specification for Poly (Vinyl Chloride) (PVC) Pipe, Schedules 40, 80, and 120. Schedules 40, 80, and 120.
   c. D 2487: Test Method for Classification of Soils for Engineering Purposes.
   d. D 4318: Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
2. Grading Tolerances Outside Building Lines: Finish excavations and grade within a tolerance of 5/8" above or 1 1/4" below required grades. Do not leave depressions in graded areas. Haul off excess excavated material not required for fill off site and dispose of same.
3. Grading Tolerance for Fill under Building Slabs: Plus or minus 1/2 inch measured with a 10 foot straight edge.

C. Submittals:

1. Refer to Section 01340, Submittals.
2. Test reports:
   a. Fill materials: Report and certification of fill materials.

D. Job Conditions:

1. Site information: Refer to Drawings.
2. Use of explosives: The use of explosives will not be permitted.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

A. Classification: Acceptable material shall be as classified in ASTM D 2487, Groups GW, GP, GM, SM, SW, and SP.

B. Common Fill:

1. Mineral soil substantially free from organic and unsuitable materials and free from rock or gravel larger than 2" in diameter; 80 percent passing No. 40 sieve and not more than 50 percent passing No. 200 sieve.
2. Common Fill is intended to be used for construction of berms and excavated areas and to achieve proposed elevation prior to placement of topsoil.

B. Topsoil

1. Secure adequate topsoil from an approved off-site location if on site quantities ore insufficient or unacceptable. It shall be fertile, friable, natural loam containing a liberal amount of humus and shall be capable of sustaining vigorous plant growth. It shall be free of stone lumps, clods of hard earth, plants or their roots, sticks and other extraneous matter. The natural organic content by oven dry weight as measured by the "wet digestion" method shall not be less than 1.5%.
2. The pH of the topsoil shall not be less than 5.5 and shall not exceed 7.2. Sand content shall not exceed 50%, oven dry weight. Soil tests shall be run prior to topsoil sample approval and at Owners Representative's discretion throughout topsoil installation. Tests shall be done at Contractor's expense and results will suffice for fertilizer requirements in Section 02930 Planting. Topsoil not meeting these requirements will not be accepted.

D. Planting Backfill Mix: As specified in Section 329300 Plants.

E. Crushed Limestone Gravel Base Material

1. Intended use: Gravel base material is intended for use under concrete walks, brick pavers, and flagstone.
2. Gradation: Type A, Grade 2. No variances from this specification will be allowed.

Sieve Size	Percent Retained
1 3/4"	0-10
No. 4	45-75
No. 40	60-85

3. Plasticity Characteristics: Minimum Liquid Limit = 40; Maximum Plasticity Index = 12.

4. Compassion Specification: A minimum of 95 percent of ATM D 698-78, Method D maximum dry density at a moisture content slightly dry of optimum. Lift thicknesses should not exceed six inches compacted thickness.
5. Generic Name(s): Crushed Limestone Base.

G. Gravel Drain Material

1. Intended use: Gravel drain material is intended to be used as drainage backfill in conjunction with planting underdrains and cloth covered ADS pipe.
2. Gradation: ASTM C 33-82, Size 6T.

Sieve Size	Percent Retained
1"	0
3/4"	0 - 10
3/8"	45 - 80
No. 4	90 - 100
No. 8	95 - 100

3. Plasticity Characteristics: Non-plastic
4. Compaction Specification: Compact by vibratory means a range of 70 to 85 percent of TEX-113-E maximum dry density. Lift thickness should not exceed eight (8) inches. Compaction by flooding is not acceptable.
5. General Name(s): Pea Gravel.

H. Sharp Sand: Sand shall be thoroughly washed, coarse grade sharp, construction or brick sand, free of clay balls, weeds, and grass. So-called cushion sand, blow sand, or creek silt is not acceptable for substitution where sharp sand is specified.

PART 3 EXECUTION

3.1 EXCAVATION

A. General

1. Contractor shall inspect the site and confirm actual grades and levels, and existing conditions under which the work is to be performed.
2. If unsuitable material or soft spots are encountered at the required subgrade elevations at the time of excavation or when compacting the subgrade, notify the Owners Representative.
3. The following materials shall be classed as unsuitable when found in the subgrade zone:
   a. Abandoned structures such as pipes or conduits, underground equipment, vaults, septic tanks, floor slabs or other similar constructions.
   b. Deposits of refuse or debris.
4. Embankments or fills shall be constructed in successive horizontal layers, not exceeding 8 in. in thickness. Each layer shall extend across the entire fill and shall be compacted to the required dry density as specified in Article 3.02 of this Section.

B. Preparation

1. Protection: Provide adequate protective measures of shoring, bracing, piling, planking and cribbing to protect existing adjacent construction.
   a. Protect all reference points, bench marks and monuments from dislocation or damage. Replace or repair immediately any points damaged, destroyed, or dislocated.
   b. Sprinkle and dampen all dusty material from the beginning of work to its completion.
   c. Protect and maintain all conduits, drains, inlets, sewers, pipes and wires that are to remain on the property.
   d. Provide, erect and maintain all lights, barricades, warning signs, and guards as necessary.
2. Layout: All work shall be laid out by a licensed surveyor employed by the Contractor. Cost of all layout work shall be borne by Contractor. Refer to Special Conditions. Contractor shall be responsible for all elevations, dimensions and verifications of actual conditions. Refer discrepancies to Owners Representative for interpretation or necessary modifications.
3. Site preparation (refer to Section 02100): Remove topsoil, grass, weeds, trees, shrubbery, roots and other vegetation from the areas to be excavated, filled or graded.
4. Construction Slopes: No slopes shall be constructed or excavated that violate the provisions of OSHA (Occupational Safety and Health Administration) criteria given in Article 1926, Sub-Part P, Table P-1, without having the geotechnical consultant specifically analyze such slopes. Refer to Special Conditions for other requirements.

C. Unauthorized Excavation

1. Unauthorized excavation shall consist of removal of materials beyond indicated subgrade elevations, limits or dimensions.
2. Remedial work shall be equal to that specified for normal earthwork in this Section.

D. Dewatering

1. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding the site and surrounding area.
2. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footing, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
3. Convey water removed from excavations and rain water to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits. Do not use trench excavations as temporary drainage ditches.
4. Notify Owners Representative in writing of work delays due to water or water-affected conditions.

3.2 COMPACTION

A. General: Control soil compaction during construction and attain the minimum percentage of density specified in this Section.

B. Required Density and Moisture

1. Compact fill material to 95 percent of the maximum dry density as determined in accordance with ACT D 698, Method A (Standard Proctor).
2. Obtain the specified compaction for fill material at a moisture content above optimum moisture. Determine optimum moisture in accordance with ACT D 698, Method A.

C. Moisture Control: Earthwork materials shall not be placed, spread, rolled or compacted during inclement weather. If such operations are interrupted by rain, operations shall not resume until the Contractor has determined that the moisture content and density of the previously placed material are within the specified limits.

3.3 BACKFILL AND FILL

A. Earthwork

1. Excavate to lines, elevations, and limits required by drawing details, plus sufficient distance and space to permit erection of forms, shoring and inspections. Excavate as required, regardless of types, conditions or moisture content of materials encountered. Refer to Uniform General Conditions for trenching requirements.
2. Grades: Cut all areas accurately to required cross-sections and grades. Take care to prevent excavation below required grades.
3. Materials shall be disposed of outside the limits of the project site and at the Contractor's responsibility. Make all necessary arrangements and obtain all permits required for traffic control during hauling operations.

B. Filling

1. Fill (or excavate as required) under items of construction as specified previously.
2. Filling: All granular fill shall be installed in loose lifts and uniformly compacted as specified for the types listed.
3. Preparations for filling:
   a. Complete stripping operations in advance of fill construction. Any material found in fill areas after stripping operation which, in the opinion of the Owners Representative, is unsuitable shall be removed from site.
   b. Areas on which any compacted earth fill is to be placed shall be rough graded, spot filled and leveled, and uniformly prepared to receive fills by means of power equipment.
4. All vegetation and root systems shall be removed prior to any select fill placement or construction. The resulting grade shall be proof-rolled, and any loose or soft spots shall be filled and compacted with an approved fill material. Fill materials used beneath vault, fountain and pool shall be a select, non-expansive soil meeting the Type I or Type II Select Fill gradation, plasticity and compaction criteria.

5. Placing Fill:
    a. Construct fill at location and to lines and grades required by drawings. Equipment for placing fills shall be capable of obtaining required density.
    b. Combined excavation and fill placing operations shall be such that materials when compacted in fill will be blended sufficiently to secure best practicable degree of compaction. Dump successive loads of material and spread and mix to give a horizontal layer of not more than specified in depth, loose measurement.
    c. No fill material shall be compacted until the layer of material has a uniform moisture content which will permit proper compaction, and material in each layer of fill, while being compacted, shall be maintained as nearly as practical at that degree of moisture content which is optimum for obtaining required compaction.
    d. If fill is to be placed on existing slopes that are steeper than 5 (horizontal) to 1 (vertical), such as could occur during undercutting of existing fill materials, then the new fill materials should be benched into the existing slopes in such a manner as to provide a good contact between the two materials, remove potential sliding planes, and allow relatively horizontal lift placement.
    e. After material has been brought to a uniform and satisfactory moisture content, each horizontal layer of all fill material shall be compacted as specified for each type.

C. Placing Topsoil

1. General: Topsoil shall be placed in all areas to receive hydromulch or solid sod.
2. Procedures: Excavate areas to receive topsoil a minimum depth of 2". Till or rake with fork bar to break-up compaction to 8" depth prior to placing topsoil.
3. Place topsoil for final grading as per Section 31 22 00 - Grading.

D. Backfilling

1. General: Backfilling includes filling and compaction beneath concrete paving and structural concrete; against and around concrete after forms have been removed and inspection completed. Compact backfills as specified.
2. Procedures:
    a. Do not begin backfilling until construction below finish grade has been approved, underground utilities inspected; tested and approved, forms removed, and excavation cleaned of trash and debris. Bring backfields to required grades.
    b. Backfill shall not be placed in wet or frozen areas. Heavy equipment for spreading and compacting backfill shall not be operated closer to foundations, curbs, or walls than a distance equal to the height of backfill above the top of structural members; the area remaining shall be compacted by power driven hand tampers suitable for the material being compacted.

E. Reconditioning Subgrade Where Approved Compacted Subgrades are Distributed Contractor's subsequent operations or adverse weather: Scarify and compact subgrade to the required density prior to further construction thereon.

F. Grading

1. Establishment of grades: The Contractor shall be responsible for establishment of all grades by means of grade stakes placed at all abrupt changes of grade and elsewhere as required.
2. Rough grading: Rough grade to elevations required by drawings. Remove soft and unstable materials which will not readily compact when rolled and tamped. Fill resulting depressions with stable material and roll until required compaction is obtained.

3. Finish grade: Finish grade to elevations required by drawings less topsoil. All areas to be hydromulched or sodded shall receive imported topsoil to a depth indicated on drawings. At intermediate points for which finish grades are not indicated, finish grades shall be of uniform level or slope between points for which elevations are given. Round any abrupt changes in elevations. Make certain that finish grades slope away from structures in all directions to assure positive drainage.

G. Pavement Areas

1. Prepared subgrade for new pavement: Prior to pavement construction, the subgrade shall be scarified 6", uniformly recompacted to a minimum of ninety-five (95) percent of ASTM D-698, at, or slightly above, the optimum moisture determined by that test and maintained in a moist condition until the pavement is placed.
2. Restore, without extra cost to Owner, all paved areas of existing parking areas, streets, curbs, etc. that may be opened or damaged in performance of the work included in contract. Pavement work and lawn areas shall match existing and shall comply with the requirements of applicable governing ordinances.

H. Grading Around Existing Trees: Refer Section 2100, Site Preparation.

I. Field Testing Earthwork: All earthwork shall be field tested by a recognized independent testing agency selected and paid for by the Owner. Payment for service authorized by Owner will be by the Owner, directly to the Testing Lab, unless specifically specified to the contrary. Proof test of materials and mixes shall be by Lab selected by the Owner but paid for by the Contractor. After approval, all authorized successful tests are paid for by the Owner.

J. Adjustments and Cleaning

1. Settlement or washing: Settlement or washing that occurs in areas, prior to acceptance of the work, shall be repaired and grades reestablished to the required elevations and slopes.
2. Clean up all debris caused by work of this section, keeping premises neat and clean at all times.

END OF SECTION 312200

SECTION 312333 - EXCAVATION, TRENCHING & BACKFILLING

All excavation will meet the most current OSHA Regulations.

PART 1 - GENERAL

1.1 DESCRIPTION

A. The work to be performed under this Specification shall consist of furnishing all labor, equipment and materials and performing all operations in connection with the excavating, trenching, and backfilling for pipelines as shown on the plans and as specified herein.

1.2 MEASUREMENT AND PAYMENT

A. All trench excavation backfill and compaction are not considered pay items. Payment for these items shall be included in the unit price laid in the Proposal for each size of pipe at their respective depths. This unit price shall be full remuneration for performing the trench and backfill complete including grading, bell holes, sheeting, dewatering, tamping, and water soaking; and including the furnishing of sewer pipe, all equipment, labor, materials, power, teams, tools, and transportation necessary or incidental thereto; but not including tunneling, or boring, all of which will be paid for as a separate item.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Materials for pipe embedment will meet LDHH Regulations for depth of bury and class of pipe and local requirements for embedment.

B. Concrete (For encasement or blocking) See SECTION 32 13 13 – CONCRETE PAVING.

Material shall conform to ASTM C94. The compressive strength of the concrete shall be at least 2,000 psi and shall contain at least four (4) sacks of cement per cubic yard.

C. Cement stabilized sand.

2.2 TESTING REQUIREMENTS

A. Compaction tests for all backfill may be required for every 200 linear feet of trench and for each twelve-inches (12") vertically. Density tests shall be measured as one unit for each test. The Owner shall pay for Geotechnical tests ordered that meet the requirements of the plans and specifications. Failed tests shall be charged to the Contractor.

PART 3 – EXECUTION

3.1 CONSTRUCTION METHODS

A. CONTROL OF WATER

Provide sufficient pumping equipment, in good working order, available at all times to remove any water that accumulates in excavations. When the excavation crosses a drainage pathway, the contractor shall provide for means of alternate drainage. The discharge of dewatering equipment shall not cause damage to private or public property.

