



PROJECT MANUAL

FOR

WESTERN ADMINISTRATION COMPLEX RECYCLING CENTER RELOCATION

4851 Museum Drive, Mobile, Alabama 36608

Project No. MX-004-24

October 23, 2024

PREPARED BY:



813 Downtowner Blvd. Suite D
Mobile, AL 36609
AL License # - ECA4146

City of Mobile, Alabama
Architectural Engineering Department
P. O. Box 1827
Mobile, AL 36633-1827

Bid Date: November 13, 2024

Set Number _____

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DIVISION 00

PROCUREMENT AND CONTRACTING
REQUIREMENTS

SECTION 00 11 16

INVITATION TO BID

You are invited to submit a sealed bid for construction of the following facility:

PROJECT NAME: Western Administration Complex – Recycling Center Relocation
PROJECT LOCATION: 4851 Museum Drive, Mobile, Alabama 36608
PROJECT NUMBER: MX-004-25

1. BID DATE:
 - A. Sealed Bids will be received and clocked in until **2:15 PM** local time, **Wednesday, the 13th day of November 2024** in the office of the City Clerk, Government Plaza, 9th Floor South Administrative Tower, 205 Government Street, Mobile, Alabama 36602.
 - B. All Bids not clocked in at the City Clerk’s Office prior to the time specified, or Bids received after the specified time, will be automatically rejected and returned immediately, unopened.
 - C. Bids will be publicly opened and read at **2:30 PM** local time, in the Atrium Lobby of Government Plaza.
2. SPECIFICATIONS AND DRAWINGS:
 - A. Specifications and Drawings are on file and may be examined at the following location:
 - a. City of Mobile, 5th Floor Architectural Engineering Department, Government Plaza, 205 Government Street, Mobile Alabama 36602.
 - B. Bidders shall use complete sets of Bid Documents in preparing their bid. Neither the Owner nor Architect/Engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
 - C. A deposit of \$50.00 per set, all of which is refundable in full on the first two sets to each prime contractor bidder if contract documents are returned in reusable condition within ten (10) calendar days of bid date.
 - a. Payments shall be made by check or money order to the City of Mobile. No cash or credit card payments will be accepted.
 - b. Bidders that request documents be sent by mail or another delivery service shall provide the cost of delivery by separate check or money order, which cost is non-refundable, in addition to the cost of Bid Documents.
 - c. Only bidders who have paid the deposit and have registered with the Project Manager may receive electronic (pdf) bid documents.
 - D. Bidders are requested to pick-up Bid Documents from Architectural Engineering Department between the hours of 8:00 AM to 12:00 PM and 1:00 PM to 3:00 PM.
 - E. Bidders receiving a minimum of one complete set of Bid Documents shall register with the Project Manager.
 - F. Addenda will be issued via e-mail to each bidder registered as having a complete set of Bid Documents and all Pre-Bid Conference attendees.

- G. This is a tax exempt project and shall be certified by the requirements of the Alabama Department of Revenue. Bidders shall NOT include sales and use taxes with their bid amounts. Bidders shall complete the Sales Tax Form C-3A and include it as an attachment to their Bid Form (see Section 00400).
3. BID SURETY: Required on Bids \$10,000.00 or more
- A. A Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00 is required to accompany Bid.
 - B. Bid Bond must be issued by a Surety licensed to do business in the State of Alabama. 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.
 - C. No Bid may be modified, withdrawn, or canceled for a period of sixty (60) days after the time designated above for receipt of bids.
 - D. The City of Mobile will have sixty (60) days from the bid opening date to award contract.
4. SURETY QUALIFICATIONS:
- A. A Surety authorized to do business in the State of Alabama must issue Bonds.
 - B. If the Base Bid is \$50,000 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
5. IRREGULARITIES AND REJECTION:
- A. The City of Mobile reserves the right to waive irregularities in the Bid and in Bidding, and to reject any or all Bids.
6. BIDDER QUALIFICATIONS:
- A. Bids for Work costing \$50,000 or more must be licensed pursuant to current Alabama law and of classifications compliant with the State of Alabama Licensing Board for General Contractors. Note that if the contract amount is \$10,000 or greater, both a Performance Bond and a Labor and Material Payment Bond shall be required. **Before Bidding, Contractor shall verify their license classification of their General Contractors license with the State of Alabama Licensing Board for General Contractors to verify classification is acceptable to perform 51% of the Scope of Work.**
 - B. In case of a joint venture of two or more Contractors, the amount for the bid shall be within the maximum bid limitations as set by the State of Alabama Licensing Board for General Contractors of at least one of the partners to the joint venture.
7. NON-RESIDENT CONTRACTORS:
- A. Except for contracts funded in whole or part with funds received from a federal agency, preference shall be given to resident Contractors on the same basis as the nonresident Contractor's state awards contracts to Alabama Contractors bidding in similar circumstances.
 - B. Nonresident Bidders shall, prior to submitting a bid, be registered with the Alabama Secretary of State and the Alabama Department of Revenue. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.

8. PRE-BID CONFERENCE:

- A. A Pre-Bid Conference shall be held on **Tuesday, November 5, 2024, at 1851 Museum Drive, Mobile, Alabama 36608** at 10:00 AM local time. The conference will include a walkthrough of the site location. Conference shall commence at existing Recycling Center.
- B. Minutes of this conference will be made as an Addendum for the project.

9. BID SUBMITTAL:

- A. Bids must be submitted on copies of the Bid Forms furnished in the bidding documents.
- B. Bid, with Bid Security, Sales Tax Form C-3A and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "**SEALED BID FOR WESTERN ADMINISTRATION COMPLEX – RECYCLING CENTER RELOCATION- PROJECT NUMBER: MX-004-25**".
- C. The Bid envelope shall be clearly addressed to the Owner as indicated on the Bid Form and include the bid date, the name, address and State License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors.
- D. All Bids of \$50,000 or more must include the bidder's State of Alabama General Contractor's License information written on the outside of the bid envelope. Any bid submitted without such license information may be rejected and returned to the bidder unopened.
- E. In addition, in large letters on both front and back of envelope, write the following: **DO NOT OPEN UNTIL TWO-THIRTY PM, NOVEMBER 13, 2024**.
- F. For a bid to be valid it shall be delivered at designated location prior to time and date for receipt of Bids indicated in INVITATION TO BID, or prior to any extension thereof issued to Bidders. After that time no Bid will be received or withdrawn.
- G. When sent by mail, preferably special delivery, express service, or registered mail, the sealed Bid, marked as indicated above, shall be enclosed in another envelope for mailing such that the exterior mailing container or envelope may be opened without revealing the contents of the Bid. It is the Contractors responsibility to assure delivery of the bid to the City Clerk's Office prior the time and date established.

10. EQUAL OPPORTUNITY:

- A. The City of Mobile, Alabama is an Equal Opportunity Employer and requires that all Contractors comply with the Equal Employment Opportunity laws and the provisions of the Bid Documents in this regard.
- B. The City of Mobile also encourages and supports the utilization of Minority Business Enterprises on these and all other publicly solicited Bids, and shall be in compliance with the City of Mobile's Minority Utilization Plan as adopted by the City Council.
- C. Contractor shall provide an appropriately completed copy of the "City of Mobile Subcontracting and Major Supplier Plan" in the envelope with their Bid Form. Form shall document DBE Subcontractors participating in the project and, should the total % of DBE participation not meet the 15% minimum, all efforts to obtain DBE Subcontractors shall be documented on or attached to the DBE Form when submitted. During construction, contractors are required to submit a "DBE Utilization Report" with every Pay Application.

- D. Contractors should contact the City of Mobile, Supplier Diversity Manager for assistance with DBE Subcontractor information and any questions regarding the DBE Compliance Forms. Contact Archnique Kidd at 251-208-7967.

11. ADDITIONAL BIDDING PROCEDURES:

- A. Refer to the complete information in the Bid Documents prior to submitting a bid. Additional Bidding Procedure information is contained therein, particularly in the specification Section 00 21 00 "Instructions to Bidders - AIA Document A701" and in the specification Section 00 22 00 "Supplementary Instructions to Bidders".

12. STATE OF ALABAMA IMMIGRATION ACT

"The State of Alabama, under the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No. 2011-535, Alabama Code Section 31-13-1, et. Seq., requires:

- A. That the Contractor shall be enrolled in the E-Verify Program, shall participate in that Program during the performance of the contract, and shall verify the immigration status of every employee who is required to be verified, according to the applicable federal rules and regulations; and
- B. That it will attach to the contract the company's documentation of enrollment in E-Verify.
- C. The subcontractor must also enroll in the E-Verify Program prior to performing any work on the contract and shall attach to its sworn affidavit documentation establishing that the subcontractor is enrolled in the E-Verify Program.

13. PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

- A. By signing this contract, Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

END OF SECTION

DRAFT AIA® Document A701™ - 2018

Instructions to Bidders

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

«Western Administration Complex – Recycling Center Relocation »
«4851 Museum Drive »
«Mobile, Alabama 36608 »
«Project No. MX-004-25 »

THE OWNER:

(Name, legal status, address, and other information)

«City of Mobile »« »
«P.O. Box 1827»
«Mobile, Alabama 36633-1827 »

THE ENGINEER:

(Name, legal status, address, and other information)

«Dell Consulting, LLC
Andrew W. Maurin, P.E.
813 Downtowner Boulevard, Suite D.
Mobile, Alabama 36609 »

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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.



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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. A Bidder must be licensed by the State Licensing Board for General Contractors if the amount for the Contract exceeds the amount established by said Board.

§ 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. A Sub-bidder performing Work must be licensed by the State Licensing Board for General Contractors if the Sub-bidders' contract amount exceeds that established by said Board.

§ 1.10 A non-resident Bidder or Sub-bidder is one who

- a. Is neither organized nor existing under the laws of the State of Alabama
- b. nor maintains its principal place of business in the State of Alabama.

A non-resident contractor who has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as such contractor continues to maintain a branch office within Alabama.

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.

§ 2.2 The Bidder is licensed by the State Licensing Board for General Contractors and the amount Bid does not exceed the Bid Limit stipulated in the Bidder's License and by the City of Mobile.

§ 2.3 Each and every Contractor belonging to or comprising a part of any entity that is bidding as a joint venture or association involving two or more contractors is licensed by the State Licensing Board for General Contractors and that the amount Bid does not exceed the Bid limit stipulated in at least one of their licenses.

§ 2.4 Any non-resident Bidder is authorized by the Secretary of State of Alabama and is registered with Alabama Department of Revenue to transact business in Alabama.

§ 2.5 Joint Ventures or Associations of Contractors, whether the same are Bidders or Subcontractors of Bidders, will remain in existence until all insurance and warranty requirements for the Project have been fulfilled.

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.

§ 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 five (5) calendar days prior to the date for receipt of Bids.

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

§ 3.2.4 The Contract Drawings and Specifications are intended to cooperate and agree, but should conflicts or difference be found to exist between the requirements within either and clarification has not been obtained in accordance with the above procedure prior to Bidding, then the most costly and/or restrictive interpretation by the decision of the Architectural Engineering Department Director will be final.

§ 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 five (5) calendar 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.

§ 3.3.6 See Division One Section "Substitution Procedures", if included in Specification.

§ 3.4 Addenda

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

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

§ 3.4.3 Addenda will be issued no later than two (2) 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. No bid will be considered unless made out and submitted on a copy of the Bid Form, Section 00400. Additional Bid Forms will be furnished to prospective Bidders upon request.

§ 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.

Unit Prices: Supply requested Unit Prices where shown on the Bid Form. Such Unit Prices shall be used to adjust the Contract Amount where the quantities shown on the Drawings and/or Specifications do not reflect amounts required for completion of the work. Where Completion of the Work requires quantities in excess of those shown on the drawings and specifications, unit prices shall be used to compute an extra payment to the Contractor. Where completion of work required quantities less than those on the Drawings and/or specifications, unit prices shall be used to compute a credit to the Owner.

Contingency Allowance: As shown on the Bid Form, Contractor shall add the amount of the contingency allowance to the Base Bid to derive the Total Bid. The contingency allowance shall cover cost of material, labor, overhead, profit

and other expenses for complete installation of items of additional work as required for a complete functional project. The contingency allowance shall be used to fund unforeseen conditions not covered in the construction documents and shall be subject to the provisions of change orders. Upon the completion of work any unused portion of the contingency allowance shall be credited to the Owner by change order.

§ 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 if so required in the Bidding Documents:
(Insert the form and amount of bid security.)

«The Bidder shall provide a Bid Security in the form of a cashier's check drawn on an Alabama bank or a Bid Bond. Bid Security is required for bids exceeding \$10,000.00. Bid Security shall be in the amount of 5% of the TOTAL BID, but in no event more than \$10,000.00.»

§ 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.

§ 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.

§ 4.2.5 Bonds must be issued by a Surety authorized to do business in the State of Alabama. A Performance Bond and a Labor and Material Payment Bond are required for projects exceeding \$10,000.00. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.

§ 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.)

«Submission of Bid shall be as stated in Section 00100, Invitation to Bid, Paragraph 9, titled "Bid Submittal".»

§ 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 and will be returned unopened.

§ 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, if required, shall be in an amount sufficient for the Bid as resubmitted.

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 and does not exceed the funds available. 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 The Owner shall accept Alternates in the order listed on the Bid Form 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.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, within three (3) calendar days 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.
- .4 The name of the Project Superintendent and Project Manager together with the resume of qualifications of each;
- .5 Nonresident Contractor shall submit a letter from an attorney as required by Subparagraph 11.1.2 below and;
- .6 Engineering Firm or Testing Laboratory for testing as specified.

§ 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.

§ 6.3.5 The Contractor shall, within ten (10) calendar days of receiving Contract Forms for signature, furnish to the Owner the following items, along with the signed contract, or the Bid Security will be forfeited automatically without further delay:

- .1 A Signed Construction Contract;
- .2 Performance Bond and Labor and Material Payment Bond (originals) on all Bids over \$10,000.00;
- .3 Certificate of Insurance and copy of Builder's Risk Policy (original), as identified in the specifications;
- .4 Schedule of Values; and
- .5 Federal Immigration Law Compliance: E-Verify enrollment documentation.

§ 6.3.6 The Bid Check or Bond of the three (3) lowest Bidders will not be returned until after the Construction Contract is executed.

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.

§ 7.1.4 A Surety authorized to do business in the State of Alabama shall issue Performance Bond and Labor and Material Payment Bond, as required by the Contract Documents. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc.

§ 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 ten (10) calendar days from receiving the Construction Contract forms for signature.

§ 7.2.2 The bonds shall be written on City's Performance Bond and Labor and Material Payment Bond forms.

§ 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 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

§ 8.1.1 AIA Document A101, Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a stipulated sum will be edited electronically and include the standard signatures as required by the City of Mobile.

ARTICLE 9 NONDISCRIMINATION

§ 9.1.1 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities. Contractor shall provide a completed copy of the City of Mobile Subcontracting and Major Supplier Plan with the Bid Form, for bids of \$250,000.00 or greater.

ARTICLE 10 USE OF DOMESTIC PRODUCTS

§ 10.1.1 Section 39-3-1 Code of Alabama provides that the Contractor agrees, in the execution of this contract, to use material supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500 nor more than 20 percent of the gross amount of the contract price.

§ 10.1.2 Section 39-3-4, Code of Alabama provides that the Contractor for a municipal construction project, financed by the State of Alabama or any political subdivision thereof, is required to use steel produced within the United States. If the Contractor violates the requirement to use domestic steel, this contract will automatically be revoked and the contractor shall not be entitled to any set-off or recoupment for labor or materials used up to the time of revocation.

ARTICLE 11 PREFERENCE TO RESIDENT CONTRACTORS

§ 11.1.1 Except for contracts funded in whole or in part with funds received from a federal agency, preference shall be given to Alabama resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded the contracts only on the same basis as a the nonresident bidder's state awards contracts to Alabama contractors bidding under similar circumstances. In the letting of public contracts in which any state, county or municipal funds are utilized, resident contractors in Alabama, be they corporations, individuals or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of domicile of the nonresident.

§ 11.1.2 A successful nonresident bidder shall include in his post bid submittals a written opinion of an attorney at law licensed to practice law in such nonresident bidders' state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of any or all public contracts.

ARTICLE 12 PRE-BID REQUIREMENTS

§ 12.1 STATE OF ALABAMA CONTRACTORS LICENSE

§ 12.1.1 If the Project total bid amount is \$50,000 or more, a license issued by the State of Alabama Licensing Board for General Contractors is required prior to submitting a bid and the licensed classification and bid limits must cover the type of work in this project. See Invitation to Bid, Section 6 "Bidder Qualifications".

§ 12.2 A NONRESIDENT BIDDER

§ 12.2.1 Every bidder shall be registered with the Department of Revenue prior to bidding and all bidders shall have a certificate of authorization to do business in Alabama from the Secretary of the State of Alabama. The registration number shall be included on the bid form.

ARTICLE 13 POST-BID REQUIREMENTS

§ 13.1 CITY CONTRACTOR'S LICENSE

13.1.1 A City of Mobile Contractor's License is required and must be current at the time of bidding. Contractor must qualify and post \$10,000.00 Surety Bond with the Land Use/Code Administration Department before a Contractor's

License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration
P. O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251.208.7421

Revenue Department
P. O. Box 1827
Mobile, Alabama 36633-1827
251.208.7461

13.2 E-VERIFY DOCUMENTATION

§ 13.2.1 The Contractor agrees that it shall comply with all of the requirements of the State of Alabama Immigration Law (Act. No. 2011-535 as amended by Act. No. 2012-491, Alabama Code (1975) Section 31-13-1, et. Seq., See Section 31-13-9), and the provisions of said Law, including all penalties for violation thereof, are incorporated therein.

13.3 PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

§ 13.3 The Contractor represents and agrees that it is not currently engaged in, nor will engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.



SECTION 00 22 00

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

THE ATTENTION OF ALL BIDDERS IS CALLED TO THE FOLLOWING INSTRUCTIONS AND CONDITIONS:

1. BIDDING DOCUMENTS

- A. Bidders may obtain complete sets of Bid Documents and Specifications (Project Manual) from the Department of Architectural Engineering as listed in the Invitation to Bid.
- B. Bidders shall use the complete set of documents in preparing their bid. The City of Mobile assumes no responsibility for errors or misinterpretations resulting from use of an incomplete set of documents.

2. INTERPRETATION OF BID DOCUMENTS:

- A. Bidders shall carefully study and compare the Bidding Documents and compare various components of the Bidding Documents with each other, shall examine the site and local conditions and shall at once report to the Project Manager any errors, inconsistencies or ambiguities discovered.
- B. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Project Manager by 12:00 PM at least five (5) calendar days prior to the date for receipt of Bids. E-mail requests are required and should be addressed to **david.cordingly@cityofmobile.org**
- C. Interpretations, corrections and changes to the Bidding Documents will be made by a formal, written Addendum. Interpretations, corrections and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely on them.
- D. Any discrepancy not resolved prior to Bidding shall be bid by the Contractor to provide for the most costly and/or restrictive interpretation of the documents.

3. BIDDING PROCEDURES:

- A. No Bid will be considered unless made out and submitted on a copy of the Bid Form as set forth by the Bid Documents.
- B. All blanks on the Bid Form shall be legibly executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- D. Interlineations, alterations and erasures must be initialed by the signer of the Bid.
- E. All requested Alternates, Unit Prices and Allowances shall be bid as indicated on the Bid Form and the Bid Documents.
- F. Addenda shall be considered as a part of the Bid Documents and those issued prior to the opening of Bids shall be acknowledged on the Bid Form and any adjustment in cost shall be included in the Contract Sum.

4. BID SECURITY:

- A. A Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00, must accompany bid. By submitting a Bid Security, the Bidder pledges to enter into a Contract with the City of Mobile on the terms stated in the Bid, and will, if required, furnish bonds covering faithful performance of the Contract and required insurance certificate. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds or insurance or any other required document, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- B. Bid Bond shall be valid for a minimum of sixty (60) days from the date of the Bid. The Owner reserves the right to retain the security of all Bidders until the successful Bidder enters into the Contract or until (60) days after Bid opening, whichever is sooner.
- C. Bonds must be issued by a Surety licensed to do business in the State of Alabama. If the project cost is more than \$50,000.00 the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
- D. Power of Attorney is required for all Bonds.
- E. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment of retainage being made to the Contractor.

5. EXAMINATION OF DOCUMENTS AND SITE WORK:

- A. Before submitting a Bid, Bidders should carefully examine the Bid Documents, visit the site of the Work, including attendance at the Pre-Bid conference, fully inform themselves as to existing conditions and limitations, and include in the Bid a sum to cover the cost of all items included in the Contract and necessary to perform the Work. The submission of a Bid will be considered as conclusive evidence that the Bidder has made such examination.

6. SUBMISSION OF BIDS:

- A. Bid, with Bid Security, Sales Tax Form C-3A, and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "**SEALED BID FOR WESTERN ADMINISTRATION COMPLEX – RECYCLING CENTER RELOCATION – PROJECT NUMBER: MX-004-25**", the Bid Date, and Contractor's name, address, and City of Mobile Business License number. And, if bidding in an amount \$50,000 or greater, the State of Alabama General Contractor's License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors shall be written on the envelope.

- B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date specified in the Invitation to Bid, or as modified by Addendum, will not be considered. Late Bids will be returned to the Bidder unopened.
 - C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
 - D. Oral, telephonic, facsimile or other electronically transmitted bids will not be considered.
7. MODIFICATION OR WITHDRAWAL OF BIDS:
- A. A Bid may not be modified, withdrawn, or canceled by the Bidder for a period of sixty (60) days following the time and date designated for receipt of bids, and each Bidder so agrees in submitting a Bid.
8. CONSIDERATION AND AWARD OF BIDS:
- A. At the discretion of the City, the properly identified Bids received on time will be publicly opened and will be read aloud.
 - B. The City shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid security or a Bid which is in any way incomplete or irregular is subject to rejection.
 - C. It is the intent of the City to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The City shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the City's judgment, is in the City's best interest.
 - D. The award shall be based on the lowest Total Bid for the Base Bid and any allowances, plus any alternates and/or options that may be accepted, as listed on the Bid Form.
9. PROOF OF COMPETENCY OF BIDDER:
- A. Bidders may be required to furnish evidence satisfactory to the City of Mobile that they have sufficient means and experience in the types of work called for to assure the completion of the Contract in a satisfactory manner.
10. SIGNING OF CONTRACT:
- A. The Standard Agreement between the City of Mobile and the Contractor, included herein, shall serve as the Agreement between the City and the Contractor.
 - B. The Bidder to whom the Contract is awarded shall, within ten (10) calendar days of receiving the Contract Forms, properly execute and deliver to the Owner, the following items with the signed Agreement:
 - (1). Performance Bond and Labor and Material Payment Bond (originals);
 - (2). Certificate of Insurance (original) with endorsements to City of Mobile;
 - (3). Evidence of enrollment in the E-Verify program.
 - (4). Other documentation as required by the Contract Documents.

- C. Failure or refusal to sign the Agreement or to provide Certificates of Insurance in a form satisfactory to the City of Mobile, E-Verify verification, or other required documentation, shall subject the Bidder to immediate forfeiture of Bid Security.
- D. On all documents: City of Mobile Business License, the Alabama Secretary of State Business Identity, the Alabama Secretary of State Certificate of Authority (out of state contractors), E-verify documentation, and ACORD Insurance Form, the Contractor's name shall be EXACTLY the same.

11. NONDISCRIMINATION:

- A. Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

12. AMERICANS WITH DISABILITIES ACT (ADA):

- A. Bidders shall comply with the provisions of the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination against individuals with disabilities.

13. USE OF DOMESTIC PRODUCTS:

- A. Section 39-3-1, Alabama Code, 1975, provides that the Contractor agree, in the execution of this Contract, to use materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this Agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500.00 nor more than twenty (20) percent of gross amount of the Contract Price.

14. NON-RESIDENT (OUT OF STATE) CONTRACTORS:

- A. Preference to Resident Contractors: Section 39-3-5, Code of Alabama, 1975, provides that a non-resident (out of State) bidder domiciled in a state which grants a preference to local Contractors is to be awarded a public contract on the same basis as the non-resident bidder's state awards contracts to Alabama bidders. Alabama bidders are given a preference to the same extent that a non-resident bidder receives a preference in his home state. A non-resident bidder must include with any written bid documents a written opinion of an attorney licensed to practice in the non-resident bidder's state declaring what preferences, if any, exists in the non-resident's state.
- B. Certificate of Authority: All non-resident (out of State) bidders shall be registered with the Alabama Secretary of State and the Alabama Department of Revenue prior to submitting a Bid. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.

15. ALABAMA IMMIGRATION ACT:

- A. The State of Alabama Immigration Law (Act No. 2011-535 as amended by Act No. 2012-491), requires that Contractors not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. In addition, Contractors are required to enroll in the federal E-Verify program and submit verification of enrollment to the City of Mobile within ten (10) days of receiving the contract forms (see Section 00 60 00).

16. CITY OF MOBILE BUSINESS LICENSE:

- A. A City of Mobile Business License is required and must be current at time of contract award and throughout contract period.

17. CITY OF MOBILE CONTRACTOR'S BUSINESS LICENSE:

- A. A City of Mobile Contractor's Business License is required and must be current when contractor signs the contract and throughout contract period.
- B. Contractor must qualify and post a \$10,000 surety bond with the Land Use/Code Administration Department before a Contractor's Business License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration
P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7421

Revenue Department
P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7461

18. CITY OF MOBILE BUILDING PERMIT:

- A. A City of Mobile Building Permit, City of Mobile Development Permit AND Certificate of Appropriateness is required and shall be obtained from the Land Use/Code Administration Department, but at no cost to the Contractor.
- B. Contractor is responsible for ensuring that all inspections are successfully performed in accordance with City of Mobile regulations.

19. CONSTRUCTION SCHEDULE AND ACCESS:

- A. The project shall be completed within Sixty (60) calendar days from the date indicated by the Notice to Proceed.
- B. The Western Administration Complex (WAC) will remain in use throughout the Construction period and the Contractor is directed to coordinate all areas of work and scheduling of work with the Owner. Any interruptive work (A/C or power disconnect / re-connect, etc.) shall be coordinated with the Owner prior to the beginning of the work. There shall be no interruption

- of service to the building during any scheduled event. Within five (5) days of the bid opening, the Apparent Low Bidder Contractor shall meet with the Owner to discuss Owner scheduling and priorities. Apparent Low Bidder shall then provide a proposed schedule within 5 calendar days of the initial meeting for Owner review and approval.
- C. Contractor shall have access to the site as approved by the Owner, but typically **seven days a week from 7:00 A.M. to 6:00 P.M.** Contractor is directed to coordinate all areas of work and scheduling with the Owner. After hours work will require prior approval of the Project Manager and may require hiring of a guard at the contractor's expense.
 - D. The Contractor may be allowed additional construction days due to inclement conditions ("rain days") only as such are appropriately documented and are in excess of the NOAA/National Weather Service average (previous 5 years) for the given month. A "rain day" is defined as more than a "trace" (0.10") of rain falling within a given 24 hour period. The Contractor shall provide documentation and formally request any "rain days" they feel are legitimately due. Documentation shall be submitted to the Project Manager, in writing, within ten (10) calendar days of the rain event. Claim shall include documentation of trades adversely impacted and the impacted activities of each trade.

20. SITE CONSIDERATIONS:

- A. It is the Contractor's responsibility to carefully remove and store any items not permanently installed within the work areas. It is recommended that the Contractor photograph, videotape or in some manner document any features to be removed and their condition, prior to removal.
- B. Noise and strong smells shall be isolated or kept to a minimum when adjacent portions of the site are occupied.
- C. Contractor shall be responsible to leave the work area and adjacent site clear of equipment and debris, etc. at the end of each work day. All final cleaning is the responsibility of the Contractor and shall be executed prior to acceptance for reuse of any portion of the site.
- D. A dumpster and lay down area for Contractor materials and staging may be located at the site and located per the direction of the Owner. The Contractor is responsible for the removal of the dumpster, any storage containers and any security fencing, temporary erosion control (BMPs), etc. as soon as practical after their use by the Contractor or the work is complete.

21. SALES AND USE TAX EXEMPTION:

- A. As per the State of Alabama ACT 2013-205, the Alabama Department of Revenue (ADOR) has been granted the authority to issue a "Certificate of Exemption from Sales and Use Tax for Governmental Entities" on construction projects. Therefore, this project shall qualify for State of Alabama Sales and Use Tax Exemptions under this ACT. It is the responsibility of the Bidder to confirm the potential tax exempt status of their bid with the ADOR and include any such savings in their bid, as well as accounting for same on their bid form attachment Sales Tax Form C-3A.

- B. The full text of ACT 2013-205 is available on the State of Alabama Building Commission website at www.bc.alabama.gov.

22. SUBMISSION OF LIEN WAIVERS:

- A. At each monthly Application for Payment submitted to the owner, the Contractor shall provide completed lien waivers, including those from Subcontractors and material suppliers.

23. NOTICE OF COMPLETION:

- A. For Contracts \$50,000 or greater:
Contractor shall provide proof of publication of Advertisement of Completion for four consecutive weeks in a local newspaper, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. This Advertisement shall not begin until the Project has been accepted by the City of Mobile.

- B. Notice of Completion advertisement shall read as follows:

STATE OF ALABAMA

COUNTY OF MOBILE

NOTICE OF COMPLETION

In accordance with Chapter 1, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that (COMPANY NAME) has completed the contract for Western Administration Complex – Recycling Center Relocation – MX-004-25, Mobile, Alabama 36608. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P.O. Box 1827, Mobile, Alabama 36633-1827.

- C. Advertisement shall not begin until the Project has been accepted by the City of Mobile as Substantially Complete.

24. CONTRACTOR WARRANTY AND CERTIFICATION:

- A. Upon completion of the contract, the Contractor shall certify under oath that all bills have been paid in full.
- B. Contractor shall provide a one year Labor and Materials Warranty on company letterhead in addition to other warranties required by the Bid Documents.

25. LIQUIDATED DAMAGES

- A. A time charge equal to Two Hundred Fifty Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted, or any required closeout documents are not acceptably submitted, for more than thirty (30) calendar days after the time specified for the Substantial Completion for

the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

END OF SECTION

SECTION 00 41 00

BID FORM

Copies of the following Bid Forms shall be used. Bids submitted on alternate forms may be rejected. Fill in all blank spaces with an appropriate entry. Bid Form must be signed by an officer of the company and notarized.

TO: City of Mobile, 205 Government St., P.O. Box 1827, Mobile, AL, 36633

REF: PROJECT NO.: MX-004-25
PROJECT NAME: Western Administration Complex – Recycling Center Relocation
PROJECT LOCATION: 4851 Museum Drive
Mobile, Alabama, 36608

In compliance with the Bid Documents and having carefully and thoroughly examined said documents for the subject Work prepared by the City of Mobile, Architectural Engineering Department dated October 23, 2024; and all Addendum (a) Number(s) _____, dated _____, 2024 (CAUTION: before submitting any bid it is the Bidder's responsibility to check with the Architectural Engineering Department for all Addenda or special instructions that may impact the Bid) thereto, receipt of which is hereby acknowledged, the premises and all conditions affecting the Work prior to making this Proposal, the Undersigned Bidder, hereby

COMPANY NAME: _____

ADDRESS: _____ PHONE: _____

ALABAMA GENERAL CONTRACTOR LICENSE NO. _____

CITY OF MOBILE BUSINESS LICENSE NO. _____

SECRETARY OF STATE OF ALABAMA BUSINESS IDENTITY NO. _____

SECRETARY OF STATE OF ALABAMA ACCOUNT NO. _____

(Note: Secretary of State Account Number shall be filled in only by non-resident bidders)

(Check one) A Corporation A Partnership An Individual Doing Business

hereby proposes to furnish all labor, materials, tools, equipment, and supplies and to sustain all the expenses incurred in performing the Work on the above captioned Project in accordance with the terms of the Contract Documents, and all applicable laws and regulations for the sum listed below. The initial term of the Contract shall extend for Sixty (60) calendar days from the date of the Notice to Proceed.

BASE BID:	\$	_____
CONTINGENCY ALLOWANCE:	+ \$	_____ 10,000.00
TOTAL BASE BID:	\$	_____
		(Fill in here and in Total Bid below)
TOTAL BASE BID:	_____	
	Dollars, (\$	_____ .00)
	(Amount in Words)	(Amount in Figures)

(Note: Show amount in both words and figures. In case of discrepancy, the amount in words shall govern). **Bids shall be provided in whole dollar amount with no cents.**

REQUIRED LISTING OF SUBCONTRACTORS/SUPPLIERS: List the subcontractors/suppliers for the trades listed below which you intend to use for the base bid. If no trades are designated, the listing is not required. List yourself for work you intend to self-perform. Any envelope adjustments to this section must be initialed by the bidder. Failure to complete this section may render your bid non-responsive. See Supplemental Instructions to Bidders for additional information.

(List requested trades here, if any)

CONTINGENCY ALLOWANCE: \$10,000.00 lump sum Contingency Allowance shall be included in the Total Bid for work related to unforeseen conditions as approved by the Owner.

BID SECURITY: The undersigned Bidder agrees that the attached Bid Security, as a Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond, made payable to the City of Mobile, in the amount of 5% of the bid amount, but in no event more than \$10,000, as the proper measure of liquidated damages which the City will sustain by the failure of the undersigned to execute the Contract. Said Bid Security shall become the property of the City of Mobile as liquidated damages as specified in the Contract Documents.

AMERICANS WITH DISABILITIES ACT (ADA): The undersigned Bidder agrees to fully comply with all requirements of the Americans with Disabilities Act of 1990 and the Amendment Act.

NONDISCRIMINATION: Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the

same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

SIGNATURE: If the undersigned Bidder is incorporated, the entire legal title of the company followed by "a corporation" should be used. If Bidder is an individual, then that individual's full legal name followed by doing business as (d/b/a) and name of firm, if any, should be used. If Bidder is a partnership, then full name of each partner should be listed followed by "d/b/a" and name of firm, if any.

Ensure that name and exact arrangement thereof is the same on all forms submitted with this Bid. If a word is abbreviated in the official company name, such as "Co.", then use that abbreviation. If not abbreviated in the official name, spell out.

Bidder agrees not to revoke or withdraw this Bid until sixty (60) calendar days following the time and date for receipt of bids. If notified in writing of the acceptance of this Bid within this time period, Bidder agrees to execute a Contract based on this Bid on the proscribed form within ten (10) calendar days of said notification and to furnish Performance Bond and Materials and Payment Bond as specified.

COMPANY NAME: _____
(Printed or Typed)

BY: _____
(Signature of Company Officer)

COMPANY OFFICER: _____
(Printed or Typed)

TITLE: _____ **DATE:** _____, 2024
(Printed or Typed)

Sworn to and subscribed before me this _____ day of _____, 2024

Notary Public

Attachments:

1. Bid Security, with Power of Attorney
2. Secretary of State Authorization (Out of state bidders only)
3. Sales Tax Form C-3A

END OF BID FORM

PROPOSAL FORM

To: _____ Date: _____
(Awarding Authority)

In compliance with the Advertisement for Bids and subject to all the conditions thereof, the undersigned

(Legal Name of Bidder)

hereby proposes to furnish all labor and materials and perform all work required for the construction of
WORK _____

in accordance with Drawings and Specifications, dated _____, prepared by
_____, Architect/Engineer.

The Bidder, which is organized and existing under the laws of the State of _____,
having its principal offices in the City of _____,
is: a Corporation a Partnership an Individual (other) _____.

LISTING OF PARTNERS OR OFFICERS: If Bidder is a Partnership, list all partners and their addresses; if Bidder is a Corporation, list the names, titles, and business addresses of its officers:

BIDDER'S REPRESENTATION: The Bidder declares that it has examined the site of the Work, having become fully informed regarding all pertinent conditions, and that it has examined the Drawings and Specifications (including all Addenda received) for the Work and the other Bid and Contract Documents relative thereto, and that it has satisfied itself relative to the Work to be performed.

ADDENDA: The Bidder acknowledges receipt of Addenda Nos. _____ through _____ inclusively.

BASE BID: For construction complete as shown and specified, the sum of _____ Dollars (\$ _____)

ALTERNATES: If alternates as set forth in the Bid Documents are accepted, the following adjustments are to be made to the Base Bid:

- For Alternate No. 1 (.....) (add) (deduct) \$ _____
(Insert key word for Alternate)
- For Alternate No. 2 (.....) (add) (deduct) \$ _____
- For Alternate No. 3 (.....) (add) (deduct) \$ _____
- For Alternate No. 4 (.....) (add) (deduct) \$ _____
- For Alternate No. 5 (.....) (add) (deduct) \$ _____
- For Alternate No. 6 (.....) (add) (deduct) \$ _____

UNIT PRICES - (Attach to this Proposal Form the unit prices, if any, on a separate sheet.)

BID SECURITY: The undersigned agrees to enter into a Construction Contract and furnish the prescribed Performance and Payment Bonds and evidence of insurance within fifteen calendar days, or such other period stated in the Bid Documents, after the contract forms have been presented for signature, provided such presentation is made within 30 calendar days after the opening of bids, or such other period stated in the Bid Documents. As security for this condition, the undersigned further agrees that the funds represented by the Bid Bond (or cashier's check) attached hereto may be called and paid into the account of the Awarding Authority as liquidated damages for failure to so comply.

Attached hereto is a: (Mark the appropriate box and provide the applicable information.)

Bid Bond, executed by _____ as Surety,
 a cashier's check on the _____ Bank of _____,
for the sum of _____
Dollars (\$ _____) made payable to the Awarding Authority.

BIDDER'S ALABAMA LICENSE:

State License for General Contracting: _____
License Number Bid Limit Type(s) of Work

CERTIFICATIONS: The undersigned certifies that he or she is authorized to execute contracts on behalf of the Bidder as legally named, that this proposal is submitted in good faith without fraud or collusion with any other bidder, that the information indicated in this document is true and complete, and that the bid is made in full accord with State law. Notice of acceptance may be sent to the undersigned at the address set forth below.

The Bidder also declares that a list of all proposed major subcontractors and suppliers will be submitted at a time subsequent to the receipt of bids as established by the Architect in the Bid Documents but in no event shall this time exceed twenty-four (24) hours after receipt of bids.

Legal Name of Bidder _____

Mailing Address _____

* **By (Legal Signature)** _____

* Name & Title (print) _____ (Seal)

Telephone Number _____

Email Address _____

* If other than the individual proprietor, or an above named member of the Partnership, or the above named president, vice-president, or secretary of the Corporation, attach written authority to bind the Bidder. Any modification to a bid shall be over the initials of the person signing the bid, or of an authorized representative.

Note: A completed DCM Form C-3A: Accounting of Sales Tax must be submitted with DCM Form C-3: Proposal Form. Submission of DCM Form C-3A is required, it is not optional. A proposal shall be rendered non-responsive if an Accounting of Sales Tax is not provided.

ACCOUNTING OF SALES TAX

Attachment to DCM Form C-3: Proposal Form

To: _____ City of Mobile _____ Date: _____
(Awarding Authority)

NAME OF PROJECT WESTER ADMINISTRATION COMPLEX - RECYCLING CENTER RELOCATION

PROJECT No. MX-004-025

SALES TAX ACCOUNTING

Pursuant to Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES TAX AMOUNT

BASE BID: \$ _____

Alternate No. 1 (..... N/A) (add) (deduct) \$ _____
(Insert key word for Alternate)

Alternate No. 2 (..... N/A) (add) (deduct) \$ _____

Alternate No. 3 (..... N/A) (add) (deduct) \$ _____

Alternate No. 4 (..... N/A) (add) (deduct) \$ _____

Alternate No. 5 (..... N/A) (add) (deduct) \$ _____

Alternate No. 6 (..... N/A) (add) (deduct) \$ _____

Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

Legal Name of Bidder _____

Mailing Address _____

***By (Legal Signature)** _____

***Name (type or print)** _____

(Seal)

***Title** _____

Telephone Number _____

Email Address _____

Note: A completed DCM Form C-3A: Accounting of Sales Tax must be submitted with DCM Form C-3: Proposal Form. Submission of DCM Form C-3A with DCM Form C-3 is required, it is not optional. A proposal shall be rendered non-responsive if an Accounting of Sales Tax is not provided.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

Bidders and Proposers – Please complete and submit these forms as required by your City of Mobile Bid or Proposal Specification.