B. SHEETING, SHORING, AND BRACING

In caving ground, or in wet, saturated, or flowing materials, the contractor shall sheet, shore, or brace the sides of the trench so as to maintain the excavation properly in place. When excavations are made adjacent to existing building or other structures or in paved streets, particular care must be taken to adequately sheet, shore, and brace the sides of the excavation to prevent undermining of, or settlement beneath, the structures or pavement. Underpinning of adjacent structures or pavement shall be done by the Contractor at his own cost and expense, in a manner satisfactory to the Engineer and when required by the Engineer. The pavement shall be removed, the void satisfactorily refilled and compacted, and the pavement replaced by the Contractor. The entire expense of such removal and subsequent replacement thereof shall be borne by the Contractor. Sheeting, shoring, and bracing shall not be left in place, unless otherwise provided for in the contract or authorized by the Engineer. The removal of sheeting, shoring and bracing shall be done in such a manner as not to endanger or damage either new or existing structure, private or public properties, and to avoid cave-ins or sliding of the banks. All holes or voids left by the removal of the sheeting, shoring, or bracing shall be immediately and completely filled and compacted with suitable materials.

C. GUARANTEE

1. Guarantee the backfilling of excavation and trenches against settlement for a period of one (1) year after the final completion of the contract under which the work is performed.
2. Make all repairs or replacements made necessary by settlement, including refilling, compacting, and reseeding or re-sodding the upper portion of the ditch and repairing broken or settled pavements, driveways, and sidewalks within five (5) days after notice from the Engineer.

D. PREPARATION

1. Site Preparation
   Prepare the construction site for construction operations by removing and disposing of all obstructions and objectionable materials in accordance with contract documents.
2. Alignment, Grade and Minimum Cover
   a. General
      The water and sewer mains shall be laid and maintained to lines and grades established by the plans and specifications with fittings, valves, hydrants, manholes and clean-outs at the required locations, unless otherwise pre-approved by the Engineer. Valve-operating stems shall be oriented in a manner to allow proper operation. Hydrants shall be installed plumb.

b. Cut sheets shall be provided to the Inspector. The contractor shall determine the alignment and grade or elevation of the pipeline from offset stakes. The contractor shall also provide a continuous chalk line along the alignment of the trench for use by the operator of the excavating equipment. The contractor shall provide a laser beam and grade pole to assist in grading the ditch to the proper elevation.

c. Should the ditch be graded below the required elevation, bring subgrade to the required elevation with cement stabilized sand or rounded pea gravel. The use of excavating materials for this application will not be allowed.

d. Where pipe grades or elevations are not definitely fixed by contract drawings, trenches shall be excavated to a depth sufficient to provide a minimum depth of backfill cover over the pipe. Greater pipe cover depths may be necessary for clearance beneath existing pipes, conduits, drains, drainage structures, or other obstructions encountered at normal pipe grades. Measurement of pipe cover depth shall be made vertically from the outside top of pipe to finished ground or pavement surface elevations.

3. Prior Investigation

Prior to excavation, investigation shall be made to the extent necessary to determine the location of existing underground structures and conflicts. Care should be exercised by the Contractor during excavation avoid damage to existing structures.

4. Unforeseen Obstructions

When obstructions that are not shown on the plans are encountered during the progress of work and interfere so that an alteration of the plans is required, the Engineer will alter the plans or order a deviation in line and grade or arrange for removal, relocation or reconstruction of the obstructions.

5. Clearance

When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of the Engineer, to provide clearance as required by federal, state or local regulations or as deemed necessary by the Engineer to prevent future damage or contamination of either structure.

E. EXCAVATION

All excavation shall meet the most current OSHA regulations.

1. Classification

Excavation of trenches for pipelines is unclassified. Soils will be classified utilizing OSHA Standards and Regulations. The Contractor shall assume that the site contains the worse type of soils and make provisions for shoring the work area.

2. Trench Excavation

a. General

The trench shall be excavated to the required alignment, depth and width and in conformance with all federal, state and local regulations for the protection of the workmen.

b. Trench Preparation
   1) Trench preparation shall proceed in advance of pipe installation for only as far as pipe will be laid that day.
   2) The contractor shall keep the trench dry from both storm water and seepage from the sides of the trench. Discharge from any trench dewatering pumps shall be conducted to natural drainage channels, storm sewers or a pre-approved reservoir. Do not discharge into any municipal sewer system without municipal approval. The contractor shall be responsible for cleaning any storm drain system, which was used for dewatering discharge.
   3) Excavated material shall be placed in a manner that will not obstruct the work nor endanger the workmen, obstruct sidewalks, driveways, or other structures and shall be done in compliance with federal, state, or local regulations.

3. Pavement Removal

   Removal of pavement and road surfaces shall be a part of the trench excavation, and the amount removed shall depend upon the width of trench required for installation of the pipe and the dimensions of area required for the installation of valves, hydrants, specials, manholes or other structures. The dimensions of pavement removed shall not exceed the dimensions of the opening required for installation of pipe, valves, hydrants, specials, manholes and other structures by more than twelve (12") inches in any direction, unless otherwise required or pre-approved by the Engineer.

4. Width

   See LDOTD Standard Bedding and Trench Detail.

5. Bell Holes

   Holes for the bells shall be provided at each joint but shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than noted previously, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel, except that a slight depression may be provided to allow withdrawal of pipe slings or other lifting tackle.

6. Subgrade in Earth
   a. Where a firm and stable foundation for the pipe can be obtained in the natural soil, and where special embedment is not shown on the plans, or specified herein, carefully and accurately trim the bottom of the trench to fit the lower portion of the pipe barrel. The bottom of the trench shall be firm, stable and free of standing water.
   b. If water is allowed to collect in an originally dry trench after a reasonable time has passed to complete the embedment of the pipe, as determined by the Engineer, the contractor shall place a minimum of four (4") inches of clean rounded pea gravel in the ditch and pump out all accumulated water before placing the pipe. No deleterious materials will be allowed in the gravel. No extra compensation will be allowed for this work.
   c. Where wet, soft, or spongy material is encountered in the excavation at subgrade level, the contractor shall remove such material at the direction of the Engineer and replace it with crushed stone of sufficient quantity such that when fully compacted, the subgrade is firm and stable.

7. Subgrade in Rock
   a. When excavation of rock is encountered, all rock shall be removed to provide a clearance of at least six (6") inches below and on each side of all pipe, valves and fittings for pipe sizes twenty-four (24") inches or smaller, and nine (9") inches for pipe sizes thirty (30") inches and larger. When excavation is completed, the proper embedment material shall be placed on the bottom of the trench to the previously mentioned depths, leveled and tamped.
   b. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris or subterranean structures, such as masonry walls, piers or foundations that may be encountered during excavation.
   c. The installation procedures specified in this section shall be followed when gravel formations containing loose boulders greater than eight (8") inches in diameter are encountered.
   d. In all cases, the specified clearances shall be maintained between the bottom of all pipe and appurtenances and any part, projection or point of rock, boulder or stones of sufficient size and placement, which, in the opinion of the Engineer, could cause a fulcrum point.

F. CONCRETE ENCASEMENT

The Contractor shall place 2,000 psi concrete encasement under and around pipe as shown on the embedment detail and provide necessary anchors to prevent the pipe from floating out of place. The contractor shall remove and relay any pipes that are floated out of proper position

G. BACKFILLING
1. General
   a. The Contractor shall not begin backfilling until approval has been obtained from the Inspector. Backfilling includes refilling and consolidation of the fill in trenches and excavations up to the natural ground surface or road grade.
   b. Backfill shall be accomplished in accordance with the specified laying condition as shown on the plans.
2. Backfill Material
   a. All backfill material shall meet latest edition of ASTM D2321 unless otherwise specified by the Engineer.
   b. If excavated material is indicated on the drawings or specified for backfill, and there is a deficiency due to a rejection of part thereof, the contractor shall provide the required amount of sand, gravel or other pre-approved material.
3. Do not leave trenches open overnight without backfilling to the natural ground level.
   Steel plates (1/2" in thickness) may be used to cover open trenches only with the approval of the Engineer.
4. Compaction
   Compaction requirements are as specified on the plans.

END OF SECTION 312333

SECTION 312513 – EROSION CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes installing, maintaining and removing:
   1. Silt Fence
   2. Temporary Construction Entrances
   3. Diversion Channels
   4. Sediment Traps
   5. Rip Rap
   6. Stone Check Dams
   7. Inlet Protection
   8. Site Stabilization

B. Related Sections:
   1. Section 31 10 00 - Site Clearing.
   2. Section 31 23 16 - Excavation and Fill.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials:
   1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-pound) rammer and a 457-mm (18-inch) drop.

B. ASTM International:
   1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3)).
   2. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft^3 (2,700 kN-m/m^3)).
   3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
   4. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

C. LDOTD Standard Specifications:
   1. Standard Specifications for Roads and Bridges, 2006, published by the Louisiana Department of Transportation.

1.3 SUBMITTAL

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data on geotextile, posts, woven wire, concrete mix design, and pipe.

C. Manufacturer's Certificate: Certify products and aggregates meet or exceed specified requirements.

D. Closeout Submittals: Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

1.4 QUALITY ASSURANCE

A. Standard of quality shall conform to the standards and practices set forth in: "Louisiana Storm Water Management and Sedimentation Control Handbook for Land Disturbance Activities", February 1998 or latest edition.

B. Maintain one copy of document on site.

1.5 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this Section.

PART 2 – PRODUCTS

2.1 GEOTEXTILE MATERIALS

A. Engineering Fabric Materials: Non-biodegradable conforming to Section 815.02 of LDOTD Standard Specifications:
   1. Silt Fence: Type 3, Class A or B Engineering Fabric.
   2. Under Rip Rap or Construction Entrances: Type 2 Engineering Fabric.

2.2 STONE, AGGREGATE, AND SOIL MATERIALS

A. Stone for Sediment Trap and Check Dam: Class B erosion control stone conforming to Division 800 of the LDOTD Standard Specifications. Minimum size 5 inches, midrange size 8 inches, and maximum size 12 inches equally distributed.

B. Stone for Rip Rap: Class 1 erosion control stone conforming to Division 800 of the LDOTD Standard Specifications. Minimum size 5 inches, midrange size 10 inches, and maximum size 17 inches equally distributed.

C. Washed Stone: Coarse aggregate, Gradation No. 57 conforming to Division 800 of the LDOTD Standard Specifications.

D. Aggregate for Construction Entrance: Coarse aggregate, Gradation No. 4 or larger with maximum size of 3 inch, conforming to Division 800 of the LDOTD Specifications.

E. Soil Fill: Clean natural soil with a plasticity index of 15 or less that is free of clay, rock, or gravel lumps larger than 2 inches in any dimension; debris; waste; frozen material; and any other deleterious material that might cause settlement. Suitable material excavated from the site may be used as soil fill under optimum moisture conditions.

2.3 PLANTING MATERIALS

A. General: Conform to rules and regulations as specified in the LDOTD Standard Specifications for seed, agricultural ground limestone, fertilizers, and mulch.

B. Temporary Seed Mixture:
   1. Late winter and early spring: Rye
   2. Summer: Common Bermuda
   3. Fall: Rye and Common Bermuda

C. Fertilizer: Commercial grade; recommended for grass.

D. Lime: ASTM C602, Class O agricultural ground limestone containing a minimum 80 percent calcium carbonate equivalent.

E. Mulch: Wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.

2.4 CONCRETE

A. Concrete: Class B concrete conforming to Section 701 of the LDOTD Standard Specifications.
   1. Compressive strength of 2,500 psi at 28 days.
   2. Air entrained.
   3. Water cement ratio of 0.488 with rounded aggregate and 0.567 with angular aggregate.
   4. Maximum slump of 2.5 inches for vibrated concrete and 4 inches for non-vibrated concrete.
   5. Minimum cement content of 508 lbs per cubic yard for vibrated and 545 lbs per cubic yard for non-vibrated concrete.

2.5 PIPE MATERIALS

A. Pipe: Corrugated steel pipe and fittings conforming to Section 715.2.3 of LDOTD Standard Specifications.

2.6 ACCESSORIES

A. Posts for Silt Fence and Inlet Protection: Steel posts 5 feet long, 1-3/8 inches wide, minimum weight 1.25 lbs/ft. conforming to Section 815.4.6 of the LDOTD Standard Specifications.

B. Woven Wire Fence for Silt Fence: Minimum 32 inches high, minimum 5 horizontal wires, vertical wires spaced 12 inches apart, minimum 10 gage top and bottom wires, and minimum 12-1/2 gage; all other wires conforming to Section 815 of the LDOTD Standard Specifications.

C. Attachment Devices for Silt Fence: No. 9 staple, minimum 1-1/2 inches long, or other approved attachment devices.

D. Hardware Cloth for Inlet Protection: 24 gage, 1/4-inch mesh opening hardware cloth.

2.7 SOURCE QUALITY CONTROL (AND TESTS)

A. Section 01 40 00 - Quality Requirements: Testing, inspection, and analysis requirements.

B. Perform tests on cement, aggregates, and mixes to ensure conformance with specified requirements.

C. Make rock available for inspection at producer's quarry prior to shipment. Notify Architect/Engineer at least seven days before inspection is allowed.

D. Allow witnessing of inspections and tests at manufacturer's test facility. Notify Architect/Engineer at least seven days before inspections and tests are scheduled.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

B. Verify compacted subgrade is acceptable and ready to support devices and imposed loads.

C. Verify gradients and elevations of base or foundation for other work are correct.

3.2 SILT FENCE

A. Install in accordance with Section 815 of the LDOTD Standard Specifications at locations shown on Drawings.

B. Use wire fence with Class A fabric.

C. Class B fabric may be used without woven wire backing subject to the following:

1. Fabric is approved by Architect/Engineer.
2. Maximum post spacing is 6 feet.
3. Posts are inclined toward runoff source not more than 20 degrees from vertical.

3.3 TEMPORARY CONSTRUCTION ENTRANCES

A. Excavate and compact subgrade as specified in Section 31 23 16.

B. Install construction entrances at the dimensions and locations as shown on Drawings. Minimum thickness is 6 inches.

C. Mound aggregate near intersection with public road to prevent site runoff entering road.

D. Periodically dress entrances with 2-inch thick course aggregate when aggregate becomes clogged with soil.

3.4 DIVERSION CHANNELS

A. Excavate channel

B. Windrow excavated material on low side of channel.

C. Compact to 95 percent maximum density.

D. On entire channel area, apply soil supplements and sow seed

E. Mulch seeded areas with hay

3.5 SEDIMENT TRAPS

A. Clear site as specified in Section 3100 00.

B. Construct trap by excavating and forming embankments as specified in Section 31 23 16.

C. Place coarse aggregate or rock at outlet as indicated on Drawings.

D. Place geotextile fabric as specified for rock lining.

E. On entire sediment trap area, apply soil supplements and sow seed as specified in Section 32 92 19.

F. Mulch seeded areas with hay as specified in Section 32 92 19.

G. Clean trap of accumulated sediment when directed but no less than when trap is half full of sediment.

3.6 ROCK LINIG (RIP RAP)

A. Excavate to depth of rock lining as indicated on Drawings or nominal placement thickness as follows. Remove loose, unsuitable material below bottom of rock lining and replace with suitable material. Thoroughly compact and finish entire foundation area to firm, even surface.