This document provides information to the City of Mobile about the subcontractors and major suppliers you intend to use to complete this contract. Failure to submit this form, when so required by the bid or proposal specification, will render your bid non-responsible. Not all specifications require this form to be completed, or may require its completion under varying circumstances. Refer to the specification for direction.

The City of Mobile will use this form to:

- Understand your intended use of subcontractors and major suppliers as part of your bid/proposal submission.
- Evaluate your capability to complete the performance of this contract.
- Determine your use of Disadvantaged Business Enterprises (DBEs) as subcontractors and suppliers.
- For certain contracts, assess whether you exercised “good faith efforts” to use DBE subcontractors and suppliers for at least 15% of the value of your bid/proposal amount. (See City of Mobile City Code Sec. 14-2.)

Include this form with your bid/proposal submission. Should your bid be considered the lowest responsible bid, you will have the opportunity to update this form at contract signature. You also will be required to re-verify your information at contract conclusion.

The bid specification may require you to attempt in “good faith” to use DBE subcontractors and suppliers for at least 15% of the value of your bid in the performance of this contract. If you don’t have that level of DBE subcontractor / supplier usage (as documented on **Form 1**), you are required to complete the “good faith effort” documentation on **Form 2**. When so required, failure to adequately address the good faith effort factors on Form 2 will render your bid or proposal as non-responsive. The determination whether the bid or proposal adequately demonstrates and documents a DBE subcontractor/supplier plan, or good faith efforts to complete such a plan, will be at the sole discretion of the City of Mobile. You are encouraged to work with the City of Mobile Supplier Diversity Manager when preparing this form.

About “**DBEs**”: The City of Mobile considers businesses owned by minorities, women, or disabled veterans to be DBEs. Please consult with the City Supplier Diversity Manager for clarification or lists of certified DBEs.

About “**Good Faith**” **Effort**: The City of Mobile expects contractors holding large contracts to recruit and engage DBEs to be a part of their team. If the specification sets, and you cannot meet, the 15% target, you must show us how you attempted to recruit and engage DBEs to meet this target. This helps the City identify DBE market weaknesses for development, and ensures all bidders are equally considering this obligation in preparing a bid. The “good faith effort” factors on **Form 2** are not intended to be a mandatory, exhaustive, or exclusive. They are a tool to help you, and to help the City consistently and fairly consider your effort.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

FORM 1: Background and Plan

Section I. Information about your company

Company	
Address	
Telephone	
E-Mail	

RFP/RFQ Solicitation Number	
Project Description	
Is your company a DBE company?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Work force demographics	Male _____ Female _____ Minority _____ Non-minority _____ Vets _____
Total #of Employees	_____

Subcontractor/Major Supplier Plan submitted by:

Printed Name: _____

Signature: _____ Date: _____

Title: _____

The following employee will be designated as the **DBE Liaison** for all communication regarding DBE participation including documentation for DBE participation and maintenance of records of Good Faith Efforts for this contract award:

Name: _____ Title: _____

E-mail: _____ Phone: _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE
 Subcontracting and Major Supplier Plan

Form 2: Good Faith Effort Documentation

Name of Bidder: _____

Contact Person: _____ Phone _____ Email _____

Please complete this form if you are unable to identify DBE subcontractors or suppliers to reach 15% of the value of your bid.

YES <input type="checkbox"/>	NO <input type="checkbox"/>	Did you do these suggested areas for DBE recruitment and engagement
		PRE-BID MEETING(S): The bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		CMDBE/ALDOT DBE LIST(S): The bidder utilized the Office of Supplier Diversity's list or lists of certified ALDOT DBE 's
		SMALL CONTRACT(S): The bidder selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation). Consider support services, including insurance, accounting, temporary labor, and transportation, landscaping, and janitorial as potential areas for DBE use.
		FOLLOW-UP: The bidder followed-up initial indications of interest by DBEs by contacting those DBEs to determine with certainty if they remained interested in bidding.
		ADVERTISEMENT: The bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities, and allowed DBEs reasonable time to respond.
		INTERNET ADVERTISING: The bidder advertised DBE and/or subcontracting opportunities on the <i>City of Mobile</i> Facebook page or other internet portals that are accessible to DBEs and/or potential subcontractors.
		GOOD FAITH NEGOTIATIONS: The bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

		INFORMATION: The bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.
		WRITTEN NOTICE(S): The bidder/proposer took the necessary steps to provide written notice in a manner reasonably calculated to inform DBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively.
		COMMUNITY RESOURCES: The bidder/proposer used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of DBE firms.
		CONTRACT RECORDS: The bidder/proposer has maintained the following records for each DBE that has bid on the subcontracting opportunity: 1. Name, address, and telephone number; 2. A description of information provided by the bidder/proposer or subcontractor; and 3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the DBE was unqualified to perform the job.

Please indicate if any of the following applied:

_____ There are not ways to break out 15% of the value of this contract for subcontractors / suppliers.

_____ Could not find sufficient DBEs to provide subcontracting or supplier services.

_____ DBEs were available but did not have sufficient qualifications or experience to meet the needs of this contract.

Please indicate additional efforts you have taken to recruit and engage DBEs. _____

Suggestions or comments to improve this program. _____

SECTION 00 50 00

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

PART 1 – GENERAL

This section includes the STANDARD FORM OF AGREEMENT BETWEEN OWNER and CONTRACTOR, AIA Document A101, wherein the basis of payment is a Stipulated Sum; the document has been electronically modified to meet the Owner's requirements and shall be used for the Project. .

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)

«City of Mobile»
«P.O. Box 1827»
«Mobile, Alabama 36633-1827»
« »

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

«Contactor Company Name »
«Contactor Company Address »
« »
«City of Mobile Business License Number:»
«Secretary of State Registration Number:»

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

«Western Administration Complex – Recycling Center Relocation»
«4851 Museum Drive»
«Mobile, Alabama 36608»
«MX-004-25»
«Relocation of existing recycling center to another location on the same site.»

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

«Dell Consulting, LLC»
«813 Downtowner Boulevard, Suite D.»
«Mobile, Alabama 36609»

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

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
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6	DISPUTE RESOLUTION
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ARTICLE 1 THE CONTRACT DOCUMENTS

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

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

A date set forth in a notice to proceed issued by the Owner.

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

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

Not later than «Sixty» («60») calendar days from the date of the Notice to Proceed for commencement of the Work.

§ 3.3.2 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 « _____ and 00/100 Dollars» (\$ « _____ .00»), subject to additions and deductions as provided in the Contract Documents.

Base Bid: \$
Contingency Allowance: \$ 10,000.00
Total Bid: \$

§ 4.2 Alternates

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

Item	Price
N/A	N/A

§ 4.3 Allowances, if any, included in the Contract Sum:

(Identify each allowance.)

Contingency Allowance: Ten thousand dollars and 00/100 Dollars (\$10,000.00)

- A. Contingency Allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete, functional project.
- B. Contingency Allowance shall be used for unforeseen conditions not covered in the construction documents.
- C. All extra work under this section must be authorized by the Owner, in writing, prior to materials or undertaking work.
- D. Upon completion of the Work, the unused portion of the Allowance shall be credited back to the Owner in the form of a Change Order.
- E. Allowances are subject to the same provision of AIA 201 Article 7.3.7.

§ 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)
N/A		

§ 4.5 Liquidated damages:

(Insert terms and conditions for liquidated damages, if any.)

« A time charge equal to Two Hundred Fifty and 00/100 Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than thirty (30) days after the date specified for the substantial Completion of the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained. »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

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

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the 25th of the month.

§ 5.1.3 Provided that an Application for Payment in acceptable format is received by the Architect not later than the first «1st» day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the tenth «10th» day of the «following» month. If an Application for Payment in acceptable format 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 «Forty» («40») days after the Architect receives the Application for Payment.
(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 may require. This accepted schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

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

§ 5.1.6 In accordance with AIA Document A201, General Conditions of the Contract for Construction (including Owner's then current Modifications), and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

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

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing and insured as specified.
- .3 Completed work shall be determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values.

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

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.3 Any Progress Payment shall include partial release of liens for material and labor for previous application for payment amount approved and paid. The DBE Utilization Report shall be included with the pay application.

§ 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%) of the first fifty percent (50%) of the completed work and after fifty percent (50%) completion has been accomplished, no further retainage shall be held from the original Contract Sum. Increases in the contract sum by Change Order shall also be subject to retainage.»

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«N/A»

§ 5.1.7.2 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.)

«The net amount of the Retainage shall be equal to two and one half percent (2.5%) of total Contract Sum, as increased or decreased by Change Order. »

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

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

§ 5.2 Final Payment

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

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201 (including Owner’s then-current modifications which may be obtained from the Owner or, alternatively, a copy of which is incorporated in the Project Manual and incorporated by reference herein as a part thereof), and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a Certificate of Substantial Completion has been issued by the Architect/Owner and the project accepted.

§ 5.2.2 The Owner’s final payment to the Contractor of retainage shall be made as follows:

« The final two and one half percent (2.5%) of the total Contract Sum retained will not be paid until proof of publication is submitted and all written claims paid in full. Contractor to submit the following:

- Contractor’s Affidavit of Payment of Debts and Claims (AIA form G706, included in contract documents) with
 - a.) Contractor’s Release or Waiver of Liens
 - b.) Releases or Waivers of Liens from Subcontractors and Material and Equipment Suppliers;
- Contractor’s Affidavit of Release of Liens (AIA form G706A, included in contract documents);
- Consent of Surety, if any, to final payment (AIA form G707, included in contract documents);
- Any additional close out requirements per the contract documents; and
- Notarized Affidavit of Notice of Completion advertisement from publisher.

Contractor shall provide proof of publication of Notice of Completion in a local newspaper once per week for four (4) consecutive weeks, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama quoted below. “The Contractor shall, immediately after the completion of the contract, give notice of Completion by an advertisement in a newspaper of general circulation published within the city or county in which the work has been done, for a period of four (4) consecutive weeks. A final settlement shall not be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of the notice shall be made by the contractor to the authority by whom the contract was made by affidavit of the publisher and a printed copy of the notice published. If no newspaper is published in the county in which the work is done, the notice may be given by the contract.” (Acts 1927, No. 39, 9.37; Acts 1935, No. 39, 9. 70; Code 1940, T. 50, Section 16; Acts 1983, No. 83-737, 9.1203; Acts 1989, No. 89-650m 9. 1284, Section 1; Acts 1994, No. 94-207, p, 270, Section 1; Acts 1997, No. 97-225, p. 348, Section 1.)

The Notice of Completion shall read as follows:

STATE OF ALABAMA
COUNTY OF MOBILE
NOTICE OF COMPLETION

In accordance with Chapter I, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that <Contractor> has completed the contract for Western Administration Complex – Recycling Center Compactor Relocation (PW-017-22), 4851 Museum Drive, Mobile, Alabama, 36608. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P. O. Box 1827, Mobile, Alabama 36633-1827.

Publication of the Notice of Completion shall not begin until the Project has been accepted as Substantially Complete by the City of Mobile.

»

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Engineer will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201, 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.)

«N/A »

§ 6.2 Binding Dispute Resolution

For any Claim, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

[] Litigation in a court of competent jurisdiction

§ 6.3 Governing Law and Venue

This Agreement shall be governed by the laws of the State of Alabama, and the appropriate venue of any actions arising out of this Agreement shall be a court of proper jurisdiction in Mobile, Alabama.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents. A copy of such amended, revised or supplemental provision is incorporated in the contract documents and hereby incorporated by reference herein as a part thereof.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

«Director, Real Estate & Asset Management »

«P. O. Box 1827 »

«Mobile, Alabama 36633-1827 »

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

«Name »
«Address »
«Email »
«Other »

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten (10) 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 below:
The Contractor shall purchase and maintain from a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

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

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the City of Mobile named as an additional insured. Contractor shall submit a Certificate of Insurance. Insurance companies listed as the "Companies Affording Coverage" shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a licensed Agent of Alabama, with the Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

- .1 Workmen's Compensation Insurance: - Statutory-amount and coverage as required by all applicable laws, rules or regulations of the State of Alabama and the United States of America, Including the U. S. Longshore and Harbor Workers Act and the Jones Act, if applicable.
- .2 Employee's Liability Insurance shall be provided for limits of liability not less than:

A.	Bodily Injury by Accident	\$1,000,000 each accident
B.	Bodily Injury by Disease	\$1,000,000 each employee
C.	Bodily Injury by Disease	\$1,000,000 each policy
- .3 United States Longshoreman's Harbor Worker's Act.
- .4 Jones Act Coverage (if applicable) placed either in the Workers Compensation or through the Marine General Liability.

.5 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations, independent contractors, and blanket contractual liability), specifically covering the obligations assumed by the Contractor for limits of liability not less than:

- | | | |
|----|--------------------------------------|--|
| A. | Bodily Injury | \$1,000,000 each person
\$1,000,000 each occurrence |
| B. | Property Damage | \$1,000,000 each occurrence; or |
| C. | Bodily Injury and
Property Damage | \$1,000,000 combined single limit |
| D. | Damage to Rented Premises | \$1,000,000 each occurrence |

.6 Such comprehensive policy shall include the following:

- A. All liability of the Contractor, for the Contractor's Direct Operations.
- B. Subcontractor's Operations.
- C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.
- D. General Aggregate Limit of \$2,000,000 shall apply on a "Per Project" Basis.
- E. Contractual Liability, meaning thereby; any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically items 11.1.1.8.3G herein below
- F. Broad Form Property Damage Coverage, including Completed Operations.
- G. Personal Injury Liability, with employee's exclusions removed.
- H. Explosion and Collapse Hazard:
Included or Not Applicable.
- I. Underground Hazard:
Included or Not Applicable.

.7 The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry, until the Contract is completed, Comprehensive Automobile Liability Coverage for Bodily Injury and property. Damage for any auto in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:

- | | | |
|----|--------------------------------------|--|
| A. | Bodily Injury | \$1,000,000 each person
\$1,000,000 each occurrence |
| B. | Property damage | \$1,000,000 each occurrence; or, |
| C. | Bodily Injury and
Property damage | \$1,000,000 combined single limit |

.8 Umbrella/Excess Liability: \$2,000,000 combined single limit each occurrence for bodily injury and/or property damage

.9 Builder's Risk Coverage (Property Insurance): The Contractor shall carry for the Owner, himself, and all Subcontractors a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrication or erection of any equipment.

- A. The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section

9.10 or until no person or entity other than the Owner has an insurable interest in the property, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors, Sub-subcontractors, and the Design Professionals in the Project.

- B. Property insurance shall be on an “all-risk” or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect’s and Contractor’s services and expenses required as a result of such insured loss.
 - C. If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles. Deductibles shall be limited to a maximum of \$2,500.00 unless the loss is caused by windstorm; then deductible shall be a maximum of three percent (3%) of the insured value.
 - D. This property insurance shall cover the full value of equipment, material, and other portions of the Work stored off the site, and also portions of the Work in transit. There shall be no limits on the value of loss per occurrence.
 - E. A named storm endorsement is required. The deductible shall be a maximum of three percent (3%) of the insured value.
- .10 A Surety authorized to do business in the State of Alabama shall furnish the required Insurance.
- .11 The standard ACORD™ format shall be provided. The ACORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent’s name, address and telephone number must appear on the face of the certificate.
- .12 The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best’s Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc. if the bid price exceeds \$50,000.00.
- .13 “In Rem” endorsement.

The insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor’s completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

Certificates of insurance acceptable to the Owner shall be filed with the Owner within ten (10) calendar days from date of issuance of contract forms for execution. Contractor shall deliver to the City of Mobile, certificates of insurance certifying the existence and limits of the insurance coverages along with separate policy endorsements. Contractor shall also be responsible for delivering policy renewal certificates to the City of Mobile, and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies shall contain a provision that coverages afforded under the policies will not be cancelled subject to non-renewal nor material change, or allowed to expire without at least thirty (30) days’ (except ten (10) days from non-payment) prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the time. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

All policies of insurance, except worker's compensation, shall be endorsed to provide that all such insurances are primary and non-contributing with any other insurance maintained by the City of Mobile and endorsed to waive rights of subrogation in favor of the City of Mobile.

The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 8.5.2 The Contractor shall provide bonds as set forth below:

Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder.

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.

The Labor and Material Payment Bond and the Performance Bond shall each be for one hundred percent (100%) of the Contract Sum.

1. Bond shall be submitted with the executed agreement on provided form(s).
2. Power of Attorney is required for both bonds.
3. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
4. A Surety licensed to do business in the State of Alabama must execute the bonds.
5. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
6. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

§ 8.6 Indemnification:

Contractor shall indemnify, defend and hold harmless City and its officers, elected officials, agents, representatives, and employees in respect of any and all claims, injuries, losses, diminution in value, damages, liabilities, whether or not currently due, and related expenses (including without limitation, settlement costs and any legal or other expenses for investigating or defending any actions or threatened actions) arising from or in connection with Contractor's performance under this agreement, including but not limited to, environmental laws, regulations, orders and decrees of whatever character or nature and damage or injury to persons or property. Contractor hereby confirms and agrees that Contractor is not a 'design professional' as defined in Alabama Act 2021-318, and not required to carry professional liability insurance for the performance or obligations of this contract.

§ 8.7 Other provisions:

« Contractor shall provide a minimum one (1) years warranty from the date of substantial completion of all Labor and Materials for the Work covered by this contract, unless otherwise specified. Labor and Material warranties required by other sections of the construction document shall not conflict with this provision. The most stringent warranty provision shall apply. »

§ 8.8 Force Majeure:

In the event that either party hereto shall be delayed or hindered in or prevented from the performance of any act required hereunder by reason of strikes, lockouts, labor troubles, inability to procure materials, failure of power, restrictive governmental laws or regulations, riots, insurrection, war, Act of God, or other reason of a like nature not the fault of the party delayed in performing work or doing acts required under the terms of this Agreement, then

performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A201, General Conditions of the Contract for Construction, including Owner’s then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

.3 Drawings

Number	Title	Date
G1.0	Title Sheet & Drawing Index	10/23/2024
C-1	Site Plan & Demolition Plan	6/8/2022
C-2	Grading & Drainage and Water & Sewer Plan	6/8/2022
C-3	Construction Details	6/8/2022
E1.0	Electrical Legend & Specifications	10/11/2022
E2.0	Electrical Demolition Site Plan	10/11/2022
E3.0	Electrical New Work Site Plan	10/11/2022
E4.0	Electrical Schedule & Details	10/11/2022
P1.0	Legend, Notes, & Abbreviations	10/11/2022
P2.0	Demolition Plan	10/11/2022
P3.0	New Work Plan	10/11/2022

.4 Specifications

Section	Title	Date
DIVISION 1	GENERAL REQUIREMENTS	
Section 01 11 00	Summary of the Work	10/23/2024
Section 01 21 00	Allowances	10/23/2024
Section 01 29 73	Schedule of Values	10/23/2024
Section 01 31 00	Project Management & Coordination	10/23/2024
Section 01 31 19	Project Meetings	10/23/2024
Section 01 32 00	Construction Progress Documentation	10/23/2024
Section 01 33 00	Submittal Procedures	10/23/2024
Section 01 40 00	Quality Assurance, Control, & Documentation	10/23/2024
Section 01 56 00	Cleaning Up	10/23/2024
Section 01 60 00	Materials and Equipment	10/23/2024
Section 01 63 00	Substitution Procedures	10/23/2024
Section 01 73 00	Execution Requirements	10/23/2024
Section 01 77 00	Closeout Procedures	10/23/2024
DIVISION 2	EXISTING CONDITIONS	
Section 02 20 00	General Site Work Requirements	10/23/2024
Section 02 21 02	Existing Utilities	10/23/2024
Section 02 41 16	Site Demolition	10/23/2024
DIVISION 3	CONCRETE	
Section 03 20 00	Concrete Reinforcement	10/23/2024
Section 03 30 00	Cast-In-Place Concrete	10/23/2024
DIVISION 5	METALS	
Section 05 15 00	Adhesive Anchors	10/23/2024
DIVISION 31	EARTHWORK	
Section 31 23 33	Trenching, Backfill, and Compaction	10/23/2024

DIVISION 32	EXTERIOR IMPROVEMENTS	
Section 32 12 16	Asphalt Paving	10/23/2024
Section 32 12 20	Crushed Aggregate Base	10/23/2024
Section 32 17 23	Pavement Markings	10/23/2024
Section 32 22 90	Erosion Control	10/23/2024

.5 Addenda, if any:

Number	Date

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.

.6 Other Exhibits:

§ 9.2

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
N/A			

§ 9.2.1 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.)

«BIDDING AND CONTRACT REQUIREMENTS	
Section 00 11 16	Invitation to Bid
Section 00 21 00	Instructions to Bidders - AIA Document A701
Section 00 22 00	Supplementary Instructions to Bidders
Section 00 41 00	Bid Form
	Accounting of Sales Tax Form C-3A
	DBE Subcontracting & Major Supplier Plan
Section 00 50 00	Standard Form of Agreement Between Owner and Contractor AIA Document A101
Section 00 60 00	Bonds, Certificates and Affidavits
	Performance Bond
	Labor and Material Payment Bond
	E-Verify Documentation (Sample)
	Application and Certificate for Payment - AIA Document G702 and G703
	City of Mobile DBE Utilization Report
	Certificate of Substantial Completion - AIA Document G704
	Contractor's Affidavit of Payment of Debts and Claims - AIA Document G706
	Contractor's Affidavit of Release of Liens - AIA Document G706A
	Consent of Surety to Final Payment - AIA Document G707
	Request for Taxpayer Identification Number and Certification W9 Tax Form and City of Mobile Vendor Information Form
Section 00 70 00	General Conditions of the Contract for Construction - AIA Document A201»

§ 9.2.2 Best Management Practices (BMPs): The Contractor shall be responsible for providing, implementing and maintaining BMPs for sediment and erosion control in full compliance with all applicable Local, State and Federal Codes and Ordinances throughout the contract period. All Work shall be in accordance with the

Clean Water Act; the Alabama Water Pollution Control Act; the current version of the Alabama Handbook for Erosion Control, Sediment Control Storm water Management on Construction sites and Urban Areas; and the current version of the Mobile, Alabama City Code Chapter 17 Storm water Management and Flood Control. All Wastewater with oils, grease, paint, mortar, etc., shall be properly contained and disposed of.

- § 9.2.3 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.
- § 9.2.4 By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.
- § 9.2.5 Public Contracts with Entities Engaging in certain Boycott Activities:
By signing this contract, the Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.
- § 9.2.6 Severability Clause:
In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, but this Agreement shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the court or other tribunal making such determination is authorized and instructed to modify this Agreement so as to effect the original intent of the parties as closely as possible so that the transactions and agreements contemplated herein are consummated as originally contemplated to the fullest extent possible.
- § 9.2.7 Non-Agency Clause:
Contractor, in the performance of its operations and obligations hereunder, shall not be deemed to be an agent of City but shall be deemed to be an independent Contractor in every respect and shall take all steps at its own expense, as City may from time to time request, to indicate that it is an independent Contractor. City does not and will not assume any responsibility for the means by which or the manner in which the services by Contractor provided for herein are performed, but on the contrary, Contractor shall be wholly responsible therefore.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

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

Owner: City of Mobile

Legal Name of Party to Contract:

Contractor: <name of contractor>

OWNER *(Signature)*

CONTRACTOR *(By Signature)*

William S. Stimpson, Mayor
(Printed name and title)

<Name of person signing form>
(Printed name and title)

ATTEST:

City Clerk

STATE OF _____
COUNTY OF _____

Before me, the undersigned a Notary Public in and for said County and State, personally appeared <Individual NAME> as <Title within Company> of <Company Legal Name> and after being duly sworn, did depose and say that he, as such officer and with full authority, signed the above and foregoing voluntarily as the act of said corporation on the day the same bears date.

Sworn to and subscribed for me this _____ day of _____, 20_____.

NOTARY PUBLIC
My Commission Expires: _____



SECTION 00 60 00
BONDS, CERTIFICATES AND AFFIDAVITS

PART 1 – GENERAL

This section includes the Bond Forms and Certificates that are to be used on this Project. No other forms will be accepted. Forms may be obtained from the Architectural Engineering Department, City of Mobile, telephone number 251-208-7454.

1.1 FORMS

- A. PERFORMANCE BOND. Owner's modified Performance Bond form.
- B. LABOR AND MATERIAL PAYMENT BOND. Owner's modified Payment Bond form.
- C. E-Verify Documentation (Sample)
- D. APPLICATION AND CERTIFICATION FOR PAYMENT - AIA Document G702 and AIA Document G703
- E. CERTIFICATE of SUBSTANTIAL COMPLETION – AIA Document G704-2017
- F. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS - AIA Document G706
- G. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS - AIA Document G706A.
- H. CONSENT OF SURETY TO FINAL PAYMENT - AIA Document G707
- I. Request for Taxpayer Identification Number and Certification, W-9 Form, and City of Mobile Vendor Information Form

PERFORMANCE BOND

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

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, hereinafter called the Principal, and _____, hereinafter called the Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633**, hereinafter called the Owner, in the penal sum of _____ Dollars (\$_____.00) for payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns for the faithful performance of a certain written Contract dated the _____ day of _____, 2024 entered into between the Principal and the City of Mobile for furnishing all labor, material, equipment and insurance and performing all Work required to properly complete Western Administration Complex – Recycling Center Relocation (MX-004-25), 1851 Museum Drive, Mobile, Alabama, 36608, a copy of which said Contract is incorporated herein by reference and is made a part hereof as if fully copied herein.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall faithfully perform the terms and conditions of the Contract in all respects on its part and shall fully pay all obligations incurred in connection with the performance of such Contract on account of labor and materials used in connection therewith, and all such other obligations of every form, nature and character, and shall save harmless the Owner from all and any liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of such Contract or other such and liability resulting from negligence or otherwise on the part of such Principal and further save harmless the Owner from all cost and damage which may be suffered by reason of the failure to fully and completely perform said contract and shall fully reimburse and repay the Owner for all expenditures of every kind, character, and description which may be incurred by the Owner in making good any and every default which may exist on the part of the Principal in connection with the performance of said Contract; and further that the Principal shall pay all lawful claims of all persons, firms, partnerships, or corporations for all labor performed and material furnished in connection with the performance of the Contract, and that the failure to do so with such persons, firms, partnerships or corporations shall give them a direct obligation; and provided, however, that no suit, action, or proceedings by reason of any default whatever shall be brought on this bond after two years from the date on which the final payment on the Contract falls due, and provided, further, that if any alterations or additions which may be made under the Contract, or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the Contract or any other forbearance being expressly waived. This obligation shall remain in full force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety. This Bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2024.

CONTRACTOR AS PRINCIPAL

Company: _____
(Corporate Seal)

By: _____
(Signature)

Name and Title: _____

SURETY

Company: _____
(Corporate Seal)

By: _____
(Signature)

Name and Title: _____

Resident Agent: _____
(Signature)

Name and Title: _____
Company Name: _____
Address: _____
Phone and Fax: _____

Owner's Representative: Cassie Boatwright
Director
REAM Department
PO Box 1827
Mobile, AL 36633
251-208-7454

LABOR AND MATERIAL PAYMENT BOND

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

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, _____, as Principal, and _____, as Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633** (hereinafter called the "Obligee") in the penal sum of _____ Dollars and no/cents (\$_____.00) lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has entered into a certain Contract with said Obligee, dated the ____ day of _____, 2024, (hereinafter called the "Contract") for furnishing all labor, material, equipment and insurance and perform all work required to properly complete Western Administration Complex – Recycling Center Relocation (MX-004-25), 1851 Museum Drive, Mobile, Alabama, 36608, which, **THEREFORE, THE CONDITION OF THIS**

OBLIGATION IS SUCH that if said Principal and all subcontractors to whom any portion of work provided for in said Contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or additions to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimant or claimants in suits on each bond, then the above obligations shall be void; otherwise to remain in full force and effect. **PROVIDED,** however, that this bond is subject to the following conditions and limitations.

- (a) Any person, firm or corporation that has furnished labor, materials or supplies for or in the prosecution of the work provided for in said contract shall have a direct right of action against the Principal and Surety on this bond, which right of action shall be asserted in a proceeding instituted in the County in which the work provided for in said Contract is to be performed or in any county in which said Principal and Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.
- (b) The Principal and Surety hereby designate and appoint _____ **Attorney-In-Fact,** as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Principal and/or Surety. In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety.
- (c) The Surety shall not be liable hereunder for damage or compensation recoverable under any Workmen's Compensation or Employer's Liability Statute.
- (d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than two years after the final settlement of said Contract.
- (e) This bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2024

CONTRACTOR AS PRINCIPAL

Company: _____
(Corporate Seal)

SURETY

Company: _____
(Corporate Seal)

By: _____
(Signature)

Name and Title: Brian Harris, President

By: _____
(Signature)

Name and Title: _____

Resident Agent: _____
(Signature)

Name and Title: _____

Company Name: _____

Address: _____

Phone and Fax: _____

Owner's Representative: Cassie Boatwright
Director
REAM Department
PO Box 1827
Mobile, AL 36633
251-208-7454



Company ID Number:

Approved by:

Employer	
Name (Please Type or Print)	Title
Signature	Date
Department of Homeland Security – Verification Division	
Name (Please Type or Print)	Title
Signature	Date

SAMPLE



Company ID Number:

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	
Company Facility Address	
Company Alternate Address	
County or Parish	
Employer Identification Number	
North American Industry Classification Systems Code	
Parent Company	
Number of Employees	
Number of Sites Verified for	

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702

PAGE ONE OF

PAGES

TO OWNER City of Mobile
 P. O. Box 1827
 Mobile, AL 36633-1827

APPLICATION NO:

Distribution to:

OWNER
ARCHITECT
CONTRACTOR

FROM CONTRACTOR: VIA ARCHITECT:

PERIOD TO:

PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

1. ORIGINAL CONTRACT SUM \$ _____
2. Net change by Change Orders \$ _____
3. CONTRACT SUM TO DATE (Line 1 + 2) \$ _____
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ _____
5. RETAINAGE:
 - a. _____ % of Completed Work \$ _____
(Column D + E on G703)
 - b. _____ % of Stored Material \$ _____
(Column F on G703)
 Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ _____
6. TOTAL EARNED LESS RETAINAGE \$ _____
(Line 4 Less Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ _____
8. CURRENT PAYMENT DUE \$ _____
9. BALANCE TO FINISH, INCLUDING RETAINAGE \$ _____
(Line 3 less Line 6)

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED\$ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
 ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTINUATION SHEET

AIA DOCUMENT G703

PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:
 APPLICATION DATE:
 PERIOD TO:
 ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)						
GRAND TOTALS									

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

**OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE**

Return to Office of Supplier Diversity
Via email: archnique.kidd@cityofmobile.org

or
P.O. Box 1948
Mobile, AL 36633

**DBE Compliance
DBE UTILIZATION REPORT**

CONTRACTOR: _____ **Certified DBE:** YES NO **Contract Start Date:** _____

DESCRIPTION: _____ **Estimated Completion Date:** _____

This report is for the month of: JAN FEB MARCH APR MAY JUNE JULY AUG SEPT OCT NOV DEC **FINAL** _____
(CHECK ONE):

Original Contract Amount	Total Amount of Contract Changes (change orders or amendments)	Final Contract Amount (include contract changes)	Payments to Date from City of Mobile	OFFICE USE ONLY (Verification)
\$	\$	\$	\$	

Instructions: List all DBEs utilized on the contract, whether or not the firms were originally listed for DBE goal credit. List actual amount paid to each DBE firm. If the established Percentage is not being met, please include a narrative description of the progress being made in DBE participation.

DBE SUBCONTRACTOR	DBE DESCRIPTION OF WORK	DBE SUBCONTRACT AMOUNT	DBE PAYMENTS THIS REPORT	PAYMENTS TO DATE	OFFICE USE ONLY (Verification)
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
TOTALS		\$	\$	\$	

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT. SUPPORTING DOCUMENTATION IS ON FILE AND IS AVAILABLE FOR INSPECTION BY CITY OF MOBILE OFFICE OF SUPPLIER DIVERSITY PERSONNEL AT ANY TIME.

PRINT NAME: _____

SIGNATURE: _____ (Title) _____ (Date)



AIA[®] Document G704[™] – 2000

Certificate of Substantial Completion

PROJECT: <i>(Name and address)</i>	PROJECT NUMBER:	OWNER <input type="checkbox"/>
	CONTRACT FOR:	ARCHITECT <input type="checkbox"/>
	CONTRACT DATE:	CONTRACTOR <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	TO CONTRACTOR: <i>(Name and address)</i>	FIELD <input type="checkbox"/>
		OTHER <input type="checkbox"/>

PROJECT OR PORTION OF THE PROJECT DESIGNATED FOR PARTIAL OCCUPANCY OR USE SHALL INCLUDE:

The Work performed under this Contract has been reviewed and found, to the Architect's best knowledge, information and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated above is the date of issuance established by this Certificate, which is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

ARCHITECT BY DATE OF ISSUANCE

A list of items to be completed or corrected is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment.

Cost estimate of Work that is incomplete or defective: \$ _____

The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

CONTRACTOR BY DATE

The Owner accepts the Work or designated portion as substantially complete and will assume full possession at (time) on (date).

OWNER BY DATE

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance shall be as follows: *(Note: Owner's and Contractor's legal and insurance counsel should determine and review insurance requirements and coverage.)*



AIA[®] Document G706[™] – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT FOR: General Construction

CONTRACTOR:

CONTRACT DATED:

SURETY:

OTHER:

STATE OF:

COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

BY: _____

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA[®] Document G706A[™] – 1994

Contractor's Affidavit of Release of Liens

PROJECT: <i>(Name and address)</i>	ARCHITECT'S PROJECT NUMBER:	OWNER: <input type="checkbox"/>
	CONTRACT FOR: General Construction	ARCHITECT: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	CONTRACT DATED:	CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY: _____

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA[®] Document G707[™] – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

CONTRACT FOR: General Construction

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT DATED:

CONTRACTOR:

SURETY:

OTHER:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the
Surety of any of its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

(Printed name and title)

Attest:
(Seal):

**CITY OF MOBILE, AL
VENDOR INFORMATION FORM**

Company Information:

1. City Vendor Number:

2. Name of Company:

3. Company D.B.A. Name, if any:

4. Mailing Address:

5. Remittance Address:

6. Telephone:

7. Fax

8. Main Email:

Primary Contact:

9. Contact Name and Title:

10. Contact Phone:

11. Contact Fax:

12. Contact Email:

Alternate Contact (if applicable):

13. Alt. Contact Name and Title:

14. Alt. Contact Phone:

15. Alt. Contact Fax:

16. Alt. Contact Email:

City of Mobile Business License Information:

17. City of Mobile Business License No. (if required):

Please attach additional sheets if necessary.

ELECTRONIC PAYMENT AUTHORIZATION

I authorize the City of Mobile to pay amounts owed to my company by EFT (electronic funds transfer). In the event of any discrepancy, the City has the authority to reverse the payment and debit my account for the incorrect payment amount.

All fields are required to be completed.

Company Name _____

City Vendor No. _____ Tax Identification No. _____
(if available)

Billing Address _____

City State Zip _____

EFT Contact Person _____

EFT Contact Phone _____

EFT Contact Email _____
(required for EFT payment notification emails)

Bank Name _____

Routing Number _____ Account Number _____

Account Type Checking or Savings

Authorized Official (print) _____

Authorized Official (signature) _____ Date 09/20/2022

For City Use Only:

Vendor No. _____

Entered Date _____

SECTION 00 70 00
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION,
AIA DOCUMENT A201 - 2007

PART 1 – GENERAL

This section includes the GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA Document A-201, that is to be used for this Project. The document has been electronically modified to meet the City of Mobile's requirements and shall be used for the project.

DRAFT AIA® Document A201® - 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

«WESTERN ADMINISTRATION COMPLEX »
«RECYCLING CENTER RELOCATION »
«4851 Museum Drive »
«Mobile, Alabama 36608 »

THE OWNER:

(Name, legal status and address)

«CITY OF MOBILE »
«ARCHITECTURAL ENGINEERING DEPARTMENT »
«P.O. Box 1827 »
«Mobile, Alabama 36633-1827 »

THE ARCHITECT:

(Name, legal status and address)

«DELL CONSULTING, LLC »
«813 Downtowner Boulevard, Suite D »
«Mobile, Alabama 36693 »

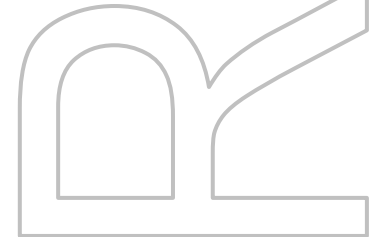
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- 12 UNCOVERING AND CORRECTION OF WORK

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.



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- 13 MISCELLANEOUS PROVISIONS
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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

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

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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

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

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

§ 1.3 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.

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

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

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

§ 1.6 Notice

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

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

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk

and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 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. 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 shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

§ 2.5 Owner's Right to Carry Out the Work

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

ARTICLE 3 CONTRACTOR

§ 3.1 General

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

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 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 any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

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

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. 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.

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

§ 3.4 Labor and Materials

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

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

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

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

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

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

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

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

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. 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.

§ 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 and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

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

§ 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.

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

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

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

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and

other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

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

§ 3.13 Use of Site

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.

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

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

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect 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 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, 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 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.

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 will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

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

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

§ 4.2.4 Communications

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

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

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise

such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

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

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

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

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

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

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

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

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with 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.

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

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

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

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

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

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

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

§ 7.2 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.

§ 7.3 Construction Change Directives

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

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

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

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

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

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

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

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, 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 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

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

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

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

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

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

§ 8.3 Delays and Extensions of Time

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

§ 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.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

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

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, 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.

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

and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, 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.

§ 9.4 Certificates for Payment

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

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

§ 9.5 Decisions to Withhold Certification

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

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

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

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

§ 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 make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

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

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

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

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

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

§ 9.6.8 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.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

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

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

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

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

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

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

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

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

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

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

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

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

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; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings

against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

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

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

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

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

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, 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 in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, 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), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 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.

§ 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 the jurisdiction where the Project is located. The Owner, 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 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 Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to

provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 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 request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

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

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner 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.

§ 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 other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

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

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

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

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

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

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 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 not executed, and costs incurred by reason of such termination.

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

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

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

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

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, 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.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

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

§ 15.1.2 Time Limits on Claims

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

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

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

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

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

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual 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 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker

and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

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

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve 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. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 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 binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. 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. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 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, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 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 any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF THE WORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provision of Contract, including General Conditions, and Division 01 or Specifications, apply to work of this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents
 - 2. Type of Contract
 - 3. Contract Duration
 - 4. Specification formats and conventions

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification
 - 1. Project Name: MX-004-25, Western Administration Complex – Recycling Center Relocation
 - 2. Project Location: 4851 Museum Drive, Mobile, Alabama 36608
- B. Engineers
 - 1. Survey / Civil: McCrory & Williams, Inc., 3207 International Drive, Suite G, Mobile, Alabama 36606
 - 2. Electrical / Plumbing: Dell Consulting, LLC, 813 Downtowner Blvd., Suite D, Mobile, Alabama 36609
- C. The Work consists of the following:
 - 1. Removal of compactor's existing concrete slab and privacy fence; all recycling related pavement striping and directional arrows; dismantling of existing service sink and water heater to be reused on new recycling structure; removal of existing electrical equipment, electrical service box, overhead power lines, and overhead conductors in this area; removal of existing water supply line, water spigots, floor drains, vent pipe, grade cleanouts, sanitary stub-ups, and associated piping; and removal and relocation of existing grease interceptors to new compactor location.
 - 2. Installation of new concrete pad with approach pad; 6-ft privacy fence; asphalt patching and repaving; parking lot striping, directional arrows, and concrete wheel stops; installation of new electrical service and site lighting; relocation of existing service sink faucet, point-of-use water heater, and associated insulated and weatherproof enclosure; domestic cold water piping and sanitary waste piping; installation of new vent through roof; and relocation of existing grease interceptor.