B. Lay and overlay geotextile fabric over substrate. Lay fabric parallel to flow from upstream to downstream. Overlap edges upstream over downstream and upslope over downslope. Provide a minimum overlap of 3 feet. Offset adjacent roll ends a minimum of 5 feet when lapped. Cover fabric as soon as possible and in no case leave fabric exposed more than 4 weeks.

C. Carefully place rock on geotextile fabric to produce an even distribution of pieces with minimum of voids and without tearing geotextile.

D. Unless indicated otherwise, place full course thickness in one operation to prevent segregation and avoid displacement of underlying material. Arrange individual rocks for uniform distribution.

3.7 STONE CHECK DAM

A. Determine length required for ditch or depression slope and excavate, backfill, and compact foundation area to firm, even surface.

B. Place Class B erosion control stone in an even distribution of rock pieces with minimum voids to the indicated shape, height, and slope.

C. Construct washed stone filter blanket against upstream face of stone check dam to the thickness indicated on Drawings.

3.8 INLET PROTECTION

A. Install four posts around drainage structure and attach hardware cloth as indicated on Drawings.

B. Place Class B erosion control stone at base of fabric and mound at approximately 2:1.

C. Place washed stone filter blanket on upstream side(s).

3.9 SITE STABILIZATION

A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.

B. Construct, stabilize, and activate erosion controls before site disturbance within tributary areas of those controls.

C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.

D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.

1. During non-germinating periods, apply mulch at recommended rates.
2. Stabilize disturbed areas which are not at finished grade and which will be disturbed within one year in accordance with Section 32 92 19 at 75 percent of permanent application rate with no topsoil.
3. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year in accordance with Section 32 92 19 permanent seeding specifications.

E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

3.10 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.

B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.

C. Perform laboratory material tests in accordance with ASTM D1557 or AASHTO 180.

D. Perform in place compaction tests in accordance with the following:
   1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922.
   2. Moisture Tests: ASTM D3017.

E. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.

F. Frequency of Tests: Twice per lift for every 10,000 square feet.

3.11 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.

B. When sediment accumulation in sedimentation structures has reached a point one-half depth of sediment structure or device, remove and dispose of sediment.

C. Do not damage structure or device during cleaning operations.

D. Do not permit sediment to erode into construction or site areas or natural waterways.

E. Clean channels when depth of sediment reaches approximately one-half channel depth.

3.12 SCHEDULES

A. Erosion Control Schedule:

Erosion Control Element	Location	Size
Silt Fence		
Temporary Construction Entrance		
Diversion Channel		
Sediment Trap		
Rock Lining (Rip Rap)		
Stone Check Dams		
Inlet Protection		
Sediment Pond		

END OF STION 312513

SECTION 313213 – LIME SOIL STABILIZATION

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Excavating, treatment, and placement of lime treated subsoil mix.

1.2 RELATED REQUIREMENTS

A. Section 310000 – Earthwork.

B. Section 312000 – Earth Moving.

C. Section 312200 – Grading.

1.3 PRICE AND PAYMENT PROCEDURES

A. See Section 012200 – Unit Prices, for unit price requirements and Louisiana Uniform Public Works Bid Form, Unit Price Form for included quantity and unit price requirements.

B. Measurement Method: By ton of material delivered to site and placed.

1.4 REFERENCE STANDARDS

A. AASHTO M 216 – Standard Specification for Lime for Soil Stabilization; American Association of State Highway and Transportation Officials; 2005.

B. ASTM C977 – Standard Specification for Quicklime and Hydrated Lime for Stabilization; 2010.

1.5 SUBMITTALS

A. See Section 01 30 00 – Administrative Requirements, for submittal procedures.

B. Samples: Submit 5 lb. sample of lime, in airtight containers, along with material analysis from source, to testing laboratory for processing.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with State of Louisiana DOTD standards.

1.7 FIELD CONDITIONS

A. Do not mix subgrade and lime in wind more than 10 mph or when temperature is below 40 degrees F.

PART 2 – PRODUCTS

2.1 MIX MATERIALS

A. Subsoil: Existing reused.

B. Lime: AASHTO M 216 hydrated lime.

2.2 ACCESSORIES – N/A

2.3 EQUIPMENT

A. Equipment: Capable of excavating subsoil, mixing and placing materials, wetting, consolidation, and compaction of material.

2.4 LIME/SOIL MIX

A. Mix materials in accordance with State of Louisiana DOTD standard.

B. Carefully add water to the mix to achieve a consistent mixture, without lumping, yet not create a wet-plastic consistency.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Do not place fill over frozen or spongy subgrade surfaces.

3.3 EXCAVATION

A. Protect adjacent structures from damage by this work.

B. Proof roll subgrade to identify soft areas; excavate those areas.

C. Notify Engineer of unexpected subsurface conditions. Discontinue affected Work in area until notified to resume work.

D. Stockpile excavated material in designated area on site.

3.4 SOIL TREATMENT AND BACKFILLING

A. Site mix subsoil, back fill and compact.

B. Maintain optimum moisture content of mix materials to attain required stabilization.

C. Compact to 95 percent of maximum density determined in accordance with ASTM D698.

D. Shape to required line, grade and cross section.

3.5 CURING

A. Allow blended subsoil to "mellow" for a period of forty-eight (48) hours prior to testing for compaction, via on-site density testing.

3.6 TOLERANCES

A. Top surface of Fill: Plus, or minus one-half inch from required elevations.

3.7 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01 40 00.

B. Compression test and analysis of hardened fill material will be performed in accordance with ASTM D698.

C. Frequency of Tests: Four (4) evenly spaced density tests of subgrade.

END OF SECTION 313213

SECTION 321313 - CONCRETE PAVING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes Concrete Paving. Including the Following:
   1. Driveways.
   2. Roadways.
   3. Parking lots.
   4. Curbs and gutters.
   5. Walks.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 SUBMITTALS

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

B. Samples: For each exposed product and for each color and texture specified.

C. Other Action Submittals:
   1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.5 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready- mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").

B. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
   1. Personnel conducting field tests shall be qualified as ACI Concrete Field-Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.

PART 2 – PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

2.2 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
   1. Use flexible or uniformly curved forms for curves with a radius of 100 feet (30.5 m) or less. Do not use notched and bent forms.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.3 STEEL REINFORCEMENT

A. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, fabricated from as-drawn steel wire into flat sheets.

B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.

C. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 (Grade 420) plain-steel bars [zinc coated (galvanized) after fabrication according to ASTM A 767/A 767M, Class I coating]. Cut bars true to length with ends square and free of burrs.

D. Tie Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.

E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
   1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
   2. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer-coated wire bar supports.

2.4 CONCRETE MATERIALS

A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
   1. Portland Cement: ASTM C 150/C 150M, white portland cement Type I.
   2. Fly Ash: ASTM C 618, Class C or Class F.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, [Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

F. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating.

2.6 RELATED MATERIALS

A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber in preformed strips.

B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to ACI 301 (ACI 301M), for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
   1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
   2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that comply with or exceed requirements.

B. Cementitious Materials: Use admixtures according to manufacturer's written instructions.

C. Concrete Mixtures: Normal-weight concrete.
   1. Compressive Strength (28 Days): 3000 psi (20.7 MPa).
   2. Maximum W/C Ratio at Point of Placement: 0.45
   3. Slump Limit: 4 inches (100 mm) plus or minus 1 inch (25 mm).
   4. Air content 6% or +/- 15%

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.

B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.5 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.

D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows, to match jointing of existing adjacent concrete paving:

E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch (6-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

A. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

B. Comply with ACI 301 (ACI 301M) requirements for measuring, mixing, transporting, and placing concrete.

C. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.

D. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

E. Screed paving surface with a straightedge and strike off.

F. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.

B. Float Finish: Begin the second floating operation when bleed water sheen has disappeared, and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.

1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch (1.6 to 3 mm) deep with a stiff-bristled broom, perpendicular to line of traffic.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection.

C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by moisture curing.

3.9 PAVING TOLERANCES

A. Comply with tolerances in ACI 117 (ACI 117M) and as follows:

1. Elevation: 3/4 inch (19 mm).
2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).
3. Surface: Gap below 10-feet- (3-m-) long; unleveled straightedge not to exceed 1/2 inch (13 mm).
4. Joint Spacing: 3 inches (75 mm).
5. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
6. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.10 REPAIR AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.

B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 321373 – CONCRETE PAVING JOINT SEALANTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Cold-applied joint sealants.
   2. Hot-applied joint sealants.
   3. Cold-applied, fuel-resistant joint sealants.
   4. Hot-applied, fuel-resistant joint sealants.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch-(150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

C. Paving-Joint-Sealant Schedule: Include the following information:
   1. Joint-sealant application, joint location, and designation.
   2. Joint-sealant manufacturer and product name.
   3. Joint-sealant formulation.
   4. Joint-sealant color.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Product Testing: Test joint sealants using a qualified testing agency.

1.5 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:
   1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer [or are below 40 deg. F (5 deg. C)].
   2. When joint substrates are wet.
   3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
   4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 – PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

2.2 COLD-APPLIED JOINT SEALANTS

A. Single-Component, Self-Leveling, Silicone Joint Sealant: ASTM D 5893/D 5893M, Type SL.

2.3 JOINT-SEALANT BACKER MATERIALS

A. Joint-Sealant Backer Materials: Non-staining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by joint-sealant manufacturer, based on field experience and laboratory testing.

B. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.

C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

2.5 PRIMERS

A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine joints to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Before installing joint sealants, clean out joints immediately to comply with joint-sealant manufacturer's written instructions.
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions.

C. Install joint-sealant backings to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of joint-sealant backings.
   2. Do not stretch, twist, puncture, or tear joint-sealant backings.
   3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install joint sealants immediately following backing installation, using proven techniques that comply with the following:
   1. Place joint sealants so they fully contact joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Non-sag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:
   1. Remove excess joint sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.

F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

3.4 CLEANING AND PROTECTION

A. Clean off excess joint sealant as the Work progresses, by methods and with cleaning materials approved in writing by joint-sealant manufacturers.

B. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.

END OF SECTION 321373

SECTION 321600 – SIDEWALKS, CURBS, AND GUTTERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Concrete WORK shall consist of air entrained Portland cement constructed on a prepared subgrade in accordance with these SPECIFICATIONS. The completed WORK shall conform to the thicknesses and typical cross-sections shown on the DRAWINGS. The completed WORK shall conform to the lines and grades shown on the DRAWINGS or to those established by ENGINEER at the job site.

1.2 RELATED SECTIONS

A. The following is a list of SPECIFICATIONS which may be related to this section:
   1. Section 31 23 00, Excavation and Fill.
   2. Section 31 23 19, Dewatering.
   3. Section 31 23 33, Trenching and Backfilling.

1.3 REFERENCES

A. The following is a list of standards which may be referenced in this section:
   1. American Association of State Highway and Transportation Officials (AASHTO):
      a. M6, Standard Specification for Fine Aggregate for Hydraulics Cement Concrete.
      b. M80, Standard Specification for Coarse Aggregate for Hydraulics Cement Concrete.
      c. M148, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
      d. M154, Standard Specification for Air-Entraining Admixtures for Concrete
      M171, Standard Specification for Sheet Materials for Curing Concrete.
      f. M182, Standard Specification for Burlap Cloth Made from Jute or Kenaf and Cotton Mats.
      g. M194M/M194, Standard Specification for Chemical Admixtures for Concrete.
      h. T22, Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens.
      i. T23, Standard Method of Test for Making and Curing Concrete Test Specimens in the Field.
      j. T26, Standard Method of Test for Quality of Water to Be Used in Concrete.
      T27, Sieve Analysis of Fine and Coarse Aggregates
      l. T96, Standard Method of Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
      m. T11, Standard Method of Test for Clay Lumps and Friable Particles in Aggregate.
      n. T119M/T119, Standard Method of Test for Slump of Hydraulic Cement Concrete.
      o. T121M/T121, Standard Method of Test for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
      p. T141, Standard Method of Test for Sampling Freshly Mixed Concrete.

q. T152, Standard Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method.
r. T176, Standard Method of Test for Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test.
s. T199, Standard Method of Test for Air Content of Freshly Mixed Concrete by the Chace Indicator.

2. ASTM International (ASTM):
   a. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
   b. C920, Standard Specification for Elastomeric Joint Sealants.
3. Louisiana Department of Transportation (CDOT):
   a. Section 703.01, Fine Aggregate for Concrete.
   b. CP30, Sampling of Aggregates.
   c. CP31A, Sieve Analysis of Fine and Coarse Aggregates.
   d. CP60, Determining Surface Moisture in Fine and Coarse Aggregates.

1.4 SUBMITTALS

A. CONTRACTOR shall cooperate with ENGINEER in obtaining and providing samples of all specified materials.

B. CONTRACTOR shall submit certified laboratory test certificates for all items required in this section.

C. Contractor shall submit mix design for concrete in writing to ENGINEER for approval prior to placement of concrete.

D. CONTRACTOR shall submit batch tickets for each load of concrete. Tickets shall show weight of all materials and additives used in each batch.

PART 2 PRODUCTS

2.1 MATERIALS

A. Concrete Conformance:

1. Concrete shall conform to the following requirements:

Concrete Requirements	
28-Day Field Compressive Strength	3,500 psi
Cement/Fly Ash	600 lbs./cu. yd.
Max. Water/Cement Ratio	0.53
Air Content % Range	5-8
Maximum Slump	4"
Fine Aggregate (max. % of total Aggregate)	50%

2. This material shall consist of a mixture of course and fine aggregates, Portland

cement, water and other materials or admixtures as required. The type of cement shall be Type I, II, or I/II unless sulfate conditions dictate otherwise. If sulfate conditions exist, Type V cement shall be used.

B. Concrete Aggregates: The grading and composition requirements for coarse and fine aggregates for concrete shall conform to the following tables.

Coarse Aggregates for Portland Cement Concrete	
Sieve Size or Test Procedure	% Passing or Test Requirement
1 inch	100
¾ inch	90-100
⅜ inch	20-55
No. 4	0-10
No. 8	0-5
% Wear	45, Max
Clay Lumps * Friable Particles, %	2.0, Max
Coal & Lignites, %	0.5, Max
Sodium Sulfate Soundness %	12, Max

Fine Aggregates for Portland Cement Concrete	
Sieve Size or Test Procedure	% Passing or Test Requirement
⅜ inch	100
No. 4	95 - 100
No. 16	45 - 80
No. 50	10 - 30
No. 100	2 - 10
No. 200	3, Max
Friable Particles, %	1.0, Max
Coal & Lignite, %	1.0, Max
Deleterious Material (AASHTO T112),%	3, Max
Sand Equivalent (AASHTO T176),%	80, Min
Fineness Modules	2.50 - 3.50
Sodium Sulfate Soundness, %	20.0, Max

Fine Aggregates for Portland Cement Concrete	
Sieve Size or Test Procedure	% Passing or Test Requirement
⅜ inch	100
No. 4	95 - 100
No. 16	45 - 80
No. 50	10 - 30
No. 100	2 - 10
No. 200	3, Max
Friable Particles, %	1.0, Max
Coal & Lignite, %	1.0, Max
Deleterious Material (AASHTO T112),%	3, Max
Sand Equivalent (AASHTO T176),%	80, Min
Fineness Modules	2.50 - 3.50
Sodium Sulfate Soundness, %	20.0, Max

C. Coarse Aggregate for Concrete: Coarse aggregates shall conform to the requirements of AASHTO M80, except that the percentage of wear shall not exceed forty-five (45) when tested in accordance with AASHTO T96. Coarse aggregate shall conform to the grading in above table.