1.4 CONTINGENCY ALLOWANCE

- A. Include in the Contract the stipulated amount for use upon Owner's instruction. The Contingency Allowance total will be Ten Dollars and 00/100 (\$10,000.00).
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit are included in Change or Field Orders authorizing expenditure of funds from this Contingency Allowance.

1.5 SCHEDULE OF VALUES

- A. Submit Schedule of Values on AIA Form G703 within five (5) calendar days of notification of project award.

1.6 APPLICATIONS FOR PAYMENT

- A. Submit two signed and notarized originals of each application on AIA Form G702 and AIA Form G703. Submit Lien Release Waivers, including from subcontractors and major suppliers, with each pay application.
- B. Content and Format: Utilize Schedule of Values, AIA Form G703, for listing items in Application for Payment.
- C. Payment Period: Monthly, except for final payment of retainage after all Close Out documents are submitted and approved.

1.7 CHANGE ORDER PROCEDURES

- A. All contract changes involving a change in scope, payment and/or time shall be made by change order.
- B. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Owner.

1.8 ALTERNATE BID ITEMS

- A. Alternates quoted on Bid Form, if any, will be reviewed and accepted in the order listed.
- B. Coordinate related Work and modify surrounding Work as required.
- C. Schedule of Alternates: Listed on bid form, as applicable.

1.9 COORDINATION

- A. Coordinate scheduling, submittals, and Work at the facility to ensure an efficient and orderly sequence and to facilitate the continued uninterrupted use of the Facility.
- B. Request Utility interruptions at least 72 hours in advance. Note that due to scheduling in

the facility, utility interruptions must be approved.

1.10 FIELD ENGINEERING

- A. Establish elevations, lines, and levels and certify that elevations and locations of the Work conform to the Contract Documents. Verify existing conditions.
- B. Contractor shall field verify all measurements and quantities required for a complete installation.

1.11 PRECONSTRUCTION MEETINGS

- A. Owner will schedule a pre-construction meeting after contract award for all affected parties.

1.12 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at pre-approved intervals.
- B. Preside at meetings, record minutes, and distribute copies within two days to those affected by decisions made.

1.13 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within five (5) calendar days after date of notice of award of project for Project Manager's review.
- B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

1.14 SHOP DRAWINGS

- A. Shop Drawings for Review: Submit to Project Manager for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit four copies for use by the owner plus the number of copies that Contractor requires. Electronic submittals may be acceptable with prior approval of the Project Manager. Close Out documents shall include electronic and hard copies of all submittals.

1.15 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' written instructions.

- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- D. Supply certification from manufacturer that the installed Work meets or exceeds all manufacturers' requirements.

1.16 EXAMINATION

- A. Verify that existing site conditions and subsurfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that utility services are available, of the correct characteristics, and in the correct location.

1.17 PREPARATION

- A. Prepare surfaces prior to applying next material installation.

1.18 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate. Comply fully with manufacturers' tolerances.

1.19 REFERENCES

- A. Conform to reference standards by date of issue current as of date of Contract Documents.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Project Manager before proceeding.

1.20 ELECTRICITY

- A. Unless otherwise provided for, Contractor shall be allowed to utilize power from the facility in moderate amounts at no cost to the contractor, until electrical service is disconnected for new construction and after new electrical service has been inspected and connected. When site electricity is not connected, Contractor shall utilize portable generators and shall include pricing for said equipment in Base Bid.
- B. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

1.21 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain temporary lighting for construction operations as may be required.
- B. Provide branch wiring from power source to distribution boxes with lighting conductors,

pigtails, and lamps as required.

1.22 WATER SERVICE

- A. Owner shall provide suitable potable water in moderate quantities without cost to the Contractor.

1.23 TEMPORARY SANITARY FACILITIES

- A. Contractor needs to supply temporary sanitary facilities to the site and coordinate its location with the Project Manager. Facilities will also continue to be used by the public and shall be maintained clean and in a sanitary condition.

1.24 BARRIERS AND FENCING

- A. Provide barriers and fencing as needed to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from dust, debris and damage.

1.25 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections. Prohibit traffic or storage upon grass or paving surfaces.

1.26 SECURITY

- A. Provide security and facilities to protect Work and existing facilities from unauthorized entry, vandalism, or theft.

1.27 ACCESS ROADS & HAULING

- A. Maintain temporary access routes through the public thoroughfare and parking areas to serve the construction area as required without obstructing traffic or blocking access for facility staff or participants. Provide drive pads as required.
- B. Restore site to pre-construction condition. Fill ruts, replace broken or damaged amenities, sod, and other disturbed areas.

1.28 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel on site. Do not block traffic.

1.29 PROGRESS CLEANING AND WASTE REMOVAL

- A. Collect and maintain work areas free of waste materials, debris, and rubbish on a daily basis. Maintain site in a clean and orderly condition. Provide refuse containers and dispose of construction debris legally off site. The Owner may request load tickets from landfills permitted to accept construction debris.

1.30 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials, prior to Substantial Completion review.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.31 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

1.32 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store, and protect Products in accordance with manufacturers' instructions.

1.33 PRODUCT OPTIONS

- A. Products Specified by Naming One Manufacturer or equal: Products of manufacturer named approved as "Basis of Design". Equal alternate products to be approved by Owner as Substitutions. Submit product data as required in SUBSTITUTIONS.

1.34 SUBSTITUTIONS

- A. Engineer/ Architect/ Project Manager will consider requests for Substitutions only within 10 days after date established in Notice to Proceed. For Pre-Bid approved Substitutions, submit request 14 calendar days or more before bid date with all back up data to show that all characteristics of the Basis of Design product are met with the substituted product or material.
- B. Document each request with complete backup data substantiating compliance of proposed Substitution with all characteristics of the materials specified in the Contract Documents.
- C. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
- D. Substitution shall indicate all product properties and show that they are equal to that Specified.
- E. Acceptance or Rejection of Pre-Bid Substitution Requests will be issued by Addendum.

1.35 FINAL CLEANING

- A. Execute final cleaning prior to final inspection of work area. User may occupy portions of the work incrementally as the work is completed and accepted. Entire project to be ready for use by User once all areas of work are completed.
- B. Clean debris from site and drainage systems.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the facility and the site. Leave site in raked and smooth condition.

1.36 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of Contract Documents to be utilized only for record documents.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section a description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Project Manager with claim for final Application for Payment.
- F. Submit (2) paper copies and Flash-Drive with PDF and AutoCAD .dwg copies to include:
 - a. As-built drawings and specifications
 - b. Approved submittals
 - c. Warrantees and guarantees
 - d. Certificate of Occupancy or Letter of Completion from Permitting Department or other agencies, as applicable.

1.37 WARRANTIES

- A. Product and Manufacturer's Warranties shall be provided per specifications.
- B. In addition, all materials and labor shall be warranted for a minimum of one year after Substantial Completion of the entire project, unless otherwise specified. Contractor to promptly repair all deficiencies within that time. A warranty inspection shall be scheduled by the Owner, with the Contractor and Owner's representative, before the end of the warranty period, in order to review the work and note deficiencies for the Contractor to correct. Said meeting may be waived if no deficiencies are noted.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Allowances will be utilized to:

1. Defer selection of certain items until more information is available.
2. Provide for discretionary installation of materials where exact and specific conditions cannot be determined in advance.
3. Provide for the discretionary use of labor where tasks and time frames cannot be determined in advance.

B. Include in Total Bid a stipulated lump sum allowance amount as specified in this Section.

1.3 ALLOWANCE

A. Include in the Total Base Bid a stipulated allowance(s) as indicated on the Bid Form for the use upon Owner's instruction. Upon Contractor inspection and Owner approval, any additional work that may be required, but not covered in the original Scope of Work (Base Scope Bid), shall be added to the scope and cost charged against the Contingency Allowance. Contractor's cost for products, delivery, installation labor, insurance, payroll, bonding, equipment rental and overhead and profit will be included in the Allowances. Contractor's markups on allowances are limited to 10% for subcontractor's work and 15% for his own forces.

B. Use of Contingency Allowance(s) shall be approved in writing by the Owner before any materials are ordered or work performed.

C. Upon completion of the Work, any unused portion of the Allowances shall be credited back to the City of Mobile in the form of a Change Order.

D. Contractor shall provide a detailed proposal of the work with overhead and profit broken out. Such proposals shall include proposals from subcontractors, also showing their detailed proposal with overhead and profit broken out.

1.4 SELECTION AND PURCHASE

A. Advise the Project Manager when final selection and purchase of allowance item must be complete to avoid delay.

1.5 SUBMITTALS

- A. Request for Use of Allowance: Submit proposals for approval that detail and break out costs for contractors and subcontractor's markups.
- B. After Use of Allowance: Submit invoices to show quantity delivered to the site for each allowance.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.1 INSPECTION

- A. Promptly inspect all Allowance items upon delivery. Immediately report any shortage, damage, or defects to Project Manager.

3.2 PREPARATION

- A. Coordinate materials and installation to assure that each item is integrated with related construction activities.

3.3 ALLOWANCE SCHEDULE

- A. Include as a Contingency Allowance the lump sum amount of Ten Thousand and 00/100 Dollars (\$10,000.00).

END OF SECTION

SECTION 01 29 73
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 GENERAL:

- A. Related requirements specified elsewhere:
 - 1. Scheduling and Sequencing
 - 2. Submittals
 - 3. Product Substitutions
 - 4. Construction Schedules
- B. Submit Schedule of Values to the Engineer, at least ten (10) days prior to submitting first Application for Payment.
- C. Upon request by Engineer, support values given with data that will substantiate their correctness.
- D. List quantities of materials specified under unit price allowances.
- E. Use Schedule of Values only as basis for Contractor's Applications for Payment.

1.02 FORM OF SUBMITTAL:

- A. Submit on AIA Document G-703 "Continuation Sheet", 1997 Edition, or other approved Format acceptable to the Engineer and Owner. Schedule of Values shall be submitted for approval.

1.03 PREPARING SCHEDULE OF VALUES:

(Unless directed otherwise in the General Conditions, follow the SOV guideline listed below)

- A. Itemize separate line item cost for each of following general cost items:
 - 1. Performance and Payment Bonds.
 - 2. Field Supervision and Layout.
 - 3. Temporary Facilities and Controls.
 - 4. Materials
- B. Itemize separate line item cost for work required by each section of this specification including General Conditions of the Contract. Itemization shall be such that the progress of the work can be clearly defined.
- C. Break down installed costs into:

1. Cost of component products, delivered and unloaded at job site. (List under Column F, G-703).
 2. Total installed cost, with overhead and profit. (List under Column C, G-703).
- D. For each line item which has installed value of more than \$20,000.00, break down costs to list major products or operations under each item.
- E. Round off figures to nearest \$1.00.
- F. Make sum of total costs of all items listed in schedule equal to total Contract sum.

1.04 REVIEW AND RESUBMITTAL:

- A. After review by Engineer, revise and re-submit Schedule (and Schedule of Material Values) as required.
- B. Re-submit revised Schedule in same manner.

END OF SECTION

SECTION 01 31 00

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. 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. Coordination drawings.
 - 4. Requests for Information (RFIs).
 - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Sections:
 - 1. Division 1 Section "Execution Requirements"
 - 2. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

1.4 COORDINATION

- A. Contractor shall be responsible for coordinating all trades of his contract, Owners Contractors, coordinating construction sequences and schedules, and coordinating actual installed location and interface of work.
- B. Contractor shall supervise and direct the development of coordination drawings showing comprehensive coordination and integration of all Work of this project including, but not limited to, structural, architectural mechanical, plumbing, fire protection, electrical disciplines, and Owners Contractors.

- C. Coordination drawings are intended to assist Contractor and all trades during construction and may be used to supplement shop drawings, record drawings, and other required submittals.
- D. Coordination: Each contractor shall supervise and direct construction operations with those of subcontractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with 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 performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- E. 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.
- F. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-installation conferences.
 - 7. Project closeout activities.
 - 8. Startup and adjustment of systems.
 - 9. Project closeout activities.

1.5 KEY PERSONNEL

- A. Key Personnel Names: Within 5 days of Notice to Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
 - 1. Post copies of list at site. Keep list current at all times.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Engineer/Architect will return RFIs submitted to Engineer/Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

1.7 PROJECT MEETINGS

- A. General: Attendance of Subcontractors and Superintendent at a weekly progress meeting is required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

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

1.02 DESCRIPTION:

- A. This section specifies administrative and procedural requirements for project meetings including, but not limited to:
 - 1. Pre-Construction Meetings
 - 2. Pre-Installation Meetings
 - 3. Progress/Schedule Update/Coordination Meetings
- B. The General Contractor will conduct the meetings listed above, in addition to those enumerated in other sections this specification, to ensure safe and quality execution of the project, and proper coordination of the work with building users and Owner's requirements.

1.03 PRE-CONSTRUCTION MEETING:

- A. The Engineer and Owner will schedule a pre-construction and organizational meeting prior to commencement of construction activities. The Engineer will conduct the meeting to review with the Contractor the Contractor's responsibilities and personnel assignments.
- B. Attendees: The Owner, the Engineer, the Contractor and his superintendent, major subcontractors, manufacturers, suppliers, and other concerned parties shall each be represented at the meeting. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance which could affect progress, including such topics as:
 - 1. Tentative overall construction schedule including critical sequencing or phasing.
 - 2. Critical path or critical sequence items.
 - 3. Tentative weekly work schedule and working hours.
 - 4. Work restrictions.
 - 5. Designation of responsible personnel, their duties, and accurate contact information.
 - 6. Procedures for processing field decisions and Change Orders.
 - 7. Procedures for RFIs.
 - 8. Procedures for testing and inspecting.
 - 9. Procedures for processing Applications for Payment.
 - 10. Distribution of Contract Documents and project correspondence.
 - 11. Use of the premises including office, work and storage areas.

12. Owner's occupancy requirements.
 13. Parking availability.
 14. Equipment and material deliveries.
 15. Temporary interruption of electrical power, HVAC, water, etc. (if any).
 16. Temporary occupation of interior spaces.
 17. Safety and security procedures.
 18. Housekeeping.
 19. Construction waste management and recycling.
 20. Preparation of record documents.
 21. Review of bid allowances and unit prices and how they would apply to the contract.
- C. Reporting: The Engineer will distribute meeting minutes to the Owner and to attendees designated by the Owner.
- 1.04 PRE-INSTALLATION CONFERENCES: Unless permitted otherwise, the following shall apply to the preinstallation conferences.
- A. The Contractor shall conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction, or as required by various Sections of this Project Manual or by Construction Drawings. Shop drawings shall be approved prior to the meeting and reviewed during the meeting. Contractor is to advise the Designer and Owner of scheduled meeting dates with at least a one-week notice.
 - B. Attendees: The installer and technical 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. Contractor and all subcontractor supervisory personnel are also required to attend. The designer shall also attend.
 - C. Reporting: The Designer will distribute meeting minutes to the Owner, all affected parties, and all meeting attendees. Significant discussions and agreements and disagreements of each conference, along with the approved schedule, will be recorded.
 - D. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the work and reconvene the conference at the earliest feasible date.
- 1.05 PROGRESS / SCHEDULE UPDATE / COORDINATION MEETINGS: Unless permitted otherwise, the following shall apply to the progress (OAC) meetings.
- A. The Contractor will conduct progress/scheduling update/coordination meetings every two weeks. The Owner may require these meetings to be conducted on a weekly schedule. The Contractor will notify the Owner and Engineer of scheduled meeting dates and locations. Dates of meetings will be coordinated with preparation of the monthly application for payment. Construction on in use facilities will likely require more frequent progress and schedule meetings.
 - B. Attendees: In addition to representatives of the Owner, Engineer, and Contractor, each subcontractor, supplier, or other entity concerned with current progress or involved in planning,

coordination, or performance of future activities shall be represented at these meetings by persons familiar with the project and authorized to conclude matters relating to progress.

- C. Agenda: Contractor shall prepare the meeting agenda. Distribute the agenda to all invited attendees. The following agenda items shall be included in the meeting agenda, and discussed in the meeting.
1. Review and correction or approve minutes of the previous progress meeting.
 2. Construction Schedule: The Contractor shall review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. If behind schedule, submit a recover schedule and secure commitments from parties involved to do so.
 3. Review the following topics for present and future issues:
 - a. Safety
 - b. Shoring needs and problems
 - c. Construction incidence reports
 - d. Coordination of construction activities with Owner's use of the facility
 4. Review the present and future needs of each entity present, including such items as:
 - a. Coordination or Interface requirements with Owner's use of facility.
 - b. Time
 - c. Submittals
 - d. Sequences of operations
 - e. Deliveries
 - f. Off-site fabrication problems
 - g. Access
 - h. Site utilization
 - i. Temporary facilities and services
 - j. Hours of work
 - k. Hazards and risks
 - l. Housekeeping
 - m. Quality and work standards
 - n. Change orders
 - o. Documentation of information for payment requests
 - p. RFI's
 - q. Field Observations
 - r. Pending claims and disputes
 - s. Deficiencies Log
- D. Reporting: After each meeting date, the Designer will distribute copies of minutes of the meeting to attendees. Significant discussions and agreements achieved will be recorded.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

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 and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Submittals Schedule.
 2. Contractor's Construction Schedule.
 3. Daily construction reports.
 4. Field condition reports.
 5. Construction Photographs.
- B. Related Sections include the following:
1. Division 01 Section "Schedule of Values".
 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 4. Division 01 Section "Quality Assurance, Control, and Documentation" for submitting a schedule of tests and inspections.
 5. Division 01 Section "Closeout Procedures" for submitting "As-Built Schedule" as Project Record Documents at Project closeout.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 2. Predecessor Activity: An activity that is linked to, and precedes another activity in the network.
 3. Successor Activity: An activity that is linked to, and follows another activity in the network.
- B. Schedule – A list of all distinct construction activities logically linked together to show the Contractor's planned sequence of work.

1. Preliminary Schedule – Schedule showing the Contractor’s planned sequence of work for the first 90 days of the project. This schedule is to include mobilization activities and procurement activities.
 2. Initial Schedule – The first schedule showing the Contractor’s planned sequence of all project activities. This schedule will serve as the baseline to measure progress of the work.
 3. Schedule Update – An update of the initial schedule showing current progress of the project.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. These relationships, and the activity durations, are used to calculate when activities can be performed, the duration of the project, and the critical path of the project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Float: The measure of leeway in starting and completing an activity.

1.4 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Section to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and Owner/Commissioning Authorities, and other information specified.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
1. Submit to Architect and Awarding Authority 3 printed copies and 1 working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (preliminary, initial (baseline) or updated) and date on label.
- C. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Architect's final release or approval.
- D. Daily Construction Reports: To be completed daily by contractor’s project staff. Submit to Architect and Awarding Authority at bi-weekly intervals.
- E. Field Condition Reports: Submit 2 copies of report to architect and 1 copy of report to City of Mobile PM at time of discovery of differing conditions.
- F. Construction Photographs: To be reviewed at each project meeting and to be submitted in a binder and on an electronic disk with close-out documents.

1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request. Reference Paragraph 3.1,A.
- B. Pre-scheduling Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's construction schedule, including, but not limited to, the following:
 - 1. Review software limitations and content and format for reports.
 - 2. Verify availability of qualified personnel needed to develop and update schedule.
 - 3. Discuss constraints, including phasing, work stages, area separations, interim milestones, and partial Owner occupancy.
 - 4. Review delivery dates for Owner-furnished products.
 - 5. Review Allowances and time required for procurement and installation.
 - 6. Review schedule for work of Owner's separate contracts.
 - 7. Review time required for review of submittals and resubmittals.
 - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 9. Review time required for completion and startup procedures.
 - 10. Review and finalize list of construction activities to be included in schedule.
 - 11. Review submittal requirements and procedures.
 - 12. Review procedures for updating schedule.

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit to the Architect and Awarding Authority a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.

2. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.
 - a. Submittal schedule to be incorporated directly into Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling" 2nd Edition. Use as a reference for additional definitions not included herein.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion to date of Final Completion.
 1. Contract completion date can be changed, at the Awarding Authority's discretion, by submission of a schedule that shows an early completion date, as allowed by the General Conditions to the Contract.
- C. Activities: Activities should be broken down and organized by floor, by elevation, and by work area. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than fifteen days, unless specifically allowed by Architect and Owner. An exception will be granted for procurement activities.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - a. Examples include, but are not limited to, structural components, limestone or pre-cast components, architectural trim, plumbing, heating/cooling/ventilation equipment, window systems, conveying equipment, specialty items, etc.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time: Include not less than seven days for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 1. Phasing: Arrange list of activities on schedule by phase. Allowances: Include a separate activity for each allowance item detailing when information is required from Architect, and when the Work for the allowance must begin so as not to affect the completion date.
 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 3. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 1 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 4. Owner-Furnished Products: Include a separate activity for each product.
 5. Work Restrictions: Show the effect of the following items on the schedule:

- a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, review inspections by review agencies, Pre-Install Conferences, Building Dry-in, temp-perm power, conditioned air, Certificate of Occupancy, Substantial Completion, and Final Completion.
- F. Resource / staffing: Should the contractor's progress fall materially behind the accepted initial schedule (30 days or more), the awarding authority can require the contractor to incorporate resource loading into the recovery schedule to indicate required staffing levels for each activity. This resource loading will show aggregate manpower requirements on a daily or weekly basis.
- G. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
1. Refer to Division 1 Section "Schedule of Values" for cost reporting and payment procedures.
- H. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis to demonstrate the effect of the proposed change on the overall project schedule.
- I. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules. See Article 9 of the General Conditions of the contract for further information.

2.3 CONTRACTORS CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. CPM Schedule: Prepare Contractor's Construction Schedule using a computerized, cost and resource loaded, time-scaled CPM network analysis program.
1. Submit schedule to the Architect and Awarding Authority in the time frame stipulated in the timeframe listed below.
 - a. For projects with an initial contract value of less than \$5,000,000.00 – Initial schedule within 10 days of Issuance of Letter of intent or Notice to Proceed.
 - b. For projects with an initial contract value of \$5,000,000.00 to \$20,000,000.00 – Preliminary schedule within 10 days of Issuance of Letter of intent or Notice to Proceed, and Initial schedule within 30 days of Issuance of Letter of intent or Notice to Proceed.
 - c. For projects with an initial Contract value greater than \$20,000,000.00 – Preliminary schedule within 15 days of Issuance of Letter of intent or Notice to Proceed, and Initial schedule within 45 days of Issuance of Letter of intent or Notice to Proceed.

2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meetings and payment request dates.
 3. Use “one workday” as the unit of time. Include a list of non-working days and holidays incorporated into the schedule.
 4. Failure to include any work item required for the performance of this schedule shall not excuse the Contractor from completing all work within the applicable completion dates, regardless of Architect or Owner approval of the schedule.
- B. CPM Schedule Preparation: Prepare a list of all activities required to complete the work. Determine the relationship of each activity to the other activities, and link the activities together to indicate the logical sequence of work.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities.
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility Interruptions.
 - g. Power outages or any utility shut downs must be given advance notice of 30 days and must be included in the CPM schedule.
 - h. Installation.
 - i. Architect and Owner Inspections.
 - j. Work by Owner that may affect or be affected by Contractor’s activities.
 - k. Testing and commissioning.
 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Schedule start and completion dates shall be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time
 4. Format: Mark the critical path: Locate the critical path near center of Network; locate paths with most float near the edges.
- C. Initial Issue of Schedule: Sort the initial submission of the network diagram “early start” date. Identify clearly all critical activities. Identify critical activities. Prepare Tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Principal events of activity.
 4. Immediate preceding and succeeding activities.

5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total float or slack time.
 9. Average size of workforce.
- D. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in cost-loading or resource-loading.
 8. Changes in the Contract Time.

2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 - a. Personnel count is to be broken down by subcontractor
 4. Equipment at project site.
 5. High and low temperatures and general weather conditions.
 6. Accidents involving injury or damage to equipment or work in place
 7. Meetings and significant decisions.
 8. Unusual events.
 9. Inspections of the work
 10. Stoppages, delays, shortages, and losses.
 11. Meter readings and similar recordings.
 12. Emergency procedures enacted
 13. Orders and requests of authorities having jurisdiction.
 14. Change Orders received and implemented.
 15. Construction Change Directives received.
 16. Services connected and disconnected.

17. Equipment or system tests and startups.
 - a. The City of Mobile intends to require the General Contractor's Daily Reporting to be done using a Call-in service administered by a third party provider. The daily reporting will be required by all Superintendents listed in the project's minimum general contractor staffing requirements.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare a detailed report. Submit with a request for information. Include a detailed description of the differing conditions and photographs illustrating the existing conditions, together with recommendations for changing the Contract Documents.
- C. Construction Photographs: Photographs to document pre-existing conditions and to regularly document construction progress.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Scheduling Consultant: Engage a 3rd party scheduling consultant to provide planning, evaluation, and reporting using CPM scheduling.
 1. In-House Option: Awarding Authority may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.
- B. Float: Float is a shared resource, available to both parties as needed. The Contractor shall not sequester shared float through such strategies as (a) extending activity duration estimates to consume available float, (b) using preferential logic, or (c) using extensive crew / resource sequencing, constraints, unnecessary milestones, leads or lags on logic ties, and hammock type activities. Since Float within the Construction Schedule is jointly owned, no time extensions will be granted nor delay damages paid until a delay occurs which extends the work beyond the contract completion date. Since float within the Construction Schedule is jointly owned, it is acknowledged that Trustees-caused delays on the project may be offset by Trustees-caused time savings (i.e., critical path submittals returned in less time than allowed by the contract, approval of substitution requests and credit changes which result in a savings of time to the Contractor, etc.). In such an event, the Contractor shall not be entitled to receive a time extension or delay damages until all Trustee-caused time savings are exceeded and the contract completion date is also exceeded.
- C. Weather Delays: Weather delays will be calculated as days lost for events in excess of the NOAA 30 year average for Mobile, AL (1971 - 2000). Weather delays will not be granted for rain events less than 0.1 inches. Weather delays will not be granted for activities that are not shown to be on the critical path of the schedule at the time of the event.
- D. Contractor's Construction Schedule Updating: At two-week intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 2. As the Work progresses, indicate Actual Completion percentage for each activity.
 3. At the end of the project, submit the As-Built schedule with actual start and finish dates to the owner as a close-out requirement.
- E. Distribution: Distribute copies of approved schedule to Architect, Awarding Authority, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Awarding Authority to receive both paper and working electronic copy of each update.
 3. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.
- F. Construction Schedule Software: The following CPM software shall be used.
1. For projects with a contract value of less than \$5,000,000, use Microsoft Project, Primavera P6, or other comparable software products.
 2. For projects with a contract value greater than \$5,000,000, use Primavera P6 or other comparable software product.
- 3.2 CONSTRUCTION PHOTOGRAPHS
- A. Photographic Process: Digital Imaging.
- B. Date Stamp: Unless otherwise indicated, date and time stamp each photograph as it is being taken so stamp is integral to photograph.
- C. Preconstruction Digital Photographs and Digital Video Recording: Before starting construction, take color photographs and digital video recording of Project site and affected City right-of-ways and surrounding properties and interior existing photos of affected areas from different vantage points. Show existing conditions adjacent to property.
- D. Periodic Construction Photographs: Periodic digital color photographs and digital file to be submitted in duplicate on disc and in print form at each pay request with the following views:
1. Exterior views of all distinct elevations on a weekly basis. Photographs of each elevation are to be taken from the same location throughout the project.
 2. Interior views of all levels of major spaces on a monthly basis. Of particular interest is the process of structure, mechanical (ductwork, equipment, plumbing, and sprinkler systems), electrical, partitions and interior finishes.
 3. Roof: Views of all roof areas on a weekly basis during periods when work is occurring on or adjacent to the roof.

4. Field Office Prints: Retain one set of prints of periodic photographs in field office at Project site, available at all times for reference. Identify photographs the same as for those submitted to Architect.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Submittal Procedure
 - 2. Submittal Schedule
 - 3. Shop Drawings
 - 4. Product Data
 - 5. Samples

1.3 SUBMITTAL PROCEDURES

- A. Number each submittal with Project Manual specification Section number and sequential number within each section. Number resubmittals with original number and an alphabetic suffix.
- B. Identify Project, Contractor, Subcontractor or supplier, pertinent Drawing sheet and detail numbers, and specification Section number, as appropriate.
- C. Submit all submittals simultaneously for each Produce or Specification Section. Where multiple Products function as an assembly, group submittals for all related Products into single submittal.
- D. Project Manager will not review incomplete submittals.
- E. Apply Contractor's stamp, signed or initialed certifying that:
 - 1. Submittal was reviewed.
 - 2. Products, field dimensions, and adjacent construction have been verified.
 - 3. Information has been coordinated with requirements for Work and Contract Documents.
- F. Schedule submittals to expedite the Project, and deliver to Engineer and Project Manager. Coordinate submittal of related items.
- G. For each submittal, allow 14 days for Engineer's review, excluding delivery time to and from Contractor. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of completed Work.
- H. Revise and resubmit submittals when required; identify all changes made since previous submittals.

- I. Distribute copies of reviewed submittals to concerned parties and to Project Record Documents file. Instruct parties to promptly report any inability to comply with provisions.

1.4 SUBMITTAL SCHEDULE

- A. Submit a submittal schedule showing all submittals proposed for project, including:
 1. Submittals for Review
 2. Closeout Submittals.
- B. Include for each submittal:
 1. Specification section number.
 2. Description of submittal.
 3. Type of submittal.
 4. Anticipated submittal date.
- C. Submit three (3) hard copies and one (1) PDF copy, concurrently.

1.5 SHOP DRAWINGS

- A. Present information in clear and thorough manner.
- B. Identify details by reference to sheet and detail numbers or areas shown on Drawings.
- C. Reproductions of details contained in Contract Documents are not acceptable.
- D. Submit four (4) hard copies and one (1) PDF copy (concurrently). One hard copy and a PDF copy will be returned to Contractor for printing and distribution.

1.6 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, and other data.
- B. Supplement manufacturers' standard data to provide information unique to this Project.
- C. Submit 3 copies. Project Manager will return one copy to Contractor for printing and distribution.

1.7 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment of devices. Coordinate sample submittals for interfacing work.
- B. Where so indicated, submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Project Manager's selection.
- C. Include identification for each sample, with full Project information.

- D. Project Manager will notify Contractor of approval or rejection of samples, or of selection of color, texture or pattern if full range is submitted.

END OF SECTION

SECTION 01 40 00

QUALITY ASSURANCE, CONTROL, & DOCUMENTATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes administrative and procedural requirements for quality assurance and quality control.

1.02 GENERAL

- A. Control System: The Contractor shall establish and maintain a system for documenting, monitoring, inspecting, verifying, and testing of the work and that of his subcontractors to ensure that all applicable requirements of the contract documents are met. The Contractor shall be diligent to ensure that the quality of workmanship is satisfactory, that the installation meets all manufacturer requirements, that dimensional requirements are met, that defective materials are not used, and that all required protection and control and laboratory testing procedures are effected. Where specific testing procedures are not stipulated, the Contractor shall establish and conduct a test procedure to ensure adherence to specified quality.
- B. Chain of Control: The Contractor shall plan, coordinate, execute, and examine the work to ensure the complete, workmanlike, and warrantable installation of all materials in a system or element of the construction.
 - 1. The Contractor shall plan, coordinate, execute, and examine the work to ensure that all underlying, substrate, or contiguous work is installed as required to meet the tolerances and requirements for the correct installation of subsequent work.
 - 2. It is the responsibility of the Contractor to advise the Architect no later than the submittal phase of any discrepancies in the requirements or tolerances of materials or components in a system or element of the construction.

PART 2 – PRODUCTS

2.01 QA / QC PROGRAM

- A. The Contractor shall submit for Owner's Approval their program format 10 (ten) days from Notice to Proceed.
- B. Once work has begun, the QA / QC manual must be kept up-to-date and approved by Owner's Field Coordinator and Project Manager prior to the current Pay Application being approved.

2.02 MOCK UPS

- A. Mock-ups shall be used to judge workmanship, execution of details, and colors for all exterior material elements. No work shall be started on any of the exterior material elements until such time the mock-up is completed by the Contractor, and accepted / approved by the City of Mobile.

2.03 DOCUMENTATION

- A. Documentation shall be by specification section or by system or element of the construction. The documentation shall be formatted in a comprehensive and collated manner to ensure ease of use and reference. A Table of Contents shall be provided. The Contractor's system shall include, but is not limited to the following:
- B. Pre-Installation Conference

- C. Agenda shall include Review of items 1 through 13 below
 - 1. Inspection and Testing requirements
 - 2. Correct environmental conditions for execution of the work and protection of the completed installation.
 - 3. Schedule including required inspections.
 - 4. Requirements and tolerances of underlying, substrate, or contiguous work.
 - 5. Manufacturer's Recommendations, Requirements, and Instructions.
 - 6. Review of requirements to ensure an enforceable warranty
 - 7. *Manufacturers' Technical Representative shall be present whenever possible and when required by Specification Section*
 - 8. Specifications
 - 9. Disposition of Submittals, Product Data, Shop Drawings and Mock ups (when required).
 - 10. Test Results
 - 11. Packaging labels from Materials where possible
 - 12. Periodic, Dated Photos of the work being performed and any other documentation that pertains to the warranty of the material or structure
 - 13. Samples of the material when reasonable, or specified.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION QUALITY CONTROL MEETING

- A. The Contractor shall schedule a meeting with the Awarding Authority, Architect, Project Superintendent, and all major trade Superintendents to review the contractor's proposed QA/QC system and requirements for compliance.

3.02 INSPECTIONS

- A. The Contractor shall make an initial inspection of each phase of work as soon as a representative portion has been completed, and the Contractor shall make follow-up inspections as required, to ensure that an acceptable quality of work is established and maintained.
- B. The Contractor shall perform a pre-final inspection, prepare a punch list, and work off all items prior to A/E inspection. Contractor shall provide copy of completed report, certifying it's completion to the Architect prior to the Architect beginning his inspections.
- C. The Contractor shall coordinate and plan inspections by the Architect and Awarding Authority in a timely manner to ensure that all parties can be scheduled so as not to impede the flow of the work.

3.03 CLOSEOUT:

- A. The documents generated through this process are to be submitted as part of the closeout documents.
- B. Provide a list of following for all equipment including but not limited to the following:
 - 1. Model Number
 - 2. Serial Number
 - 3. Description
 - 4. Contract Document Reference
- C. Filter and Belt list for each air handler

END OF SECTION

SECTION 01 56 00

CLEANING UP

PART 1 - GENERAL

1.01 REMOVAL OF DEBRIS:

- A. All debris and waste materials shall become the property of the Contractor and the Contractor shall be responsible for removal of the debris from the project site on a daily basis.
- B. Demolition debris shall be removed in covered trucks or other method that prevents debris, litter, dust, etc. from falling onto streets, sidewalks or soil. Streets, sidewalks and other public and private spaces shall be kept clean and free from demolition debris at all times.
- C. The Contractor shall be responsible for the cleanup of streets, driveways, sidewalks, and landscaping. Failure to clean promptly (within one day's notice) will result in the Owner having areas cleaned and deducting costs for same from the Contractor's contract.
- D. No storage of debris or trash will be allowed on the exterior of the building unless in an approved container.
- ~~E. The Contractor shall be responsible for cleanup of existing windows, roofs, etc.~~
- F. All debris shall be documented (dump tickets acceptable). During project close-out, a debris report will be required. Debris Report must include weight of debris.

1.02 DUST AND DEBRIS:

- A. The Contractor shall not allow debris and dust to accumulate for more than one day before removing such from adjacent public streets and driveways as a result of the work of this project. At no time shall any accumulation be allowed which will create a hazard to safety or which will create bad public relations. No construction debris is allowed to run into existing storm water drains.
- B. The measures to be used to prevent littering the pavement shall include (but does not constitute the only measure to be used, if necessary) the following:
 - 1. Maintain dust control.
 - 2. Wash and/or sweep paved areas.
 - 3. Pick up droppings as they occur.
 - ~~4. Clean existing windows, roofs and landscaped areas.~~
- ~~C. Preventative measures shall be taken to prevent debris from falling onto vehicles from work performed at upper elevations of the deck.~~

- D. In facilities under use during the project, Contractor shall take necessary measures to limit dust intrusion into areas of the facility in use. Owner shall have sole discretion for judging if dust in areas under use by occupants is too severe.

1.03 CLEANING UP: Before final inspection and acceptance of the project, clean work under the contract, including adjacent pavements and parking deck concrete surfaces.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 60 00

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 General:

- A. Material shall be new and without any indication of damage or overage. If usually packaged bring to job in original unbroken labeled containers. Materials not specified but required, shall be of a grade equal or superior to related parts of work
- B. Products include materials, equipment and systems.
- C. Comply with Contract Documents and referenced standards as minimum requirements.
- D. Do not use or remove from site any materials and equipment removed from the existing structure, except as specifically required or allowed by Contract Documents.
- E. All construction procedures and materials used in the work for this project shall comply with the following:
 - 1. Contract Documents
 - 2. Applicable Manufacturer's Specifications
 - 3. Accepted standards/practices
 - 4. Applicable building codes, both national and local
- F. Color Selections: The Designer'/Owner's color schedule will be prepared for color only; it will not justify deviations from Contract requirements (such as changing of finish material, type of paint, etc.) which must be made by Change Order. Where color numbers and names conflict, secure instructions before proceeding.
- G. Foreign Materials: In accordance with State Law, provide only materials manufactured, mined or processed in the United States or its territories, provided same are available at reasonable prices.

1.02 WORKMANSHIP:

- A. Work shall be performed by persons qualified to produce workmanship and quality specified.
- B. The Construction Manager's designated Superintendent shall provide full-time on-site supervision.

1.03 MANUFACTURER'S INSTRUCTIONS:

- A. Work shall be performed in accordance with the Material Manufacturer's specifications as modified by the Contract Documents.
- B. Conflicts between the Contract Documents and the Material Manufacturer's specifications shall be brought to the attention of the Project Manager prior to beginning construction. Work in this area shall not proceed until conflicts are satisfactorily resolved by Project Manager.
- C. Provide Material Safety Data Sheets (MSDS) for all materials brought on the site.

1.04 TRANSPORTATION AND HANDLING:

- A. Transport products by methods to avoid product damage; deliver all materials with Manufacturer's labels intact and legible.
- B. Provide equipment and personnel to handle products by methods to prevent damage.

1.05 STORAGE AND PROTECTION:

- A. The following are considered minimum requirements. Additional storage and protection requirements are specified in individual sections of the specifications.
- B. Store all materials so as to maintain clean, dry, weather tight conditions and to protect against loss, damage, and wetting. Materials indicating moisture contents above the specified level shall be marked, rejected for installation, and removed from the site.
- C. Materials temporarily stored on the scaffold or floor shall be located in approved areas and shall be distributed in such a manner as to stay within the allowable load limits.
- D. Materials subject to moisture intrusion and damage shall be stored on clean, dry, and raised platforms so as to prevent wetting or moisture absorption and yet provide sufficient ventilation to prevent condensation. These materials shall be covered so as to be completely weather tight. Factory-applied wrapping shall be unacceptable as the sole means of protection.
- E. Any materials which when subject to moisture intrusion may have a detrimental effect on the installation or performance of other components of the roofing system, shall be stored as indicated in Items 1.05, B. and D.

1.06 PRODUCT OPTIONS:

- A. The Contractor shall submit list of materials proposed in accordance with Section 01 33 00
- B. Product Selection: Provide products according to the following.
 - 1. Products specified only by referenced standards: Any product meeting that standard.