D. Fine Aggregate for Concrete: Fine aggregates shall meet Louisiana Department of Transportation requirements and gradation as shown above. Fine aggregate for concrete shall conform to the requirements of AASHTO M6. The amount of deleterious substances removable by elutriation shall not exceed three percent (3%) by dry weight of fine aggregate when tested in accordance with AASHTO T11, unless otherwise specified. The minimum Sand Equivalent, as tested in accordance with AASHTO T176 shall be eighty (80), unless otherwise specified. The Fineness Modules shall not be less than two and five-tenths (2.50) nor greater than three and five-tenths (3.50), unless otherwise approved.

E. Fly Ash and Water: Upon approval based on a satisfactory trial mix, CONTRACTOR shall have the option of substituting approved fly ash for Portland cement, up to a maximum of twenty percent (20%) by weight. The total weight of cement and fly ash shall not be less than the specified mix design.

1. Fly ash for concrete shall conform to the requirements of ASTM C618, Class C or Class F. All chemical requirements of ASTM C618 Table 1-A shall apply with the exception of footnote A.

    a. Class C fly ash will not be permitted where sulfate resistant cement is required.

    b. CONTRACTOR shall submit certified laboratory test results for the fly ash. Test results that do not meet the physical and chemical requirements may have been taken to ensure that the material meets the SPECIFICATIONS.

2. Water used in mixing or curing shall be clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substance injurious to the finished product. Water shall be tested in accordance with and shall meet the suggested requirements of AASHTO T26. Water known to be of potable quality may be used without test. Where the source of water is relatively shallow, the intake shall be enclosed to exclude silt, mud, grass, or other foreign materials.

F. Concrete Curing Materials and Admixtures:

1. Curing Materials: Curing materials shall conform to the following requirements as specified:
    a. Burlap Cloth made from Jute or Kenaf: AASHTO M182.
    b. Liquid Membrane-Forming Compounds Curing Concrete: AASHTO M148.
    c. Sheet Materials for Curing Concrete: AASHTO M171.
    d. Straw shall not be used for curing unless approved by ENGINEER.
2. Air-Entraining Admixture: Air-entraining admixtures shall conform to the requirements of AASHTO M154. Admixtures which have been frozen will be rejected. No chloride containing additives shall be permitted.

3. Chemical Admixtures: Chemical admixtures for concrete shall conform to the requirements of AASHTO M194M/M194. Admixtures which have been frozen will be rejected.
4. Joint Fillers: The joint fillers shall meet the requirements of ASTM C920.

PART 3 EXECUTION

3.1 SUBGRADE PREPARATION

A. The subgrade shall be excavated or filled to the required grades and lines. All soft, yielding, or otherwise unsuitable material shall be removed and replaced with suitable material with ENGINEER's approval. Filled sections shall be compacted and compaction shall extend a minimum of six (6) inches outside the form lines.

B. The moisture content of the subgrade shall be brought within +/- two percent (2%) of optimum moisture content and compacted to ninety-five percent (95%) of the maximum standard Proctor density (ASTM D698) for subgrade materials classified as A-4 through A-7 or ninety five percent (95%) of modified proctor density for materials classified as A-1 through A-3.

3.2 CONCRETE PLACEMENT

A. General:
1. Concrete transported in truck mixers or truck agitators shall be delivered to the site of the WORK and completely discharged within a period of ninety (90) minutes after the cement comes in contact with the mixing water or with the combined aggregates containing free moisture in excess of two percent (2%) by weight.
2. The concrete shall be placed either by an approved slip form/extrusion machine, by the formed method, or by a combination of these methods.
3. The subgrade shall be conditioned to provide a uniformly moist surface when concrete is placed.

B. Machine Placement: The slip form/extrusion machine shall be so designed to place, spread, consolidate, screed, and finish the concrete in one (1) complete pass in such a manner that a minimum of hand finishing will be necessary to provide a dense and homogenous concrete section. The machine shall shape, vibrate, and/or extrude the concrete for the full width and depth of the concrete section being placed. It shall be operated with as nearly a continuous forward movement as possible. All operations of mixing, delivery, and spreading concrete shall be so coordinated as to provide uniform progress, with stopping and starting of the machine held to a minimum.

C. Formed Method:
1. The vertical face of previously sawed and adjacent asphalt pavement may NOT be used as a forming surface. CONTRACTOR shall use forms on front and back of all curb and gutter, sidewalks and crosspans.

2. The forms shall be of metal or other suitable material that is straight and free from warp, having sufficient strength to resist the pressure of the concrete without displacement and sufficient tightness to prevent the leakage of mortar. Flexible or rigid forms of proper curvature may be used for curves having a radius of one hundred (100) feet or less. Division plates shall be metal. Where directed by ENGINEER, CONTRACTOR shall use a thin metal back form to preserve landscaping, sprinklers, etc. Form shall be straight and rigid and shall be approved by ENGINEER prior to use on PROJECT.
3. The front and back forms shall extend for the full depth of the concrete. All of the forms shall be braced and staked so that they remain in both horizontal and vertical alignment until their removal. No wooden stakes will be allowed. They shall be cleaned and coated with an approved form-release agent before concrete is placed against them. The concrete shall be deposited into the forms without segregation and then it shall be tamped and spaded or mechanically vibrated for thorough consolidation. Low roll or mountable curbs may be formed without the use of a face form by using a straight edge and template to form the curb face. When used, face forms shall be removed as soon as possible to permit finishing. Front and back forms shall be removed without damage to the concrete after it has set. In the asphalt patch detail to properly correct failed concrete sections, CONTRACTOR shall remove and replace said asphalt pavement beyond all failures to provide a smooth repair. ENGINEER shall be notified prior to commencing any additional asphalt removal.

3.3 FINISHING

A. The plastic concrete shall be finished smooth by means of a wood float and then it shall be given final surface texture using a light broom or burlap drag. Concrete that is adjacent to forms and formed joints shall be edged with a suitable edging tool to the dimensions shown on the DRAWINGS.

3.4 JOINTING

A. Contraction Joints:
   1. Contraction and construction joints shall be placed at the standard spacing of ten (10) feet in curb, gutter, sidewalks, crosspans, trickle channel, etc. A minimum spacing of five (5) feet shall be allowed for repairs.
   2. Transverse weakened-plane contraction joints shall be constructed at right angles to the curb line at intervals not exceeding ten (10) feet for curb and gutter or five (5) feet for sidewalk. Joint depth shall average at least one-fourth (1/4) of the cross-section of the concrete.
   3. Contraction joints may be sawed, hand-formed, or made by one-eighth inch (1/8") thick division plates in the formwork. Sawing shall be done early after the concrete has set to prevent the formation of uncontrolled cracking. The joints may be hand-formed either by (1) using a narrow or triangular jointing tool or a thin metal blade to impress a plane of weakness into the plastic concrete, or (2) inserting one-eighth inch (1/8") thick steel strips into the plastic concrete temporarily. Steel strips shall be withdrawn before final finishing of the concrete.

Where division plates are used to make contraction joints, the plates shall be removed after the concrete has set and while the forms are still in place.

B. Expansion Joints:
1. Expansion joints shall be constructed at right angles to the curb line at immovable structures and at points of curvature for short radius curves. Filler material for expansion joints shall conform to requirements of the requirements of ASTM C920 and shall be furnished in a single one-half inch (1/2") thick piece for the full depth and width of the joint.
2. Expansion joints in a slip-formed curb or curb-and-gutter shall be constructed with an appropriate hand tool by raking or sawing through partially set concrete for the full depth and width of the section. The cut shall be only wide enough to permit a snug fit for the joint filler. After the filler is placed, open areas adjacent to the filler shall be filled with concrete and then troweled and edged. CONTRACTOR may choose to place the filler and pour the concrete around it.
3. Alternately, an expansion joint may be installed by removing a short section of freshly extruded curb-and-gutter immediately, installing temporary holding forms, placing the expansion joint filler, and replacing and reconsolidating the concrete that was removed. Contaminated concrete shall be discarded.
4. Construction joints may be either butt or expansion-type joints. Curbs or combined curbs-and-gutters constructed adjacent to existing concrete shall have the same type of joints as in the existing concrete, with similar spacing however, contraction joint spacing shall not exceed ten (10) feet.

3.5 PROTECTION

A. CONTRACTOR shall always have materials available to protect the surface of the plastic concrete against rain. These materials shall consist of waterproof paper or plastic sheeting. For slip-form construction, materials such as wood planks or forms to protect the edges shall also be required. Concrete damaged by rain shall be required to be removed and replaced at CONTRACTOR's expense.

B. Concrete being placed in cold weather during which the temperature may be expected to drop below thirty-five degrees Fahrenheit (35°F), shall be suitably protected to keep the concrete from freezing until it is at least ten (10) days old. Concrete injured by frost action shall be required to be removed and replaced at CONTRACTOR's expense.

C. CONTRACTOR shall be responsible for correcting any vandalism or defacement (graffiti) that occurs on the concrete prior to final acceptance.

3.6 CURING

A. Concrete shall be cured for at least seven (7) days after placement to protect against loss of moisture, rapid temperature change, and mechanical injury prior to any overlay or reconstruction work. Moist burlap, waterproof paper, white polyethylene sheeting, white liquid membrane compound, or a combination thereof may be used as the curing material. Membrane curing shall not be permitted in frost-affected areas when the concrete will be exposed to deicing chemicals within thirty

(30) days after completion of the curing period.

3.7 BACKFILLING

A. The spaces in front and back of curbs shall be refilled with suitable material to the required elevations after the concrete has set sufficiently. The fill material shall be thoroughly tamped in layers.

3.8 SEALING

A. Where required, concrete shall be sealed with a mixture of one-half (1/2) linseed oil and one-half (1/2) diesel fuel, unless otherwise specified by ENGINEER.

3.9 TOLERANCE

A. Forms shall not deviate from true line by more than one-quarter (1/4) inch at any point.

B. Mixed concrete shall be not less than fifty degrees Fahrenheit (50°F), nor more than eighty degrees Fahrenheit (80°F) at the time of placement in forms, unless otherwise directed.

C. If air temperature is thirty-five degrees Fahrenheit (35°F) or less at the time of placing, ENGINEER shall require water and/or aggregate heated to not less than seventy degrees Fahrenheit (70°F), or more than one-hundred fifty degrees Fahrenheit (150°F).

D. Finished joints shall not deviate more than one-quarter (1/4) inch in the horizontal alignment from a straight line.

E. Any localized humps and or depressions greater than one-quarter (1/4) inch shall require removal and replacement of the WORK in question at CONTRACTORS expense

F. No ponding of water greater than three-eighths (3/8) inch shall be allowed.

G. Combination curb, gutter and walk and/or vertical curb and gutter flowline depth shall not vary from adopted standards by more than +/- one-half (1/2) inch, measured vertically from the top of curb to the gutter invert.

H. Pedestrian walks shall have a minimum of two percent (2.0%) and a maximum of two- and one-half percent (2.5%) slope toward the roadway.

I. Heave or settlement of sidewalk, relative to separate curb pour, greater than one-half (1/2) inch shall be cause for corrective action. This provision shall not apply to transverse sidewalk joints.

3.10 QUALITY CONTROL

A. Testing: Concrete testing and testing laboratory services required shall conform to the following unless otherwise determined by ENGINEER.

Section Type of Test	Project Acceptance Frequency	Point of Sampling Acceptan	Procedures	
			Test Sampling	Project Testing
Sidewalks (Concrete Aggregat	1/1000 square yards or fraction thereof for each size aggregate of	Stockpile, Belt or Bin	LDOTD	LDOTD
Curbing (Concrete Aggregat	1/2000 lineal feet or fraction thereof for each size aggregate of concrete placed		LDOTD	LDOTD
Moisture Content (Fine	1 per day and as often as needed for quality control		LDOTD	LDOTD

-

Section Type of Test	Project Acceptance Frequen	Point of Sampling Acceptan	Procedures	
			Test Sampling	Project Testing
Moisture Content (Coarse Aggregat e)	1 per day min. where moisture content is greater than +0.5% from SSD condition	Stockpile, Belt or Bin	LDOTD	LDOTD
Slump	1 set of tests for every 1000 square yards or fraction thereof of concrete placed per day	The slump, air content, unit weight and compressive strength tests shall be carried out on the first truck of concrete for the daily placement and thereafter in conformance with this table by sampling from the mixer discharge or pumper truck discharge hose	AASHTO T141	AASHTO T119M/ T119
Air Content	1 set of tests for every 1000 square yards or fraction thereof of concrete placed per day		AASHTO T141 T199	AASHTO T152
Yield and Cement	4 tests for every 2000 lineal feet or fraction thereof of concrete placed per a day		AASHTO T141	AASHTO T121M/ T121
Compressive (Sidewalks)	1 set (4) of cylinders per 1000 square yards or fraction thereof of concrete placed per day		AASHTO T141 T23	AASHTO T22
Compressiv e (Curbing)	1 set (4) of cylinders per 2000 lineal feet or fraction thereof of concrete placed per day		AASHTO T141 T23	AASHTO T22

B. Repair:
   1. Prior to backfilling and after forms are removed, honeycombed, defective or damaged areas of concrete shall be repaired. Repairs shall be made within seven (7) days after the forms are removed.
   2. At the time of final acceptance inspection, the repair of all cracks shall be completed.
      a. Cracks that are less than one-quarter (1/4) inch wide, exhibit no horizontal or vertical shifting, may at the discretion of the OWNER, be sealed by routing approximately three-quarter (3/4) inch to one (1) inch deep by one-quarter (1/4) inch wide and filling with Sikaflex 1-A or equivalent.
      b. Any crack that extends through a joint shall require removal and replacement of the entire cracked area.
      c. Any longitudinal cracked section of concrete shall require complete removal and replacement of that section between joints.
      d. Repair action for hairline cracks as determined in 1, above, may be waived at the discretion of OWNER. For the purpose of this section, a hairline crack is one that is reasonably immeasurable and without separation as determined by ENGINEER.

3.11 CLEAN-UP

A. The surface of the concrete shall be thoroughly cleaned upon completion of the WORK and prior to the substantial completion walk through, and the site left in a neat and orderly condition.

END OF SECTION 321600

SECTION 321713 - PARKING BUMPERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01, apply to this Section.

B. Refer to Document 00 21 13, Instructions to Bidders, for substitution of materials and products.

C. Addenda issued during the bidding period that affect this section of the specifications.

1.2 SUMMARY

A. Section includes wheel stops.

B. Related Sections
   1. Section 03 30 00, Cast-In-Place Concrete
   2. Section 32 13 13, Concrete Paving

1.3 ACTION SUBMITTALS

A. Submit product data and installation instructions for each type of product indicated.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00, Project Management and Coordination.

1.5 WARRANTY

A. Provide written warranty against defects in material and workmanship for the work of this Section for a period of one year from the Date of Substantial Completion of the Project.

B. Refer to Section 01 77 00, Closeout Procedures, for Warranty form.

PART 2 - PRODUCTS

2.1 PARKING BUMPERS

A. Concrete Wheel Stops: Precast, steel-reinforced, air-entrained concrete, 4000 psi minimum compressive strength, 6 inches high by 8 inches wide by 72 inches long. Provide chamfered corners, transverse drainage slots on underside, and a minimum of two factory-formed or -drilled vertical holes through wheel stop for anchoring to substrate.
   1. Surface Appearance: Free of pockets, sand streaks, honeycombs, and other obvious defects. Corners shall be uniform, straight, and sharp.
   2. Mounting Hardware: Galvanized-steel hardware as standard with wheel-stop manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that pavement is in suitable condition to begin installation according to manufacturer's written instructions.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install wheel stops according to manufacturer's written instructions unless otherwise indicated.

B. Securely anchor wheel stops to pavement with hardware in each preformed vertical hole in wheel stop as recommended in writing by manufacturer. Recess head of hardware beneath top of wheel stop.

END OF SECTION 321713

SECTION 321723 – PAINTED PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes painted markings applied to concrete pavement.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

PART 2 - PRODUCTS

2.1 PAVEMENT-MARKING PAINT

A. Pavement-Marking Paint: MPI #32, alkyd traffic-marking paint.

1. Color: As indicated.

PART 3 - EXECUTION

3.1 PAVEMENT MARKING

A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.

B. Allow paving to age for a minimum of 30 days before starting pavement marking.

C. Sweep and clean surface to eliminate loose material and dust.

D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils (0.4 mm).

1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils. Apply paint so that it cannot run beneath the stencil.

END OF SECTION 321723

SECTION 321823 – INFILLED SYNTHETIC TURF

PART ONE - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provision of the contract, including General and Supplementary Conditions apply to this section.

1.2 SCOPE OF WORK

Furnish all labor, materials, tools, and equipment necessary to install, in place, all synthetic turf material as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with the manufacturer's written instructions, and in accordance with all approved shop drawings.

A. Prior to order of materials, the Turf Contractor shall submit the following:

1. Product Data, including Independent Test Lab Results
2. Installation Details
3. Sample Warranty
4. Field Layout and Striping Shop Drawings
5. Minimum 12" x 18" sample of the exact turf to be provided, in each color noted within the construction plans.
6. Minimum 10" x 10" sample of the exact shock pad/drainage blanket material to be provided.
7. Details on construction, especially any details that may deviate from plans and specifications.

B. Prior to the beginning of installation, the Turf Contractor/Manufacturer of the synthetic turf shall inspect the subbase and supply a Certificate of Subbase Acceptance for the purpose of obtaining manufacturer's warranty for the finished synthetic turf playing surface.

C. Prior to final acceptance, the Turf Contractor shall submit to the Owner three (3) copies of Maintenance Manuals, which will include necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.

D. Project Record Documents: Record actual locations of seams, drains and other pertinent information.

E. Submit Bills of Lading/Material Delivery Receipts for synthetic turf infill materials. Bills of lading shall bear the name of the project/delivery address, quantity of materials delivered, source/location of origin of infill materials and/or manufacturer, and date of delivery.

1.3 SHOP DRAWINGS

A. Shop drawings shall be prepared at the scale of the construction documents and contain all pertinent information regarding installation. These drawings shall be submitted to the Owner for approval prior to the manufacturing and shipment of materials.

B. Submit drawings for:

1. Installation details; edge detail, goal post detail, other inserts and covers, etc.
2. Striping plan; layout showing any field lines, markings and boundaries, and field logo per project drawings.

1.4 QUALITY ASSURANCE

A. Manufacturer/Installer's Experience

The synthetic turf installer/manufacturer shall have manufactured and installed at least fifty (50) acceptable installations of full-size baseball and/or softball fields (minimum of 70,000 SF) in the United States within the past five (5) years. Provide this listing with the bid.

The installer must provide competent workmen skilled in synthetic turf installation. The designated supervisory personnel on the project must be certified by the Contractor as competent in the installation of these components. The Contractor shall have a representative on site from the beginning of the project to the final acceptance of the project to certify that the installation meets their specifications and standards through excavation, installation of concrete base and shock pad/drainage blanket, installation of the synthetic turf, markings, and infill.

B. Turf Contractor shall meet the following criteria:

a. Turf Contractor shall have proper Contractor's license, authority to do business in the state bidding, in good standing, and have never had revocation of the same.
b. Turf Contractor shall have NOT had a Surety of Bonding Company finish work on any contract within the last ten (10) years.
c. Turf Contractor shall have not been disqualified or barred from performing work for any public owner or other contracting entity in the last ten (10) years.
d. Turf Contractor shall not have any fields replaced under warranty.
e. Turf Contractor shall be a single source contractor. The Contractor must install the synthetic turf and the base construction or repair with its own employees (not subcontractors) and must self-perform 100% of total scope of work.

C. Warranty:

The Turf Contractor shall submit the synthetic turf manufacturer's warranty. The warranty guarantees the usability and playability of the synthetic turf SYSTEM for its intended uses for an eight (8) year period commencing with the date of Substantial Completion.

1. The warranty submitted must have the following characteristics:

a. Must provide coverage for eight (8) years from the date of Substantial Completion.
b. Must warrant materials and workmanship.
c. Must verify through a third party that the materials installed meet and exceed the product specifications.
d. Must have a provision to either make a cash refund or repair or replace such potions of the installed materials that are no longer serviceable to maintain a serviceable and payable surface.
e. Must be a manufacturer's warranty from a single source covering workmanship and all self-manufactured or procured materials.

D. Pre-Installation Conference: Conduct conference at project site at time to be determined by Landscape Architect. Review methods and procedures related to installation including, but not limited to, the following:

a. Inspect and discuss existing conditions and preparatory work performed under other contracts.
b. In addition to the Contractor and the installer, arrange for the attendance of installers affected by the Work, The Owner's representative, and the Architect.

1.5 SCHEDULE

A. Turf Contractor shall complete all work on the synthetic turf system in accordance with the published project schedule.

B. The Turf Contractor will be require unencumbered use of area within thirty (30) feet of the synthetic turf area(s) being installed to complete its work. Turf Contractor shall also be afforded unencumbered access through the construction site to reach the turf field area being installed.

1.6 SURFACE AREA

A. The Turf Contractor shall verify all dimensions and measurements provided within the construction plans.

1.7 UTILITIES

A. Owner shall supply necessary water, adequate lighting, and electricity for turf installation. Owner shall permit the use of toilet and wash-up facilities.

1.8 MAINTENANCE SERVICE

A. Contractor shall train the Owner's facility maintenance staff in the use of the turf manufacturer's recommended maintenance equipment.

B. Manufacturer must provide maintenance guidelines to the facility maintenance staff.

PART TWO - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Approved manufacturers are as follows:

1. Hellas Construction, Inc.
   Matrix Turf
   12710 Research Blvd., Suite 240
   Austin, TX 78759
   P: 512.250.2910

2. GeoSurfaces, Inc.
   GeoGreen Turf
   7080 St. Gabriel Ave., Suite A
   St. Gabriel, LA 70776
   P: 877.663.5968

3. Shaw Sports Turf
   B1K Turf System
   185 South Industrial Blvd.
   Calhoun, GA 30701
   P: 866.703.4004

4. FieldTurf USA
   Prestige Vertex Turf
   175 N. Industrial Blvd.
   Calhoun, GA 30701
   P: 800.724.2969

5. -or-
   Accepted Substitute

2.2 MATERIALS - SYNTHETIC TURF

The synthetic turf fibers shall be a maximum of two (2) inches (+/- 1/8") in height (See drawings for Turf Height Requirements). The tufted total weight (not including infill) shall not be less than 68-ounces per square yard. The fiber shall be 100% polyethylene, treated with UV inhibitor and shall be tufted at a yarn face weight of a minimum of 40-ounces per square yard. The gauge of the stitch line separation shall be no more than ½". The synthetic turf backing shall be a multi-layer fabric incorporating a dimensionally stable primary backing. A secondary backing shall consist of an application of polyurethane, which is heat activated to permanently lock fiber tufts in place. The polyurethane backing shall be coated at a minimum application rate of 14-ounces per yard. The backing shall be perforated. The synthetic turf shall be delivered to the project site in 15' or 12' wide rolls. The rolls shall be long enough to go from field sideline to field sideline.

The owner may randomly select a minimum 12" x 12" sample of the DELIVERD turf material and independently test the sample for conformance to the material specifications. The cost of such testing shall be borne by the CONTRACTOR. At the request of the owner, the CONTRACTOR shall replace any materials, which, according to the testing, does not comply with the performance specifications delineated herein.

2.3 PHYSICAL PERFORMANCE CRITERIA FOR SYNTHETIC TURF

The synthetic turf system shall demonstrate by independent, certified laboratory testing:

- A minimum average Tuft Bind, without infill, (ASTM D-1335) of 8 lbs-force.
- A minimum breaking strength (ASTM D-5034) of 200 lbs-force in either direction.
- An initial G-max (ASTM F-355-A) of 100, or less.
- An ultimate G-max of 135 shall be the highest attainable G-max during the warranty period.

2.4 MATERIALS – SHOCK PAD / DRAINAGE BLANKET

The following are a list of prior approved suppliers for the field shock pad / drainage blanket for the project:

1. Hellas Construction, Inc., Austin TX
    a. Phone: 512.250.2910
    b. Approved Product: Cushdrain 19 mm

2. SportsEdge, Troutman, NC
    a. Phone: 800.334.6057
    b. Approved Product: BlueLay

3. Brock International, Boulder, CO
    a. Phone: 303.544.5800
    b. Approved Product: Brock Power Base YSR

4. Global Synthetics Environmental, LLC, Baton Rouge, LA
    a. Phone: 877.663.5968
    b. Approved Product: GeoFlo+

5. -or- Accepted Substitute

2.5 MATERIALS – TURF SYSTEM INFILL

The infill material shall consist of sports field sand. The materials shall be as designated by the Contractor and delivered to the project site in appropriate containers. The infill shall consist of 2.5 pounds per square foot installed.

Infill shall be uniformly infused with no finish grade deviation of the infill materials greater than ¼" in 10'. The minimum relief of grass filaments above infill shall be ¾". After installation is completed, infill shall not be readily visible and should not move with footfalls, ball bounces or body impacts, as acceptable to owner.

Infill shall be infused in multiple applications not to exceed 10% of the total weight in each layer applied. The Owner, or its representative, prior to acceptance of the work, shall approve infill depth. Finished grade of infill shall not deviate more than ¼" under a 10' straight edge.

2.6 MATERIALS – SAND/PEA GRAVEL BALLAST

Beneath the turf infill shall be a ballast layer of sports field sand or pea gravel. The ballast layer shall consist of 4 lbs. per square foot, installed. The average particle size of the ballast material shall be between 20 and 30 mesh, single grain. Ballast material shall be infused into the turf using the same process as the infill.

2.7 PERMANENT MARKINGS

All markings shall be permanently installed per plans, and approved shop drawings.

PART THREE - EXECUTION

3.1 EXAMINATION

A. Verify that area is ready to start work, dimensions and elevations are as indicated on drawings. Beginning of installation means acceptance of existing conditions.

3.2 SUBBASE EXCAVATION AND PREPARATION

A. Remove and dispose of any vegetative layer or other material deemed undesirable.

B. Excavate to depth required to accommodate required cross-section, slope, and finished grades.

C. Contour, slope, rough grade, and compact remaining subbase to required cross-section, slope, and finished grades.

D. Using laser operation instrument, the contractor shall verify that grade has been prepared according to specifications regarding compaction, sub grade and is free of debris prior to beginning work.

3.3 BASE CONSTRUCTION

The Contactor shall install a 4" layer of compacted #57 limestone with a 2" compacted layer of #89 limestone over a 12"x1" composite drain system, over a PVC liner, as shown in typical field cross section. The subgrade and base shall be uniformly compacted to a minimum of 95% of maximum dry density. Care must be exercised to minimize segregation.

At the perimeter of the field, the contractor shall install a reinforced concrete curb, as detailed in the construction plans, using 3,000-psi concrete.

1. After base construction is complete and concrete has cured, a 2x4 composite nailer shall be installed at specific perimeter line, by ramset, tapcon, or similar method, to the newly installed concrete curbing (anchor). The finished grade of the nailer shall match the perimeter finish grade of the concrete base.

2. Contractor shall use an electronic, staked grade grid or string line, of not more than 25' separation, to establish finished grade of the concrete base, before installing the shock pad/drainage blanket or the synthetic turf. The finish grade tolerance shall not exceed ¼" under a 10' straight edge.

3.4 BASE CONSTRUCTION - ALTERNATE

The Contactor shall install a 3.35" polypropylene, high strength, engineered drainage cell system (Basis of Design: Permavoid PV85s (800.334.6057) -or- Accepted Substitute), over a PVC liner, as shown in typical field cross section. Subgrade and base shall be uniformly compacted to a minimum of 95% of maximum dry density. Care must be exercised to minimize segregation.

At the perimeter of the field, the contractor shall install a reinforced concrete curb, as detailed in the construction plans, using 3,000-psi concrete.

1. After base construction is complete and concrete has cured, a 2x4 composite nailer shall be installed at specific perimeter line, by ramset, tapcon, or similar method, to the newly installed concrete curbing (anchor). The finished grade of the nailer shall match the perimeter finish grade of the concrete base.

2. Contractor shall use an electronic, staked grade grid or string line, of not more than 25' separation, to establish finished grade of the concrete base, before installing the shock pad/drainage blanket or the synthetic turf. The finish grade tolerance shall not exceed ¼" under a 10' straight edge.

3.5 SHOCK PAD / DRAINAGE BLANKET INSTALLATION

A. Contractor shall use an electronic or staked grade grid, of not more than 25' separation, to establish finished grade of approved base, before installing the shock pad/drainage blanket. The approved base should not deviate from specified finish grade by more than 1/4" under 10' straight edge.