2. Products specified by naming several manufacturers: Products of any named manufacturer meeting Specifications unless specific approval of other brand is obtained in writing. Comparison of substitute brands will be with the first name of those listed.
 - a. By requesting approval of or by making a substitution, the Contractor shall certify that the product substituted is in all respects equal to, and will function equally well in the project, as the product specified. The Architect/Engineer, at his discretion may require the certification in writing.
3. Whenever any material or piece of equipment is identified on the plans or in the Specifications by reference to a single manufacturer's name, model numbers, etc., without the phrase "or approved equal", this material or equipment shall be supplied as specified without consideration to any other manufacturer. Any deviation from this requirement must be approved in writing by the Designer prior to the receipt of bids.
4. When the Specifications and/or Drawings indicate two or more manufacturer's names or brands for materials or equipment to be used, it shall be assumed that the phrase "or approved equal" is inserted following the naming of manufacturers, whether such phrase occurs in the Specifications or not. However, if the Contractor desires to use a substitute, it must secure written approval by the Designer. If a request to substitute an "approved equal" is made by the Contractor, and not approved by the Designer, then it will be expressly understood that all such material and equipment so named or described by any one of the manufacturers listed in the Specifications and/or Drawings will be furnished in full accordance with the Contract Documents.
5. Brand Names: Mentioned herein to establish a standard of design and quality. Except when indicated in subsequent sections in regard to each particular item. Qualified pre-bid approval may be given to various vendors at their request on products for which pre-bid approval is not required; such approvals will be communicated only to the vendor.

Where three or more manufacturers are listed, the product must be furnished by one of the manufacturers so listed unless specific approval of other brand is obtained in writing. Comparison of substitute brands will be with the first name of those listed.

1.07 SUBSTITUTIONS:

Prior to commencing work, the Project Manager will consider requests from the Contractor for substitutions. Substitutions will then be considered according to the procedures as presented in Section 01 63 00 of this Project Manual.

1.08 INSTALLATION

Install, apply, connect, clean and operate all materials and equipment per manufacturer's directions and recommendations. In the event of conflict between specifications and manufacturer's directions, obtain instructions from Engineer.

1.09 REFERENCE TO APPLICABLE STANDARDS:

- A. Whenever reference is made to codes, standard specifications, or other data published by regulating agencies or accepted organizations, it shall be understood that such reference is made to the latest edition (including addenda) published prior to the date of the Contract Documents, except as noted specifically otherwise by date in the Contract Documents. By reference, this data becomes a legal part of this specification and shall provide the standard for the work unless otherwise noted in this project manual.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 63 00

SUBSTITUTION PROCEDURES

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. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
 - 1. Divisions 2 through 16 Sections for specific requirements and limitations for substitutions and pre-bid approvals.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced.
 - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

- c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. 6"x12" Samples of each finish material in proposed pattern and color.
 - e. Certificates and qualification data.
 - f. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - g. Cost information, including a proposal of change, if any, in the Contract Sum (not applicable for pre-bid Submittals).
 - h. Impact of substitution on construction schedule.
 - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - j. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Project Manager's Action: If necessary, Project Manager will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Project Manager will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Project Manager Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Project Manager does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 73 00

EXECUTION REQUIREMENTS

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. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Environmental concerns.
 - 2. Installation of the Work.
 - 3. Cutting and patching.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.
- B. Related Sections:
 - 1. Division 1 Sections "Summary of the Work" and "Project Record Documents" for submitting closeout documents and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.

3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate how long services and systems will be disrupted.

1.5 QUALITY ASSURANCE

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 1 Section "Project Management and Coordination."
- D. Surface and Substrate Preparation: Comply with manufacturer's recommendations for preparation of substrates to receive subsequent work.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of **96 inches, but in no case shall the new piping be lower than the existing piping.**

- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect / Engineer.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous, and meet environmental requirements.

3.4 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 1 Section "Summary of Work"
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Exterior Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

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

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Utilize containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.

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

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

1. Remove liquid spills promptly.

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

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

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

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

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

H. Clean completed construction as frequently as necessary through the remainder of the construction period.

3.6 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in other Division 2 -16 Sections."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in other Division 2-16 Sections.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass, lenses or reflective surfaces.

3.9 ENVIRONMENTAL CONCERNS

- 1. Provide protection and conduct construction in ways that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

3.10 STORMWATER CONTROL AND DISCHARGE

1. Comply with City of Mobile and Alabama Department of Environmental Management requirements. Pay particular attention to Water Regulations and Allowable Discharges.
2. See City of Mobile Code, Chapter 17, Storm Water Management and Flood Control.
3. Obtain any necessary permits that may be required due to discharges.

END OF SECTION 01 73 00

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL:

1.01 GENERAL REQUIREMENTS:

- A. When project construction reaches 75% complete, a 75% Closeout Meeting with the City of Mobile (CoM) Project Manager and the Contractor is required to review in detail all requirements for completing and closing out the project. When project construction reaches 95% complete, a Closeout Meeting with CoM Contract Administrator, the Contractor, Project Architect/Engineer, and others as appropriate is required to further review requirements for project close out.
- B. Except as noted, delivery of items listed hereunder are prerequisites for release of final retainage as indicated on the contractor's application for payment.
- C. All required warranties and guarantees will commence upon date of Certificate of Substantial Completion.
- D. Closeout Submittal Requirements:
 - 1. (1) Copy of Operation and Maintenance manuals (properly tabbed and indexed). See General Conditions of the Contract and specification sections regarding Shop Drawings & Submittals. Operation and Maintenance manuals are to be submitted during construction but no later than 30 days prior to contract completion date.
 - 2. (1) Closeout Binder labeled "Closeouts" including Mobile project name and job number with all applicable items in order as listed under "Project Closeout Items"
 - 3. Electronic closeout submittals in PDF file format of the following:
 - a) (1) copy of the Operation and Maintenance manuals
 - b) (1) copy of all applicable "Project Closeout Items"
- E. Projects must be closed within 60 (sixty) days of Certificate of Substantial Completion.
(This means all close out documents have been reviewed and accepted by The Awarding Authority.)

1.02 PROJECT CLOSEOUT ITEMS:

- A. Furnish the following items in order to successfully close out a project:
 - 1. As-Built Drawings and specification mark-ups must be reviewed by project team for completeness.
 - 2. Operation and Maintenance Manuals
 - a) GC to upload into active projects Closeout Documents folder on CoM's e-Builder site (*PDF Format*)
 - b) GC to submit one (1) hard copy with closeout binder

- c) A/E to provide confirmation on letterhead that all O&M's have been uploaded to Mobile's e-builder site
3. Completed Training sessions for Owner's personnel as required per project specifications (*Attendees sign-in sheets required*)
4. Certificate of Occupancy from City (*original required*)
5. Approved HVAC Test and Balance Report **and** Documented Functional Performance Testing by the Commissioning Agent (*if applicable*)
6. Control Drawings are to be complete and available for review (*if applicable*)
7. Fire Alarm Certification (*copy is acceptable*)
8. Carpet Certifications (ASTM Standards for Flame Spread and Smoke Development) – See Specs if applicable
9. State Elevator Inspection Report (*if applicable*)
10. Boiler Permit/Inspection Report (*if applicable*)
11. City of Mobile Project Manager to complete the following:
 - a) Confirm Design Team submitted AutoCAD 3D (.dwg) files of the site plan, site utility plans, and site power plans to the city's Architectural Engineering Dept. Plans to be referenced to the Alabama West Zone Grid NAD 1983.
12. Construction Record Documents:
 - a) "As-Built Drawings" – submitted electronically on a USB Flash Drive (PDF and AutoCAD .dwg Format)
 - (1) All field red-lines incorporated, external references bound and "As-Built" indicated in title block.
 - (2) Submit electronic copy to A/E for approval
 - b) Control Drawings (Bond Copy) – submitted electronically on a USB Flash Drive (PDF Format)
 - c) Final Conformance Specifications – submitted electronically on USB Flash Drive (*PDF and Microsoft Word Format*)
 - d) PM to confirm all of the above as received prior to closeout with Contract Administrator.
13. Proof of Advertisement of Completion - Certified by a locally published newspaper of general circulation, in accordance with Title 39, Section 39-1-1 of the Code of Alabama
14. Affidavit of Release of Liens from GC only, on AIA Document G706A form. Release of Liens - from GC and all subs
15. GC and Subcontractor Warranties - Standard (1) year & any extended that may be required by specific specification sections.
16. Extended Manufacturer's Warranties
17. Roof Warranties - Standard Five-Year (ABC Form C-9) plus additional warranties required in

the specification sections.

18. Delivery of Maintenance Stock Items as Specified - See Specs for specific requirements - Furnish signed receipts
 19. Receipt for return of all keys - Transmit to CoM Project Manager
 20. Elevator Requirements (if applicable, in addition to Item 8 above)
 - a) Executed elevator maintenance agreement (*copy, if applicable*)
 - b) Reminder: PM to confirm all elevator submittals are complete
 21. Termite Contract (copy is acceptable)
 22. Fully Executed CERTIFICATE OF SUBSTANTIAL COMPLETION, AIA Document G704
 23. GC to provide copy of executed Final Change Order Form as part of close-out binder.
 - a) Cover sheet only with all signatures, must include all reconciliations (*previous errors, allowances and /or unit prices*).
 24. CONSENT OF SURETY FOR FINAL PAYMENT (*date of Power of Attorney must be same or later than date indicated on Consent of Surety*)
 25. Certification that final punch lists items have been completed
 26. Utilities; Confirmation that all have been transferred into "City of Mobile" name
 27. Construction Debris Report; Submit estimated tons of construction debris hauled off from project site on GC letterhead.
 28. Equipment List for Maintenance and Replacement Parts - Provide a list of all equipment (*i.e. water heaters, air handlers, etc.*) with model numbers, serial numbers and warranty periods. Include filter and belt list for each air handler unit
 29. Minority and Woman-Owned Business (MWB) Subcontracts Form
 30. Subcontracting and Major Supplier Plan Form
- B. Items A.1 through A.10 above must be complete and reviewed by A/E prior to scheduling a final inspection with CoM and are a condition precedent to issuing Certificate of Substantial Completion.
- C. When applicable all Davis Bacon and DBE (Disadvantaged Business Enterprise) requirements must be reported and final submission on file with the CoM before closeouts are considered complete.
- D. GC is required to determine requirement for Submission of other documentation may be required in the Specifications and Construction Drawings.
- E. All closeout Documents are to be submitted within 45 days of substantial completion. If not submitted within 45 days the Awarding Authority, with no further notice required, may elect, at its sole discretion, acquire all outstanding required documents, and the actual cost thereof will be deducted from the contract.

1.03 INSPECTIONS:

- A. Final Inspection: For a Certificate of Substantial Completion (COSC) to be issued the Final Inspection must be conducted by the Architect, Engineers & CoM Project Manager, and appropriate Public Officials upon notification by Contractor and concurrence by Architect, Engineer & CoM that

project is complete. Punch lists prepared at inspections shall be corrected within thirty days of the date of the COSC.

- B. Year-End Inspection: To be conducted jointly by Architect, Engineer, CoM Project Manager, and appropriate Public Officials approximately 1 year after completion and upon notice by Architect, Engineer, CoM Project Manager, and Public Officials. Any and all defects will be expected to be remedied as soon as possible.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 02 20 00

GENERAL SITE WORK REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE:

The work under this section shall cover the construction of building pads, streets, grass / landscape / hardscape areas, and parking lots (where applicable) as shown on plans. The work shall include, but is not limited to, unclassified excavation, embankment, under-cut, rock excavation, subgrade processing, and base course.

1.2 RELATED SECTIONS:

- A. Section 01 41 26 - Storm Water Monitoring and Temporary Erosion Control
- B. Section 03 30 00 – Cast In Place Concrete
- C. Geotechnical Report

1.3 PAYMENT:

No separate payment shall be made for these items unless specifically identified in the Bid Proposal. Any items not specifically identified in the Bid Proposal shall be considered incidental to the lump sum cost of the project.

1.4 REFERENCES:

- A. ALDOT Standard Specifications for Highway Construction, latest edition are hereby incorporated by reference.
- B. ALDOT Special and Standard Highway Drawings, latest edition.
- C. National Manual on Uniform Traffic Control Devices, latest edition.

1.5 CONSTRUCTION STAKING:

All construction staking shall be the responsibility of the CONTRACTOR. All staking shall be performed under the supervision of a licensed professional land surveyor or registered professional engineer in the State of Alabama.

1.6 BENCHMARKS AND MONUMENTS:

- A. All benchmarks, control monuments and stakes, whether newly established by the OWNER or previously existing, shall be carefully maintained and protected from damage or dislocation.
- B. If any discrepancies are found by the Owner's Representative between the drawings and actual conditions at the site, the Owner's Representative reserves the right to make such minor adjustments in work specified hereunder as are necessary to accomplish the intent of the Contract Documents, without increased cost to OWNER.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Unclassified Excavation:
 - 1. Unclassified Excavation shall include all necessary stripping excavation and stockpiling (including topsoil), subgrade excavation, and any necessary undercut excavation of unconsolidated soils specifically included (includes backfill material in such areas).

Material unsuitable for use in embankments as structural fill shall include:
-Organic silts
-Organic clays of medium to high plasticity
-Peat or other highly organic soils
 - 2. All suitable on-site excavation, less topsoil and roots, that is performed as indicated by the contract drawings or directed by the Owner's Geotechnical Representative may be recovered, processed, and used as embankment (structural) fill provided the soils have appropriate moisture contents from excavation areas.
 - 3. Existing asphalt and concrete materials may also be incorporated back into embankment as structural fill material if they are sufficiently broken up and all steel reinforcement is removed. Asphalt and concrete materials that are to be re-incorporated into the embankment shall be broken up so that no particle size exceeds three (3) inches in maximum diameter, and in no case shall these materials be used in the top eighteen (18) inches of embankment areas or within eighteen (18) inches of bottom of footings, slabs, or other structural items.
 - 4. The stability of the subgrade after reaching planned grade in cut areas, undercut areas, and before embankment or backfill placement, shall be assessed and/or evaluated under the direction of the Owner's Geotechnical Representative. Areas that are deemed unsuitable material shall be treated as recommended by the Owner's Geotechnical Representative. The Owner's Geotechnical Representative shall be present and direct all subgrade suitability evaluations on the project.
 - 5. Contractor shall minimize any and all equipment on the exposed subgrade beneath

the existing concrete pavement when such is removed and during grading operations.

6. Unclassified excavation shall include any over-excavation of subgrade as required by the Owner's Representative. Any over-excavation required shall be considered unclassified excavation.

B. Embankment Fill:

1. All materials entering the embankment shall be free of organic matter such as leaves, grass, roots, and other objectionable material.
2. The embankments and structural fill materials, including off-site borrow, shall consist of clayey sands, silty sands, or sandy clay soils which are classified using the Unified Soil Classification System as SC, SM, or CL with the plasticity index between 5 and 25. Sandier soils and soils containing gravel may be suitable for use as embankment structural fill as recommended or approved by Owner's Representative based on field and laboratory data. All material shall be placed in successive horizontal layers of not more than 8 inches in loose thickness for the full width of the cross sections compacted to 98% of the soil's maximum dry density in accordance with ASTM D-698. Embankment fills shall be moistened or aerated to $\pm 3\%$ of optimum moisture as determined by ASTM D-698 in order to facilitate obtaining the specified compaction. No material shall be placed on surfaces that are muddy, frozen, or that contain frost.
3. The material in each layer of fill shall be of the proper moisture content before rolling to obtain the required compaction. Wetting or drying of the material and manipulation when necessary to obtain a uniform moisture content throughout the layer may be required.

C. Undercut:

Contractor shall anticipate undercut will be performed at all locations that unconsolidated or unsuitable material is encountered as determined by the Owner's Geotechnical Representative. The Owner's Geotechnical Representative shall determine the areas and limits of such undercut. The Owner's Geotechnical Representative shall be notified immediately if such material is encountered by the Contractor. Any removal of such material prior to approval of Owner's Geotechnical Representative shall be at the Contractor's expense, including all necessary structural fill and compaction.

D. Subgrade Processing

1. The site will be graded under this contract to the grades indicated on the construction plans, but as a minimum be graded such that positive drainage is obtainable across the entire site into proposed or existing drainage structures at all times during and after construction in order to alleviate deterioration of the subgrade surface. Any remediation necessary as determined by the Owner's Geotechnical Representative due to subgrade deterioration caused by the

Contractor, as a result of actions not taken by the Contractor to keep areas drained and protected from moisture, or areas not sealed off in the time frames as specified for the pavement replacement areas shall be performed by contractor at the direction of the Owner's Representative at no additional cost to the project. The roadbed and all other areas shall be constructed to the elevation designated on the plans in accordance with the requirements of 2.01A and 2.01B of this section. Any excess or unsuitable material shall be removed from site immediately.

2. Density requirements shall be in accordance with ASTM D-698 and have an In-Place density of 98% maximum dry density. The moisture requirement at the time of the In-Place Density test shall be $\pm 3\%$ of the optimum moisture content as established by the Proctor Density Report.

E. Base Course (for concrete pavement, sidewalks, and unit paver areas)

1. Crushed Limestone Aggregate Base course shall be of material meeting the requirements as stated in Section 825 Type "B" Crushed Aggregate Base of the Alabama Department of Transportation Standard Specifications, Latest Ed., with all material being crushed limestone per Owner requirements.
2. A base of up to six (6") inch compacted thickness may be constructed in one layer. Unless otherwise shown on the plans, a base of over six (6") inches shall be constructed in approximately equal layers each not over five (5") inches compacted thickness.
3. Compaction testing shall be performed in accordance to ASTM D-698 and have an In-Place Density of 100% Standard Proctor Density. The moisture requirement at the time of the In-Place Density test shall be $\pm 2\%$ of the optimum moisture content as established by the Proctor Density Report.

F. Topsoil Replacement and Subgrade Preparation for All Disturbed Areas, and Landscape, Lawn, Grass Areas as Designated on Landscaping Plan

1. Prior to any construction, contractor shall investigate and document condition of existing grades and if large concentrations of stone or deleterious material are present in any portion of the project area. Documentation shall include photos and areas shall be indicated on plan prior to beginning any construction.
2. Contractor shall anticipate fine grading of all disturbed areas associated with the project. Any excess or spoil material shall be removed from site. All costs associated with fine grading, additional embankment fill, or removal and disposal of excess material shall be incidental to the project.
3. All removal and disposal of temporary stones, 1" or greater, for roadways, construction accesses, sidewalks, drives, construction, etc. shall be incidental to the project. It is the General Contractors' responsibility to fully remove, at no

additional cost to the owner, these temporary materials as the project is completed. This applies to all materials, equipment, etc. the contractor transports to the project. No such material shall be allowed to be wasted on site.

4. All prepared subgrades within the top six (6) inches of the trenches shall be 85% stone free. Subgrades that contain more than 15% stone in any 12" x 12" area shall be removed and replaced, by the general contractor at no additional costs to the Owner. Contractor to replace soil in such areas with acceptable subgrade material to be approved by Owner's Representative.
5. After all excavation, concrete, curb, gutter, and sidewalks have been completed, topsoil shall be replaced on excavated or disturbed areas as directed by the Owner's Representative to a minimum depth of four (4) inches.
6. Preparation of subgrade in areas mentioned in preceding paragraph shall follow City of Mobile Construction Standards as follows:
 - a. In areas that have not been altered or disturbed by excavation, grading, or stripping operations, prepare subgrade as follows:
 - i. Till to a depth of not less than six (6) inches to a homogeneous mixture of fine texture, free of lumps, clods, or stones larger than one (1) inch in greatest dimension.
 - ii. Remove all foreign materials, including any and all extraneous materials such as lumps, clods, stone, roots, concrete, rubble, or any other debris from landscape area(s) in excess of one (1) inch in greatest dimension.
 - a. Subgrade must be at least 85% soil.
 - iii. Eliminate uneven areas and low spots so as to ensure proper positive drainage towards drainage areas, and provide gradual grade change(s) of ground elevations.
 - iv. Re-till soil to a homogeneous mixture of fine texture, free of lumps, clods, or stones larger than one (1) inch in greatest dimension, roots, and other extraneous material.
 - b. In all others areas, prepare subgrade as follows:
 - i. Scarify subgrade to a depth of not less than six (6) inches.
 - ii. Remove all foreign materials, including any and all extraneous materials such as lumps, clods, stone, roots, concrete, or rubble larger than one (1) inch in greatest dimension, or any other debris from landscape area(s).