B. The installation of the shock pad/drainage blanket shall continue over then entire area to be covered with artificial turf including the open stone of the perimeter collector drains. The shock pad/drainage blanket shall be installed per manufacturer recommendations. All seams shall be sufficiently tight to leave no gaps or irregularities that could reflect through the synthetic grass surface; however, care should be taken to maintain the necessary separation to allow for thermal expansion.

3.6 SYNTHETIC TURF INSTALLATION

A. The installation shall be performed in full compliance with approved Shop Drawings.

B. Only trained technicians, skilled in the installation of athletic caliber synthetic turf systems working under the direct supervision of the approved installer supervisors, shall undertake any cutting, sewing, gluing, shearing, topdressing or brushing operations.

C. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer, as competent in the installation of this material, including sewing seams and proper installation of the Infill mixture.

D. Designs, markings, layouts, and materials shall conform to all currently applicable National Collegiate Athletic Association rules, NFHS rules, and/or other rules or standards that may apply to this type of synthetic grass installation. Designs, markings, and layouts shall first be approved by the Architect or Owner in the form of final shop drawings. All markings will be in full compliance with final shop drawings.

E. The turf rolls are to be installed directly over the properly prepared base and drainage mat system. Extreme care should be taken to avoid disturbing the finished grade. The full width rolls shall be laid out across the field. Utilizing standard state-of-the-art bonding procedures, each roll shall be attached to the next. Turf shall be attached, by industrial rustproof staples (1" x 1") directly to wood nailer, around perimeter of field at maximum three-inch (3") intervals.

F. Immediately after brushing the completely installed artificial turf with a motorized rotary nylon broom, the infill material shall be spread evenly by using a drop spreader (minimum 4 foot wide), in multiple applications, each no more than 10% of the total application, at a uniform rate. Between applications, and just prior and after infilling, the area shall be brushed with the motorized broom. Infill depth shall be as required to meet performance specifications.

3.7 FIELD MARKINGS

A. Field markings shall be installed in accordance with approved shop drawings. If football is designated as the primary sport, all five-yard lines will be tufted-in.

B. Balance of sports markings will be inlaid or painted in accordance with the Drawings.

C. Center field logo shall be inlaid according to artwork indicated on Drawings and in accordance with manufacturer's standard palette of turf colors.

D. End-zone letters and logos shall be inlaid according to artwork and fonts indicated on the Drawings, and in accordance with manufacturer's standard palette of turf colors.

3.8 ADJUSTMENT AND CLEANING

A. Do not permit traffic over unprotected surface.

B. Contractor shall provide the labor, supplies, and equipment as necessary for final cleaning of surfaces and installed items.

C. All usable remnants of new material shall become the property of the Owner.

D. The Contractor shall keep the area clean throughout the project and clear of debris.

E. Surfaces, recesses, enclosures, and related spaces shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

3.9 PROTECTION OF FINISHED WORK

A. Protect installation throughout construction process until date of substantial completion.

END OF SECTION 321823

SECTION 329200 – TURF AND GRASSES

PART ONE - GENERAL

1.1 SODDING

A. SCOPE

The work under this section of the Specifications consists of furnishing all fertilizer, seed, sod and related materials, supervision, labor, equipment, appliances, and services necessary for and incidental to completing all operations in connection with the dressing, fertilizing, sodding of earthwork areas in strict accordance with these Specifications and the applicable drawings. In general, the work shall include but not be limited to, the following:

1. Dressing, Fertilizing, Sodding – lawn areas, cut and fill areas or swales, both for temporary establishment during the winter months and for permanent establishment in the warm months.
2. Establishing Lawn Areas – or erosion control and fertilizing in all other areas on the project site disturbed by construction, but not to be otherwise planted or covered.

B. SUBMITTALS

1. Soil Analysis: For each un-amended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory.

    a. The soil-testing laboratory shall oversee soil sampling.
    b. Report suitability of tested soil for plant growth.
    c. State recommendations for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    d. Report presence of problem salts, minerals, or heavy metals; if present, provide additional recommendations for corrective action.

PART TWO - PRODUCTS

A. TOPSOIL

Topsoil: ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 2 percent and maximum of 20% organic material content. Imported topsoil or manufactured topsoil from off-site sources; do not obtain from agricultural land, bogs, or marshes. Verify suitability of soil to produce viable planting soil as determined by the testing lab to meet project specifications. Clean soil of roots, plants, sod, stones, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.

Sieve Sizes	Percentage Passing
1-inch	100%
½ inch	95%-100%
No. 4	75%-100%
No. 10	60%-100%
No. 200	10%-60%

Mix soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:

1. Ratio of Loose Wood Derivatives to Topsoil by Volume: 1:3
2. Volume of Sand to Topsoil by Volume.: 1:3
3. Weight of Commercial Fertilizer per 1000 Sq. Ft. (92.9 Sq. m): 3lbs

B. FERTILIZER

Fertilizer shall be 10-12-12 or other approved blend, applied at the rate of one thousand (1000) pounds per acre or as recommended by the Manufacturer, and shall be a commercial lawn starter fertilizer conforming to all applicable state laws. It shall be delivered in original, unopened containers, each bearing the manufacturer's guaranteed analysis, and shall be uniform in composition, dry and free flowing. Any fertilizer that becomes wet, caked or otherwise damaged, making it unsuitable for use will not be accepted.

C. GRASS – (Bermuda)

a. Sod – shall be in areas as shown on plans. Sod shall be live, free of weeds and nut grass, and shall be cut with a full three-quarters (3/4) inch of natural soil covering the roots. It shall be delivered to the job in twelve (12) inch wide strips and shall not have been stacked for more that twenty-four (24) hours between the time of cutting and delivery to the job site. During delivery, prior to and during the planting of the lawn areas, the sod panels shall always be protected from excessive drying and exposure of the roots to the sun.

PART THREE – EXECUTION

A. SODDING

1. Thoroughly till Areas to be Sodded – to a depth of four (4) inches with fertilizer as specified at the rate of one thousand (1000) pounds per acre. If suggested by the soil test analysis, work limestone into the soil ad required (normal application is approximately 2000 pounds per acre).

2. Fine Grade Sod Bed – to remove ridges and depressions and clear surface of weeds, grass growth, stones, and debris. Taking care not to disturb or adversely alter drainage.

3. Lay Sod Panels – tightly together to make a solid sodded lawn area. Immediately following the sod laying, the lawn areas shall be rolled with a lawn roller commonly used for such purposes and then thoroughly watered as described under "Seeding".

4. Top Dress – with builders' sand (Clean course textured sand to be approved by project landscape architect) to smooth out uneven spots in the new lawn surface, if deemed necessary by the Owner or the Landscape Architect.

B. CLEAN-UP

Thoroughly clean the entire project area of all trash and other debris and all unused or salvaged materials resulting from grassing operations. After completion of the work, remove all spoil piles and sweep or rake the entire project area clean.

C. MAINTENANCE

Maintenance of grass areas shall consist of watering, weeding, cutting, repair of any erosion and re-seeding and/or re-sodding as necessary to establish a uniform stand of the specified grass and shall continue until provisional acceptance of the entire planting and grassing work.

All lawn areas that do not show satisfactory growth within fifteen (15) days sodding shall be scarified, and re-sodded and re-fertilized as directed until a satisfactory lawn has been established. The lawns shall be considered established when they are reasonably free from weeds, green in appearance and the specified grass is vigorous and growing well, with no bare spots larger that one (1) square foot. Full coverage is required within thirty (30) days.

D. PROTECTION

All lawn areas shall be protected until accepted. All eroded and damaged areas, regardless of cause, shall be immediately repaired and re-sodded. Protect lawns against traffic.

E. FINAL INSPECTION and ACCEPTANCE

As soon as the lawns have become established as required, a final inspection of the work will be made by the Landscape Architect and the Owner. If the work is found to be satisfactory and in accordance with all requirements of the Contract documents, the work will be provisionally accepted.

F. GUARANTEE PERIOD

The entire sodded area shall be maintained for 90 days and guaranteed by the Landscape Contractor for 12 months following provisional acceptance of work.

3.1 SPECIAL LANDSCAPE PROVISIONS

Definition – the term "Contractor" as referred to in this section means only the Landscape Contractor. The Landscape Contractor shall be currently licensed to perform landscape contracting work in this state.

A. Water – will be available for the work. Contractor to coordinate with the Owner for sources. Hose or other watering equipment required for the work shall be furnished and operated by the Contractor at his own expense.

B. Finished Grading – shall be the Contractor's responsibility. It will be the Contractor's responsibility to provide whatever fine grading is required to bring areas to be planted back up to the existing finished grades or to grades specified on the Drawings or in these Specifications. This will also include grading to ensure proper drainage of all planting areas wherever necessary and shall also apply to existing slopes, berms or lawn areas damaged during the work described herein. If additional topsoil is required to accomplish these items, it will be the responsibility of the Contractor to do so unless decided otherwise by the Owner. All areas designated to be sodded shall have topsoil spread evenly and shall have a minimum depth after compaction and settlement of 4 inches.

C. Period of Establishment and Replacements

1. Upon the completion of sodding and if sod is in place, living and conforms to these Specifications, provisional acceptance will be granted.

2. The Contractor shall be responsible for replacing dead, damaged or unhealthy sod and, in general, ensuring proper plant growth for a Period of Establishment, which shall be one (1) year after the provisional acceptance is made.

3. Plant materials that have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Landscape Architect shall be final.

4. Plants used for replacement shall be of the same quantity, size, kind, and quality as those originally planted, and they shall be planted as originally specified. This extra work, including all materials, labor and equipment used in these replacements shall be at no cost to the Owner. Replaced sod shall carry the same establishment period as the original. Damage, including ruts in lawn or bed areas, existing utilities, paving and other improvements, incurred while making replacements shall be immediately repaired to the satisfaction of the Owner.

5. With the approval of the Landscape Architect, plants may be replaced at the start of next year's planting or digging season but, in such cases, dead plants shall be removed from the site immediately.

6. The Contractor agrees that, for the Period of Establishment of ninety (90) days for sodded turf, he will water the sod a minimum of two (2) times each week during dry periods. Watering shall consist of thoroughly soaking each planting area to ensure that deep watering has occurred. The irrigation system may be used to accomplish all necessary watering.

7. This replacement guarantee does not apply where sod dies after final acceptance because of injury by excessive wind (hurricane), hail or vandalism.

8. Final acceptance will be made only if all sod is in place, living and is in conformance with the Drawings, Specifications, and these Special Provisions.

END OF SECTION 329200

SECTION 330500 - COMMON WORK RESULTS FOR UTILITIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Summary: This Section includes water system piping for potable-water service outside the building.
   1. This Section does not include tapping of the utility company water main by utility company and charging directly to Owner.

B. Comply with NSF 14 for plastic potable-water-service piping.

C. Comply with NSF 61 for materials for water-service piping and specialties for domestic water.

PART 2 - PRODUCTS

2.1 PIPE AND FITTINGS

A. PVC Plastic Pipe: ASTM D 1785, Schedule 80.
   1. PVC Socket Fittings: Schedule 80, ASTM D 2467.
   2. Solvent Cement for Joining PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

B. PVC, AWWA Pipe: AWWA C900, Class 150, with bell end with gasket and spigot end.
   1. Comply with UL 1285 for fire-service mains.
   2. PVC Fabricated Fittings:AWWA C900, Class 150, with bell-and-spigot or double-bell ends. Include elastomeric gasket in each bell.
   3. PVC Molded Fittings: AWWA C907, Class 150, with bell-and-spigot or double-bell ends. Include elastomeric gasket in each bell.

2.2 VALVES

A. Nonrising-Stem, Resilient-Seated Gate Valves, NPS 3 and Larger: AWWA C509, gray and bonnet; with bronze or gray- or ductile-iron gate, resilient seats, bronze stem, and stem nut. Include 200-psig minimum working-pressure design, interior coating according to AWWA C550, and mechanical-joint ends.

B. Nonrising-Stem Gate Valves: UL 262, FMG-approved iron body and bonnet with flange for indicator post, bronze seating material, and inside screw; 175-psig working pressure, and flanged end connections.

C. Valve Boxes: NEMA 4X Fiberglass box with top section and cover with lettering "WATER"; bottom section with base of size to fit over valve and barrel approximately 5 inches in diameter, and adjustable cast-iron extension of length required for depth of bury of valve.

D. Indicator Posts: UL 789, FMG-approved, vertical-type, cast-iron body with operating wrench, extension rod, and adjustable cast-iron barrel of length required for depth of bury of valve.

E. Curb Valves: Comply with AWWA C800. Include bronze body, ground-key plug or ball, and wide tee head, with inlet and outlet matching service piping material.

2.3 SPECIALTIES

A. Backflow Prevention Devices: ASSE standard backflow preventers, bronze body, 150-psig working pressure, of size indicated for maximum flow rate and maximum pressure loss indicated.

B. Plastic Underground Warning Tapes: Polyethylene plastic tape, 6 inches wide by 4 mils thick, solid blue in color with metallic core and continuously printed black-letter caption "CAUTION--WATER LINE BURIED BELOW."

PART 3 - EXECUTION

3.1 INSTALLATION

A. Connect water system piping and water-supply source and building water-distribution and fire-protection systems at the building wall in locations and pipe sizes indicated.

B. Install restrained joints for buried piping within 60 inches of building. Use restrained-joint pipe and fittings, thrust blocks, anchors, tie rods and clamps, and other supports at vertical and horizontal offsets.

C. Install fittings for changes in direction and branch connections.

D. Comply with NFPA 24 for fire-service-main piping materials and installation.

E. Install copper tube and fittings according to CDA's "Copper Tube Handbook."

F. Install PVC, AWWA pipe according to AWWA M23 and ASTM F 645.

G. Bury piping with depth of cover over top at least 30 inches, with top at least 12 inches below level of maximum frost penetration.

H. Install continuous underground detectable warning tape during backfilling of trench for underground water- service piping. Locate below finished grade, directly over piping.

I. Clean and disinfect water distribution piping according to authorities having jurisdiction.

END OF SECTION 330500

SECTION 331100 - WATER UTILITY DISTRIBUTION PIPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Buried pipe and piping.

B. Valves.

C. Thrust blocks and harnessing.

D. Field quality control.

E. Test.

F. System disinfection.

G. Connections to existing mains.

1.2 RELATED SECTIONS

A. Trenching, bedding and backfilling for pipelines are specified in Section 31 23 33 – Excavation, Trenching and Backfilling.

B. Coordinate the work of this Section with the work of Section 22 11 16 – Domestic Water Piping and Appurtenances.

1.3 MEASUREMENT AND PAYMENT

A. General: Measurement and payment for the water distribution system will be by the lump-sum method.

B. Lump Sum: If the bid schedule indicated a lump sum for the water distribution system, the lump-sum method of measurement and payment will be in accordance with Section 01 20 00 Price and Payment Procedures.

1.4 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM A126 Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
   2. ASTM A197 Specification for Cupola Malleable Iron
   3. ASTM A307 Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile
   4. ASTM D1784 Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
   5. ASTM D1785Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

6. ASTM D2466Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
7. ASTM D2564Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC)Plastic Pipe and Fittings
8. ASTM D2855Practice for Making Solvent-Cemented Joints, with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
9. ASTM D3139Specifications for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
10. ASTM F439Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fitting, Schedule 80
11. ASTM F477 Specification for Elastomeric Seal (Gaskets) for Joining Plastic Pipe

B. American Water Works Association (AWWA):
1. AWWA C500 Gate Valve, 3 through 48 inches NPS – for Water and Sewage System
2. AWWA C503 Standard for Wet-Barrel Fire Hydrants
3. AWWA C504 Rubber Seated Butterfly Valve
4. AWWA C508 Swing-Check Valves for Water Works Service, 2 inches through 24 inches NPS
5. AWWA C606 Grooved and Shouldered Type Joints
6. ANSI/AWWA Standard for Disinfecting Water Mains C651
7. ANSI/AWWA Specification for Polyvinyl Chloride (PVC) Pressure Pipe, 4-inch C900 through 12 inch for Water Distribution

C. Water Utility District Standards: Note that all work shall be performed and completed in accordance with the jurisdictional water utility district's standard drawings and specifications. The Contractor shall be responsible for obtaining all such standards and for compliance with such standards as applicable.

D. Underwriters Laboratories Inc. (UL):
1. UL 246 Hydrant for Fire-Protection Service

1.5 SUBMITTALS

A. Refer to Section 01 33 00 – Submittal Procedures, and Section 01 30 00 – Administrative Procedures, for submittal requirements and procedures.

B. Submit respective manufacturer's product data for manufactured materials and equipment, including all valves and fire hydrants.

C. Submit Shop Drawings showing piping layout and pipe, valves, hydrants, and locations of tie-ins, buttresses, and thrust blocks.

1.6 SUBMITTALS FOR CLOSEOUT

A. General: Refer to Section 01 70 00 – Execution and Closeout Requirements, and Section 01 78 00 – Closeout Submittals, for Submittal Requirements and Procedures.

B. Record Drawings: Record actual location of piping mains, valves, connections, and invert elevations for review.

1.7 SITE CONDITIONS

A. Excavations in which products will be buried shall be dry.

B. Coordinate the installation of the water supply system with the jurisdictional water utility owner.

C. The jurisdictional water utility district shall provide water services to the demark point indicated on the drawings. The Contractor shall be responsible for making all such arrangements.

PART 2 – PRODUCTS

2.1 BURIED PIPE AND FITTINGS

A. Requirements: Provide the types, sizes, and configurations of pipe, fittings, and miscellaneous materials and installation accessories as indicated.

B. PVC Pipe and Fittings, 3 inches and Smaller:
1. Pipe: Polyvinyl chloride (PVC), ASTM D1785, Schedule 40 or 80, as indicated, Type I, Grade
2. Fittings: ASTM D2466, socket weld, same material and schedule as pipe, or meeting requirements of ASTM F439, as applicable.
3. Joints: Socket welded with PVC solvent cement conforming to ASTM D2564 and ASTM D2855.

C. PVC Pipe and Fittings, 4inches or Larger:
1. Pipe: AWWA C900, Class 200, polyvinyl chloride (PVC) water pipe with bell and spigot ends and flexible ring joints.
2. Fittings: ASTM D1784, Type 1, Grade 1, polyvinyl chloride (PVC) fittings, Class 200, or meeting requirements of ASTM F439, as applicable.
3. Joints: ASTM D3139, gasketed bell joints with ASTM F477 gaskets.

2.2 VALVES

A. Gate Valves:
1. Gate Valves up to 2-1/2 inches: 150-pound bronze body, non-rising stem, single wedge, threaded connection.
2. Gate Valve 3 inches and Over: AWWA C500, iron body, bronze trim, non-rising stem with square nut, single wedge, mechanical joint ends with type gland and serration's designed for plastic pipe service.

B. Pressure Reducing Valves: All bronze construction, spring-loaded, single-seated, suitable for tight shutoff under dead-end conditions. Provide with renewable composition seat discs, nylon inserted diaphragm, bolted spring chamber, and threaded connection.

C. Backflow Preventer: Provide a device that is approved by the jurisdictional water utility company. As a minimum, the backflow preventer shall be a reduced pressure principle assembly with two rising-stem gate shut-off valves, two resilient seat ball-valve test cocks, two check valves replaceable resilient disks and seat with relief valve with replaceable

seat. Backflow preventer shall be suitable for 175 psig operating pressure and 140 degrees F operating temperature, and shall be of bronze construction with bronze construction with bronze internal parts and stainless steel springs, screwed inlet and outlet for 2-inch and smaller sizes, and cast iron, epoxy-coated construction with 150 pound flanged inlet and outlet for 3-inch and larger sizes.

2.3 CONCRETE FOR THRUST BLOCKS

A. Provide Class 3000, 1-inch aggregate, concrete for all thrust blocks, as specified in Section 03 05 15 – Portland Cement Concrete, with reinforcement where indicated.

2.4 MISCELLANEOUS METAL

A. Tie Rods: Stainless steel, Type 316, threaded ANSI standard, bolt threaded on both ends. Minimum 1/2 –inch diameter for 4-inch pipe, 5/8-inch minimum diameter for 6-inch and 8-inch diameter pipe, and 3/4-inch minimum diameter for 12-inch and larger.

B. Rod Couplings: Malleable iron, ASTM A197, turnbuckle design, female threaded to mate with tie rods, 5/8-inch and ¾-inch sizes to mate with both rods and mechanical joint bolts.

C. Pipe Clamps: For sizes 4 inches and larger, provide with malleable iron rod sockets. Provide washers in lieu of rod sockets where authorized, conforming with ASTM A126, Class A, cast iron. Bolts and bolting shall conform with ASTM A307.

PART 3 – EXECUTION

3.1 MAINTAINING WATER SERVICES

A. Maintain water service and conduct operations at times selected to minimize the duration and inconvenience of service interruption.

B. At least 24 hours prior to the required cutting or abandoning of an existing water main, notify the jurisdictional water utility owner, and obtain approval of the schedule. Actual cutting or abandoning of an existing water main shall be performed by the Contractor after receiving approval from the owner of the facility.

C. Keep existing water mains parallel to new water mains in service until new water mains are ready for service.

D. Where the existing water main or service is to be cut for connection to new piping, the work shall be performed by the Contractor. Initial work operations shall include the test-pitting of all points of connection (tie-in) to ensure the true location of existing linework.

E. Water valves in service shall be operated only by personnel of the jurisdictional water utility owner.

F. Except as specified otherwise herein, construction methods shall be in accordance with the applicable provisions of the jurisdictional water utility owner's standard drawings and specifications.

3.2 INSTALLATION

A. Installation Requirements:
   1. Excavate pipe trench in accordance with Section 33 05 28 - Trenching and Backfilling for Utilities. Hand trim bottom of trench to approximately 6 inches below invert of pipe.
   2. Top of pipe to finished grade shall be 30 inches unless otherwise indicated or approved by the Engineer.
   3. Place sand bedding material, meeting the requirements of Section 33 05 28 - Trenching and Backfilling for Utilities, at trench bottom, level in one continuous layer not exceeding 8 inches in compacted depth. Compact bedding to 95 percent relative density.
   4. Backfill around sides and to 6 inches above pipe with cover fill tamped in place and compacted to 95 percent relative density.
   5. Test pipe distribution system and place tracer wire on top of pipe as specified herein prior to covering pipe. Backfill trench in accordance with Section 33 05 28 – Trenching and Backfilling for Utilities.
   6. Maintain optimum moisture content of bedding material to attain required compaction density.
   7. Provide concrete thrust blocks for elbows, tees, valves, and appurtenances of buried piping. Thrust blocks shall be constructed as indicated and in accordance with AWWA requirements.
   8. Install piping true to line and grade, supported and guided to assure alignment under all conditions.
   9. Install pipe to allow for expansion and contraction without stressing pipe or joints.
   10. Install unions at each connection to valves, both sides of each valve.
   11. Make change in line with fittings. Do not spring joints to effect change of direction.
   12. Do not field cut pipe unless necessary. Make such necessary cuts by means of equipment designed for the purpose, ensuring a smooth and square end.
   13. For connection to existing pipe, provide pipe with suitable ends or adapters, after verification of size and type of existing pipe.
   14. Install tie rods and pipe clamps at every joint fitting and valve.

B. Valves:
   1. Install valves in accordance with the valve manufacturer's installation instructions.
   2. Where valves are provided by the jurisdictional water utility owner, provide suitable access for performance of such work.
   3. Where necessary, alter the typical valve manhole to suit actual conditions. Any alterations in valve manholes shall be operable from the street level. All operator nuts shall be plumb to the valve manholes.
   4. Set valve on solid bearing.
   5. Center and plumb valve box over valve. Set box cover flush with finished grade.

C. Thrust Blocks and Harnessing
   1. Provide for counteracting thrust caused by static and dynamic forces, including water hammer at bends, tees, reducers, valves, and dead ends by installing harnessing as indicated or required. For other methods, submit details for approval of the jurisdictional water utility owner prior to use.
   2. Provide concrete thrust blocks as indicated where harnessing is not practicable.

D. Water Service Connections: Provide water service connections, where necessary, in accordance with the Local Plumbing Code, the installation instructions of the service pipe and fittings manufacturer, and the utility company requirements with reduced pressure

back-flow preventer (as specified and approved by Baton Rouge Water Co.) and water meter with by-pass valves.

E. Acceptance Requirements: After installation of pipes, ends of pipes shall be either capped or plugged. No piping shall be buried before being inspected and tested.

3.3 FIELD QUALITY CONTROL

A. Refer to Section 01 40 00 – Quality Requirements, for requirements.

B. Compaction testing of related earthwork shall be performed in accordance with applicable requirements of Section 31 00 00 – Earthwork.

C. If tests indicate work does not meet specified requirements, remove such work, replace, and retest at no additional cost to the Owner.

3.4 TESTS

A. Protection from Flooding: Provide positive measures to protect exposed, installed pipe and compacted pipe bedding from flooding during testing.

B. Notice of Testing:
   1. Give 48-hour notice of intention of testing to the jurisdictional water utility owner, which will furnish, install, and operate pumps, gages, meters, and individual pipe connections to test openings.
   2. Designate largest sections feasible for testing and sterilizing. Testing and sterilizing operations shall be performed by the Contractor, at Contractor's expense.

C. Testing Requirements:
   1. General:
      a. For hydrostatic tests, provide approved caps and plugs in sections to be tested, and remove them after testing.
      b. Prevent leakage in pipes and fittings at openings. Temporarily block plugged and capped ends to prevent displacement.
      c. Install the water source connection for testing the isolated section. The Engineer may permit the use of a tap that will be furnished and installed by utility owner.
      d. Provide labor and materials required for leakage testing, including excavation for installation and removal of pumps, gages, meters, and water source connections.
      e. Where leakage exceeds the water utility company's standards, perform necessary corrective measures.
      f. Remove and replace defective pipes, joints, fittings, valves, and other appurtenances. Reset such items if displaced.
      g. Perform hydrostatic tests in accordance with the jurisdictional water utility district's requirements. All such tests shall be witnessed by the jurisdictional water utility district's representative. The Contractor shall be responsible for making all such arrangements.

D. Testing and Flushing of Potable Water System: Test the potable water system hydrostatically in sections to a pressure of at least 150 psi for not less than 15 minutes, witnessed by the Engineer. Pressure test pipe before burial. Repair leaks and retest the system until the system is leak free. Use testing instruments calibrated by a qualified laboratory in accordance with Section 01 45 00 - Quality Control. Test sequence shall be as follows:
   1. Lines shall be fully flushed.
   2. Lines shall be hydrostatically tested.
   3. Lines shall be fully flushed.
   4. Lines shall be fully disinfected.

3.5 SYSTEM DISINFECTION

A. Before final acceptance of the water supply system, each section of the new line shall be disinfected in accordance with ANSI/AWWA C651. One of the following sources of disinfectant shall be used:
   1. Mixture of water and chlorine gas.
   2. Direct application of chlorine.
   3. Mixture of water and calcium hypochlorite; or
   4. Mixture of water and calcium chloride.

B. Before disinfecting, flush the line thoroughly to remove dirt and extraneous materials. Clean each section of the line between valves independently.

C. Retain the disinfectant solution in the pipe for at least 24 hours. Following this sterilization period, the residual chlorine content at the ends of the section and at other representative points shall be not less than five parts per million. Then, the line shall be drained and thoroughly flushed with water until the residual chlorine content is similar to that obtained from the existing water distribution system.

D. Take water samples and test in accordance with ANSI/AWWA C651.

3.6 CONNECTIONS TO EXISTING MAINS

A. Following testing and sterilization, new water distribution lines shall be connected to existing mains as indicated. Each connection shall be made at a time and in a manner that will result in the least interruption of service.

B. All connections involving shut down of jurisdictional water utility's existing facilities shall be made under the immediate supervision of the jurisdictional water utility district. No member of the Contractor's forces may operate any valve controlling the flow of water in the water utility's existing system.

C. The Contractor shall provide tie-ins to the existing system at a time that is convenient to jurisdictional water utility district, which may be in the evenings and on weekends.

END OF SECTION 331100

SECTION 333100 - SANITARY UTILITY SEWERAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Sanitary sewer pipe and fittings.
2. Underground pipe markers.
3. Connection to existing manholes.
4. Wye branches and tees.
5. Sanitary Laterals.

B. Related Sections:
1. Section 312333 – Excavation, Trenching & Backfilling, bedding and backfill requirements for trenching required by this section.

1.2 REFERENCES

A. ASTM International:
1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM A746 - Standard Specification for Ductile Iron Gravity Sewer Pipe.
3. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
4. ASTM C425 - Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings.
5. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
6. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
7. ASTM C923 - Standard Specification for Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes and Laterals.
8. ASTM C1479 - Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations.
9. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.
10. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
11. ASTM D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
12. ASTM D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
13. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.
14. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

15. ASTM D3034 - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
16. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

B. American Water Works Association:
1. AWWA C110 - American National Standard for Ductile-Iron and Grey-Iron Fittings, 3 in. Through 48 in. (75 mm through 1200 mm), for Water and Other Liquids.
2. AWWA C111 - American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
3. AWWA C153 - American National Standard for Ductile-Iron Compact Fittings for Water Service.
4. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.

C. LDOTD Standard Specifications:
1. Standard Specifications for Highway Construction, 2007, published by the Louisiana Department of Transportation.

1.3 SUBMITTALS

A. Section 013000 – Administrative Requirements: Requirements for submittals.

B. Permits: Submit copies of construction permits obtained for this Work.

C. Product Data: Submit catalog cuts and other pertinent data indicating proposed materials, accessories, details, and construction information.

D. Submit reports indicating field tests made and results obtained.

E. Manufacturer's Installation Instructions:
1. Indicate special procedures required to install Products specified.
2. Submit detailed description of procedures for connecting new sewer to existing sewer line and directional drilling, or pipe jacking installation.

F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record location of pipe runs, connections, manholes, cleanouts, and invert elevations.

C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with SCDOT Standard Specifications.

B. Maintain one copy of document on site.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum 3 years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Deliver and store valves in shipping containers with labeling in place.

C. Block individual and stockpiled pipe lengths to prevent moving.

D. Do not place pipe or pipe materials on private property or in areas obstructing pedestrian or vehicle traffic.

E. Do not place pipe flat on ground. Cradle to prevent point stress.

F. Store UV sensitive materials out of direct sunlight.

1.8 FIELD MEASUREMENTS

A. Verify field measurements and elevations are as indicated.

1.9 COORDINATION

A. Section 013000 - Administrative Requirements: Requirements for coordination.

B. Coordinate Work with local sewerage authority. Convene pre-installation meeting minimum of one week prior to starting Work of this Section.

C. Notify affected utility companies minimum of 72 hours prior to construction or as prescribed by law.

PART 2 - PRODUCTS

2.1 SANITARY SEWER PIPE AND FITTINGS

A. PVC Flexible Joint Plastic Pipe: ASTM D3034, Type PSM, Poly (Vinyl Chloride) (PVC) material; bell and spigot style rubber ring sealed gasket joint.
   1. Pipe Class: SDR 35.
   2. Fittings: PVC conforming to pipe specifications.
   3. Joints: ASTM-D 3212, elastomeric gaskets.

2.2 FLEXIBLE PIPE BOOT FOR MANHOLE PIPE ENTRANCES

A. Furnish materials in accordance with authority having jurisdiction.

B. Flexible Pipe Boot: ASTM C923, ethylene propylene rubber (EPDM), Series 300 stainless steel clamp and stainless-steel hardware.

2.3 UNDERGROUND PIPE MARKERS

A. Plastic Ribbon Tape: Brightly colored green continuously printed with "SANITARY SEWER" in large letters, minimum 6 inches wide by 4 mils thick.

2.4 CONCRETE AND GROUT

A. Concrete: Concrete conforming to Division 500 of the LADOTD Standard Specifications.
   1. Compressive strength of 3,000 psi at 28 days.
   2. Air entrained.
   3. Water cement ratio of 0.488 with rounded aggregate and 0.532 with angular aggregate.
   4. Maximum slump of 3.5 inch for vibrated concrete and 4 inch for non-vibrated concrete.
   5. Minimum cement content of 564 pounds per cubic yard for vibrated concrete and 602 pounds per cubic yard for non-vibrated concrete.

B. Grout: Non-shrink, non-metallic in accordance with LADOTD Standard Specifications with a compressive strength of at least 5,000 psi at 3 days.

2.5 BEDDING AND COVER MATERIALS

A. Bedding for Rigid Pipe (DIP and RCP): Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SP, SP-SM or SP-SC.

B. Bedding for Flexible Pipe (PVC, ABS): Clean coarse aggregate Gradation No. 57 conforming to LADOTD Standard Specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 013000 - Administrative Requirements: Verification of existing conditions before starting work.

B. Verify existing sanitary sewer utility main size, location, and inverts are as indicated on Drawings.

3.2 EXCAVATION AND BEDDING

A. Excavate pipe trench in accordance with Section 312333.

B. Excavate to lines and grades shown on Drawings or required to accommodate installation of encasement.

C. Dewater excavations to maintain dry conditions and preserve final grades at bottom of excavation.

D. Place bedding material at trench bottom, level continuous layer not exceeding 8-inch compacted depth; compact to 95 percent per Section 312333.

3.3 INSTALLATION - PIPE

A. Install in accordance with manufactures instructions and as indicated on Drawings.

B. Install plastic pipe, fittings, and accessories in accordance with ASTM D2321.

C. Install VCP, fittings, and accessories in accordance with ASTM C12.

D. Install RCP, fittings, and accessories in accordance with ASTM C1479.

E. Install CIP and DIP, fittings, and accessories in accordance with applicable portions of AWWA C600.

F. Seal joints watertight.

G. Lay pipe to slope gradients indicated on Drawings with maximum variation from indicated slope of 1/8 inch in 10 feet. Begin at downstream end and progress upstream.

H. Ensure entire pipe is supported by bedding.

I. Assemble and handle pipe in accordance with manufacturer's instructions except as modified on the Drawings or by Engineer.

J. Keep pipe and fittings clean until work is completed and accepted by Engineer. Cap open ends during periods of work stoppage.

K. Lay bell and spigot pipe with bells upstream.

L. Connect pipe to existing sewer system as indicated on Drawings at existing manhole or using doghouse manhole connection per Section 330514.

M. Place haunching material, rod, and tamp per Section 312317 to eliminate voids.

N. Install underground marking tape continuously 18 inches above pipeline.

3.4 CONNECTION TO EXISTING MANHOLE

A. Core drill existing manhole to clean opening. Using pneumatic hammers, chipping guns, and sledgehammers is not permitted.

B. Install watertight neoprene gasket and seal with non-shrink concrete grout.

C. Concrete encase new sewer pipe minimum of 24 inches to nearest pipe joint. Use epoxy binder between new and existing concrete.

D. Prevent construction debris from entering existing sewer line when making connection.

3.5 INSTALLATION – WYE BRANCHES AND TEES

A. Install wye branches or pipe tees at locations indicated on Drawings concurrent with pipe laying operations. Use standard fittings of same material and joint type as sewer main.

B. Maintain minimum 5 feet separation distance between wye connection and manhole.

C. Use saddle wye or tee with stainless steel clamps for taps into existing piping. Mount saddles with solvent cement or gasket and secure with metal bands. Layout holes with template and cut holes with mechanical cutter.

3.6 INSTALLATION – SANITARY LATERALS

A. Construct laterals from wye branch to terminal point at right-of-way or as indicated on Drawings.

B. Where depth of main pipeline warrants, construct riser type laterals from wye branch.

C. Maintain 3-foot minimum depth of cover over pipe.

D. Maintain minimum 5-foot separation distance between laterals.

E. Install watertight plug, braced to withstand pipeline test pressure thrust, at termination of lateral. Install temporary marker stake extending from end of lateral to 24 inches above finished grade. Paint top 6 inches of stake with fluorescent orange paint.

3.7 BACKFILLING

A. Backfill around sides and to top of pipe in accordance with Section 312333.

B. Maintain optimum moisture content of backfill material to attain required compaction density.

3.8 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.

B. Request inspection prior to and immediately after placing bedding.

C. Perform test on sanitary sewage system in accordance with and local code. Perform the following tests:
   1. Gravity Sewer Testing:
      a. Low pressure air test.
      b. Infiltration test.
   2. Deflection Testing of Plastic Piping.
   3. Manhole Testing: Vacuum Test.
   4. Notify Engineer and Owner 72 hours in advance of test and have witness test.

D. Compaction Testing: In accordance with Section 312333.

E. When tests indicate Work does not meet specified requirements, remove work, replace, and retest.

3.9 PROTECTION OF FINISHED WORK

A. Section 017000 - Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

END OF SECTION 333100

SECTION 334100 - STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Storm drainage piping.
   2. Accessories.
   3. Concrete Collars.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials
   1. AASHTO M36 – Corrugated Steel Pipe, Metallic Coated, for Sewers and Drains.
   2. AASHTO M190 – Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches.
   3. AASHTO M196 – Corrugated Aluminum Pipe for Sewers and Drains.
   4. AASHTO M294 – Corrugated Polyethylene Pipe

B. ASTM International:
   1. ASTM C14 - Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe.
   2. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
   3. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
   4. ASTM C924 - Standard Practice for Testing Concrete Pipe Sewer Lines by Low- Pressure Air Test Method.
   5. ASTM C969 - Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.
   6. ASTM C1103 - Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.
   7. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
   8. ASTM D3034 - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
   9. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

C. LADOTD Standard Specifications:
   1. Standard Specifications for Roads and Bridges, 2006, published by the Louisiana Department of Transportation.

1.3 SUBMITTALS

A. Section 013000 – Administrative Requirements: Requirements for submittals.

B. Product Data: Submit data for pipe and pipe accessories.

C. Manufacturer's Installation Instructions: Submit special procedures required to install products specified.

D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

A. Section 017000 – Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents:
   1. Accurately record actual locations of pipe runs, connections, catch basins, cleanouts, and invert elevations.
   2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with LADOTD Standard Specification.

B. Maintain one copy of document on site.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum 5 years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum 5 years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Block individual and stockpiled pipe lengths to prevent moving.

C. Do not place pipe or pipe materials on private property or in areas obstructing pedestrian or vehicle traffic.

D. Do not place pipe flat on ground. Cradle to prevent point stress.

E. Store UV sensitive materials out of direct sunlight.

1.8 COORDINATION

A. Section 013000 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with local storm drain authority.

C. Notify affected utility companies minimum of 72 hours prior to construction or as required by law.

PART 2 - PRODUCTS

2.1 STORM DRAINAGE PIPING

A. Reinforced Concrete Pipe (RCP): ASTM C76, bell and spigot or tongue and groove ends.
   1. Pipe Class: Class III with Wall Type B, or as otherwise specified on Drawings.
   2. Fittings: Reinforced concrete.
   3. Joints: ASTM C443, rubber compression gasket.

B. HDPE Corrugated Polyethylene Pipe: AASHTO M294, Type S or Type D.
   1. Fittings: PVC conforming to pipe specifications.
   2. Joints: ASTM F477, elastomeric gaskets.

C. Corrugated Metal Pipe (CMP):
   1. Steel Pipe: ASSHTO M36.
   2. Aluminum Pipe: AASHTO M196.
   3. Fittings: Corrugated Steel or Aluminum to match pipe.
   4. Joints: Corrugated coupling bands, galvanized steel or aluminum to match pipe, minimum 10 inches wide; connected with two neoprene "O" ring gaskets per and two galvanized steel bolts.

D. Bituminous Coated CMP: AASHTO M 190, Coated inside and out with 0.050-inch-thick bituminous coating or polymer coating.

2.2 CONCRETE AND GROUT

A. Concrete: Concrete conforming to the LADOTD Standard Specifications with:
   1. Compressive strength of 3,000 psi at 28 days.
   2. Air entrained.
   3. Water cement ratio of 0.488 with rounded aggregate and 0.532 with angular aggregate.
   4. Maximum slump of 3.5 inch for vibrated concrete and 4 inch for non-vibrated concrete.
   5. Minimum cement content of 564 pounds per cubic yard for vibrated concrete and 602 pounds per cubic yard for non-vibrated concrete.

B. Grout: Non-shrink, non-metallic in accordance with LADOTD Standard Specifications with a compressive strength of at least 5,000 psi at 3 days.

2.3 BEDDING AND COVER MATERIALS

A. General: Compaction testing or related earthwork shall be performed in accordance with applicable requirements of 31 00 00 Earthwork.

B. Bedding for Rigid Pipe (RCP): Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SP, SP-SM or SP-SC.

C. Bedding for Flexible Pipe (HDPE and CMP): Clean coarse aggregate Gradation No. 57 conforming to the LADOTD Standard Specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 013000 - Administrative Requirements: Verification of existing conditions before starting work.

B. Verify trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on Drawings.

3.2 PREPARATION

A. Excavate pipe trench in accordance with Section 312317.

B. Excavate to lines and grades shown on Drawings or required to accommodate installation of encasement.

C. Dewater excavations to maintain dry conditions and preserve final grades at bottom of excavation.

D. Provide sheeting and shoring in accordance with Section 312317.

E. Place bedding material at trench bottom, level continuous layer not exceeding 8-inch compacted depth; compact to 95 percent per Section 312317.

F. Maintain optimum moisture content of bedding material to attain required compaction density.

3.3 INSTALLATION – PIPE

A. Install in accordance with manufactures instructions and as indicated on Drawings.

B. Install plastic pipe, fittings, and accessories in accordance with ASTM D2321.

C. Seal joints watertight.

D. Lay pipe to slope gradients indicated on Drawings; with maximum variation from indicated slope of 1/8 inch in 10 feet. Begin at downstream end and progress upstream.

E. Assemble and handle pipe in accordance with manufacturer's instructions except as modified on the Drawings or by Engineer.

F. Keep pipe and fittings clean until work is completed and accepted by Engineer. Cap open ends during periods of work stoppage.

G. Lay bell and spigot pipe with bells upstream.

H. Connect pipe to existing sewer system as indicated on Drawings at existing manhole or using doghouse manhole connection per Section 330514.

I. Install underground marking tape continuously 12 inches above pipeline.

J. Connect to sub-drainage tile system piping. Refer to Section 33 46 00.

K. Install site storm drainage system piping to 5 feet of building and plug.

3.4 INSTALLATION – CONNECTION TO EXISTING STRUCTURES

A. Core drill existing manhole to clean opening. Do not use pneumatic hammers, chipping guns, and sledgehammers.

B. Install watertight neoprene gasket and seal with non-shrink concrete grout.

C. Concrete encase new sewer pipe minimum of 24 inches to nearest pipe joint. Use epoxy binder between new and existing concrete.

D. Prevent construction debris from entering existing sewer line when making connection.

3.5 INSTALLATION – MANHOLES, CATCH BASINS, AND CLEANOUTS

A. Install manholes in accordance with Section 330514.

B. Form bottom of excavation clean and smooth to correct elevation.

C. Form and place cast-in-place concrete base pad or pre-cast concrete base with provision for storm sewer pipe end sections.

D. Level top surface of base pad; sleeve concrete shaft sections to receive storm sewer pipe sections.

E. Establish elevations and pipe inverts for inlets and outlets as indicated on Drawings.

F. Mount lid and frame level in grout, secured to top cone section to elevation indicated.

3.6 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.

B. Request inspection prior to and immediately after placing bedding.

C. Perform tests on storm drain system in accordance with Section 330134 and local code. Perform the following tests:
   1. Gravity Sewer Testing:
      a. Low Pressure Air Test.
      b. Infiltration Test.
   2. Deflection Testing of Plastic Piping.
   3. Manhole Testing: Vacuum Test.
   4. Notify Engineer 72 hours in advance of test and have witness test.

D. Soil Compaction Testing: In accordance with Section 312317.

E. When tests indicate Work does not meet specified requirements, remove work, replace, and retest.

3.7 PROTECTION OF FINISHED WORK

A. Section 017000 - Execution and Closeout Requirements: Protecting finished Work.

B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.
   1. Take care not to damage or displace installed pipe and joints during construction of pipe supports, backfilling, testing, and other operations.
   2. Repair or replace pipe that is damaged or displaced from construction operations.

END OF SECTION 334100