- iii. Spread minimum of four (4) inches topsoil. Topsoil shall be placed in such a manner to ensure positive drainage towards drainage areas, inlets, etc.
- c. General notes for all landscape areas shall be as follows:
 - i. Topsoil material and subgrade preparations shall be performed during dry weather. CONTRACTOR shall be responsible for coordinating with and providing advance notice to OWNER (twenty-four (24) hour minimum) for inspection and acceptance of subgrade in landscaping areas prior to placement of topsoil. Any topsoil placed prior to approval of subgrade by OWNER shall be removed by CONTRACTOR at no additional costs to the project.
 - ii. Any foreign materials shall be removed while spreading of topsoil.
 - iii. There shall not be any rocks or debris greater than one (1) inch in greatest dimension.
 - iv. Near existing trees / plants, sidewalks, curbs, concrete surfaces, fencing, walls, buildings, other hardscape or structures, topsoil shall be spread manually to prevent damage to such.
 - v. All topsoil shall be rolled in-place, including area as specified in paragraph 2 above.
 - vi. Fertilizer shall be applied at a rate required by topsoil analysis. Apply lime at rate required to achieve pH range between 5.0 and 7.0. Fertilizer and lime shall be thoroughly mixed into the upper two (2) inches of topsoil prior to rolling.
 - vii. Topsoil shall be placed so that no potential for water to stand and / or percolate behind curbs or pavement surfaces so that integrity of curb or paved surfaces are not affected by such.
- 7. Landscaping and Topsoil Material requirements as per City of Mobile Construction Standards for Landscaping and Topsoil
 - a. It is the intent to segregate from other excavation, stockpile, and re-purpose existing topsoil on the project to be used as topsoil replacement.
 - b. In the event adequate quantity of topsoil is not stockpiled on-site, the CONTRACTOR shall provide topsoil meeting all the below requirements for topsoil material from an off-site source:
 - i. Topsoil material used shall be equivalent to Bama Sandy loam.
 - ii. Permeability rate for topsoil material shall be 0.60 to 6 inches per hour.

- iii. Topsoil material shall have low shrink – swell potential.
 - iv. pH range shall be between 5.0 and 7.0.
 - v. Minimum organic matter of 2.0%.
 - c. Topsoil shall be free of viable noxious weed seed or vegetation propagules. Contractor shall be responsible for applying necessary chemicals to topsoil to rid material of such weed seed or vegetation propagules.
 - d. At the discretion of Designer, topsoil shall be tested for physical properties, organic content, pH range, and nutrient content by a recognized soils lab to be selected by the Owner. All costs associated with the soils testing for topsoil shall be the responsibility of the Owner. The soils lab shall provide instructions on the proper method of taking soil samples, and shall determine rate of fertilizer and / or lime application necessary to meet topsoil material requirements. The contractor is responsible for adhering to such requirements as recommended by the soils testing lab. The Contractor shall provide Owner a minimum of 48 hours' notice in advance of taking soil samples for proper coordination and observation by Owner. Soil test shall be submitted and approved by Owner prior to any topsoil being transported or placed on-site.
 - 8. All costs associated with grading of site to accommodate topsoil placement, subgrade preparation, and actual topsoil placement (from off-site or on-site source), fine grading of such topsoil, removal and off-site disposal of all excess or unsuitable material, clean-up, removal of any and all stone, debris, etc., preparation of subgrade testing, or other items associated with such work shall be incidental to the project.
 - 9. Any and all areas disturbed during construction shall be replaced to the original condition or better at no additional cost to the project. All grades, existing or proposed, shall be blended together in a seamless manner and grassed.
- G. Curb, Gutter, and Sidewalks
- 1. All curbs, gutters, sidewalks, and unit paver band shall be constructed of Class A, Type 2 mix.
 - 2. All concrete mixes for curbs, gutter, and sidewalks shall have a minimum 28 day strength as specified on the construction plans.
 - 3. All curbs shall be machine formed/poured except for tie-ins and areas not suitable to machine installation (ADA ramps, connections to existing inlet boxes, sharp radii, bends/breaks etc.)

PART 3 - EXECUTION:

3.1 SOIL TESTS, COMPACTION AND INSPECTION:

- A. A soil testing laboratory shall be employed by the OWNER to perform compaction test and/or any other materials testing deemed necessary by the Owner.
- B. All testing referred to herein shall be paid for by the OWNER. Where tests fail to certify required limits, the cost of subsequent retesting shall be borne by the CONTRACTOR.
- C. The frequency of testing shall be as recommended in the geotechnical report or as per Owner's geotechnical representative.

3.2 CLEAN-UP:

Contractor shall be responsible for ensuring no debris, silt, stone, concrete, etc. or any other material is deposited or migrates into any of storm sewers, sanitary sewers, electrical/telecommunication duct banks, or any other utility systems during construction. Owner reserves the right to request Contractor to provide video, digital photos, or other methods of inspection of such at any time during construction and/or before issuance of Certificate of Substantial Completion. Contractor shall immediately clean out and remove, debris, material, etc. in such utility systems, and shall be responsible for inspection of such systems during the project to monitor any items in system.

END OF SECTION

SECTION 02 21 02

EXISTING UTILITIES

PART 1 - GENERAL

A. EXISTING UTILITIES

1. The Contractor shall be responsible for the protection of all existing utilities. Where existing utilities are interrupted, damaged, or taken off line for connection to other facilities, or are taken out of service for any reason associated with the work, the Contractor shall work expeditiously and non-stop thru meals, breaks, after hours, thru weekends, holidays, etc. to return the utility to service as soon as possible. Where the Contractor plans to remove existing utilities from service with the prior expressed approval of the utility and the Owner, the Contractor shall coordinate with persons, businesses, or parties that may be affected by the temporary loss of service.
 - a. If shown in the drawings, the Contractor shall install all conduits, equipment pads, pedestals, etc., for each private utility company. The installation and materials shall be approved and to the satisfaction of each private utility company representative before the underground conduit system shall be turned over to each private utility company to install below ground utilities. The Contractor shall not relinquish ownership of the conduit system until all below ground utilities are pulled/installed and the systems are energized/activated, allowing the retirement of above ground utilities.
 - b. All coordination with private utility companies is the sole responsibility of the Contractor. Proper scheduling of private utility company crews to install new services and retire existing services shall rest on the Contractor's timely, advance coordination of the overall project schedule with each private utility company. There shall be no additional contract time granted for the Contractor's failure to coordinate in a timely fashion with the private utility companies.
2. Any adjustments (temporary or otherwise), protection, support, removal, relocation, or repairs, etc. to utilities shall be performed by the utility (at the expense of the Contractor). Alternatively, if the utility owner desires, such activity shall be performed by the Contractor at his expense in a manner meeting the approval of the utility.
3. Verification of Existing Utilities - Prior to any excavation, the Contractor shall be responsible for unearthing all known utilities to confirm the location and depth of such utility(s) sufficiently far enough in advance to allow for any necessary adjustment(s) of the vertical or horizontal alignment of any proposed new utility or structure, if necessary. If any such conflict(s) are discovered, all information shall be provided to the Owner's Representative in order to allow proper time for any necessary design adjustments.

END OF SECTION

SECTION 02 41 16

SITE DEMOLITION

PART 1 – GENERAL

A. SUMMARY

1. This section includes the following:
 - a. Demolition and removal of existing site structures such as but not necessarily limited to light poles and bases, storm / sanitary structures, concrete and asphalt pavement, curbs, gutters, sidewalks, walls, brick columns, fencing, etc.
 - b. Disconnection, capping / sealing, and removing existing site utilities.
 - c. Disconnection, capping / sealing, and abandoning existing site utilities in place. This shall include grout filing the abandoned utilities entirely in place with low strength grout.

B. DEFINITIONS

1. Remove: Items to be removed and legally disposed of by the Contractor except any such item(s) designated to be reinstalled or reused, salvaged, or to remain property of the Owner.
2. Remove and Salvage: Items indicated to be removed and salvaged by the contractor but to remain as property of the Owner. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers. Load, transport, unload, and place in area as designated by the Owner.
3. Remove and Reinstall: Items designated to be removed and re-used and / or reinstalled by the Contractor. This shall include any and all cleaning, servicing, and preparation of any such items for reuse, along with any temporary storage or protection against damage.
4. Existing to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by the Owner and at the discretion and cost of the Contractor, items may be removed to a suitable, protected storage location during demolition and then cleaned and reinstalled in their original locations.

C. OWNERSHIP OF MATERIALS

1. Except for items or materials indicated to be reused, salvaged, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.
2. Historical items, relics, and similar objects including, but not necessarily limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Owner, which may be discovered and / or encountered during demolition or construction shall remain the Owner's property if deemed so by the Owner. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Owner. Cooperate with Owner's archaeologist or historical adviser prior to removal and manner in which item(s) are to be removed, transported, and placed in Owner's possession by the Contractor.

D. SUBMITTALS

1. Schedule and sequence of demolition activities indicating as a minimum the following:
 - a. Detailed sequence complete with start and end dates and times.
 - b. Indicate notification dates to the Owner and /or utility owners.
 - c. Dates, times, and duration of utility service disruptions.
2. Proposed dust and noise control measures.
3. List of times to be removed, salvaged, and retained by the Owner.
4. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by demolition and construction operations.
5. Location (GPS coordinates), vertical elevation, type, size, etc. of capped utilities, either abandoned or remaining in service.
6. Landfill records for hazardous waste disposal. Documentation shall include receipt and acceptance of such material. Landfill facility shall be properly licensed to accept such hazardous waste, with proof to be included with submitted documentation.

E. QUALITY ASSURANCE / CONTROL

1. Comply with any and all governing State, Local, EPA notification regulations or requirements prior to beginning any demolition. Hauling and disposal regulations of authorities having jurisdiction shall also be followed.
2. Qualifications: Engage experienced personnel that have successfully completed demolition work similar in nature to this Project.
3. Pre-demolition Conference shall be scheduled simultaneously with the owner and any impacted utility owner(s) on-site a minimum of forty-eight (48) hours prior to beginning any demolition.

F. PROJECT CONDITIONS AND SCHEDULING

1. Evaluation of the demolition items and determination if asbestos is present shall be coordinated by the Contractor with the Owner. The Owner, or a representative of the Owner will examine and make the determination if asbestos or other hazardous material(s) exists. Should asbestos be present, it will be the Contractor's responsibility to secure pricing from a properly licensed company to perform removal and disposal of such asbestos material. It shall be the Contractor's responsibility to coordinate removal of all material. The cost of all associated work with the removal, transporting, disposal, etc. shall be the responsibility of the contractor. The Contractor shall submit to the Owner's Representative a certified letter stating that all asbestos has been removed and provide tickets for the disposal location.

2. Sale or storage of items or materials to remain the property of the Contractor once removed and salvaged by the Contractor shall be immediately removed from the project site. No on-site storage of such items or materials shall be permitted.
3. Demolition, removal, and salvage operations schedule shall not interfere with the day to day use of the site or the surrounding areas by the Owner. All elements associated with such work shall be performed in such a manner to not disturb on-going activities of the Owner.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

A. Existing Conditions

1. Contractor shall be responsible for verifying all utilities have been properly located and disconnected in areas of required demolition.
2. Contractor shall confirm the existing conditions and any necessary requirements associated with any utility outages necessary for completion of the demolition.
3. Contractor shall conduct field observations and document the condition of items designated to be demolished, salvaged, and / or re-used.
4. Contractor shall identify any potential hazards associated with the demolition activities.

B. Utilities

1. Contractor shall be responsible for the location of all existing utilities prior to beginning demolition work.
2. Disconnection and shut-down of existing utility services shall be coordinated by the contractor without the appropriate utility company and the Owner. No services shall be turned off without prior coordination, communication, and approval from the utility company(s) and Owner.
3. All utilities indicated to be removed shall be excavated and removed as necessary. Any trench backfill shall follow the trench backfill requirements as specified in other sections of these specifications.
4. All existing utilities indicated to be abandoned in-place shall be completely filled with a low strength grout material with a liquidity as required so that all voids are filled in the abandoned utility. All existing chemicals, gases, flammables, or other dangerous materials, along with any liquids, solids, etc. shall be completely drained, purged, otherwise removed, collected, and properly disposed of before proceeding with abandoning, grout filling, or removal of such abandoned utility.

C. PREPARATION FOR DEMOLITION ACTIVITIES

1. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
2. Demolition operations shall be conducted in such a manner to prevent injury to pedestrians along with damage to adjacent buildings, streets, utilities, and facilities to remain. A safe and protected passage for pedestrians around the demolition area(s) shall be provided by the contractor. As a minimum, the following shall be provided:
 - a. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways where required by authorities having jurisdiction.
 - b. Protect existing site improvements, appurtenances, and landscaping to remain.
 - c. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
3. Shoring, bracing, supports, etc.: Provide and maintain any shoring, bracing, structural support, etc. as necessary to preserve the stability and prevent movement, settlement, or collapse of existing retaining walls, buildings, utilities, etc. in the area of the demolition. Any additional measures required after the initial supports have been installed will be required as deemed necessary by the Contractor, the Owner's representative(s), and / or the Owner.
4. Explosives: Use of any explosives shall not be allowed without written consent from the Owner and any authorities having jurisdiction. Consent from the owner or jurisdictional entities shall not in any way relieve the Contractor of all responsibility and liability to injuries or other damages to property due to the use of such explosives. The contractor shall be responsible for any and all pre-blasting observations, reports, documentation, etc.
5. Pollution Controls: Water mist, temporary enclosures or covers, or any other means, methods, techniques to limit the spread of dust, dirt, or debris shall be the responsibility of the Contractor.
 - a. Hazardous conditions such as ice, flooding, and pollution when using water shall be avoided or mitigated.
 - b. Remove and haul debris in such a manner that spillage onto existing surfaces shall be prevented.
 - c. Any dust, debris, dirt, etc. caused by the demolition process on existing buildings, streets, structures, vehicles, etc. shall be immediately cleaned by any and all means necessary as directed by the Owner at the sole expense of the Contractor.

D. DEMOLITION

1. Demolition of any items below the proposed subgrade shall be as follows:
 - a. Any foundation wall, footings, supports, etc. shall be removed a minimum of eighteen (18) inches below the proposed subgrade.
 - b. Concrete or asphalt surface may be broken up into particle sizes for areas below the subgrade. Otherwise, all should be removed from the project area.
 - c. Any items of old debris such as trolley rails and / or ties, tanks, vaults, etc. shall be completely removed unless written consent that such items may remain is provided by the Owner. Cost of any such removal shall be the sole responsibility of the Contractor.
 - d. ~~All earthen fill resulting from the demolition process shall follow Section 31-2000, Earth Moving.~~

2. Demolition Material Disposal
 - a. All material and debris removed from the project shall be disposed of off-site at a location of the Contractor's discretion. Disposal shall follow any and all local, State, or Federal requirements.
 - b. No dumping of material on adjacent property(s) or burial of such material shall be allowed.
 - c. Burning of perishable debris or material on-site will not be allowed unless written consent is provided by the Owner. If written consent for such burning is provided by the Owner, the contractor shall still remain responsible and liable for all pollution and environmental control of such burning activities.

END OF SECTION

SECTION 03 20 00
CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

1.02 SCOPE:

A. Work Included in This Section:

1. Extent of concrete reinforcement as shown on the Drawings.
2. The work includes fabrication and placement of reinforcement for cast-in-place concrete, including bars, ties, supports and accessories.

B. Related Sections:

1. Cast-in-Place Concrete (Section 03 30 00)

1.03 INDUSTRY STANDARDS:

A. References: Some products and execution are specified in this section by reference to published specifications or standards of the following (with respective abbreviations used). Reference is to the latest edition of the standard referenced.

American Concrete Institute (ACI)

The American Society for Testing and Materials (ASTM)

American Welding Society (AWS)

Concrete Reinforcing Steel Institute (CRSI)

American Iron and Steel Institute (AISI)

B. Standard References: The current edition of the following standard references shall apply to the work of this section. Suffixes indicating date of issue are omitted from reference numbers used in the text. Work shall comply with the following standards and codes unless indicated otherwise on the Drawings or herein:

1. Publications of the American Concrete Institute:

ACI 117 "Standard Specifications for Tolerances for Concrete Construction Materials"

ACI 301 "Specifications for Structural Concrete for Buildings"

ACI 315 "Manual of Standard practice for Detailing Reinforced Concrete Structures"

2. Publications of the American Welding Society:

AWS D1.4 "Structural Welding Code – Reinforcing Steel, including Metal Inserts and Connections in Reinforced Concrete Construction:

AWD D1.1 "Structural Welding Code:

3. Publications of the Concrete Reinforcing Steel Institute:

"Manual of Standard Practices"

4. Publications of the American Society for Testing and Materials:

ASTM A82 "Specification for Steel Wire, Plain, for Concrete Reinforcement:

ASTM A185 "Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement"

ASTM A615-S1 "Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement:

ASTM A617 "Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement"

ASTM A706 "Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement"

1.04 SUBMITTALS:

A. Shop Drawings: To be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, and other sections of these Specifications.

1. Use of sepia transparencies of Contract Drawings for shop drawings will not be acceptable. Only shop drawings checked and stamped "Approved by Contractor and Fabricator" will be accepted for review. Show placing plans, bending details and bar lists.
2. Show reinforcing in elevation views, with location of laps and accessories indicated clearly. Show reinforcing steel in plan views, with laps clearly shown and located.

Show details, bar clearances, notes, and necessary information for placing of reinforcing steel.

- B. Mechanical Splices: Submit manufacturer's technical data methods and procedures for installing mechanical splices. Data shall include a complete description of the splice method, installation instructions and certification that the splicing method meets the performance requirements of this Specification.
- C. Reinforcing Test Reports: Furnish (in triplicate) certified mill test reports on reinforcing steel used in work.

1.05 DELIVERY, STORAGE AND HANDLING:

- A. Reinforcing steel shall be delivered to the project site properly tagged, bundles and ready to place.
- B. Reinforcing steel delivered to the project site (and not immediately placed in forms) shall be protected from mud, excessive rust-producing conditions, oil, grease, or distortion. Reinforcing steel shall be stored off ground on heavy timbers.
- C. Use all necessary precautions to maintain identification after bundles are broken.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Reinforcing Bars: Reinforcing steel shall conform to one of the following ASTM Standards, latest edition, except that weldable reinforcing steel meeting the requirements of both ASTM A706 shall be used where reinforcing steel is specifically noted on the Drawings to be welded to embedded steel plates and other shapes.
 - 1. "Standard Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement", ASTM A615-S1, Grade 60.
 - 2. "Standard Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement", ASTM A617, Grade 60.
 - 3. "Standard Specification for Low Alloy Steel Deformed and Plain Bars for Concrete Reinforcement".
- B. Wire Fabric: Welded wire fabric shall be electrically welded wire fabric of cold-drawn wire of gauge and mesh shown on the Drawings or as required and shall conform to "Specifications for Steel Welded Wire Fabric for Concrete Reinforcement", ASTM A185 except that for wire with a specified yield strength exceeding 60,000 psi, weld strength shall be the stress corresponding to a strain of 0.35 percent. Wire for welded wire fabric shall be made of wire conforming to ASTM A82, "Specification for Steel Wire, Plain, for Concrete Reinforcement". Welded wire fabric shall be fabricated in sheets.

- C. Mechanical Splices: Mechanical splices shall be Cadweld "C" Series as manufactured by Erico Products, Dayton Bar Grip or other as accepted by the Engineer. Include spacers, ties, chairs, bolsters and other devices required to properly support, space, and secure the reinforcing steel and post-tensioning tendons in their proper places in accordance with the Drawings and recommendations of the CRSI "Manual of Standard Practice". Chairs and other accessories shall be Class I or Class II in accordance with CRSI. Parts in contact with exposed concrete surfaces shall be stainless steel (AISI 302 or 304). The locations and types of accessories shall be shown on the shop drawings. Accessories required by other trades shall be furnished by other trades and included under this section.

PART 3 - EXECUTION

3.01 FABRICATING AND PLACING TOLERANCES:

- A. General: Reinforcing steel shall be fabricated to shapes and dimensions indicated on Drawings, and in compliance with applicable provisions of ACI 301, ACI 318, and ACI 117.
- B. Field Bending: Bars may not be bent or re-bent in the field, unless specifically indicated on Drawings or accepted in writing by the Engineer.
- C. Fabricating and Placing Tolerances:
1. Reinforcing bars shall be fabricated and placed to meet the tolerances of ACI 117 except as noted herein.
 2. Bars used for concrete reinforcement shall meet the following requirements for fabricating tolerances:
 - a. Sheared length: +/- one inch.
 - b. Overall dimension of stirrups and ties: +/- one-quarter inch.
 - c. All other bends: +/- one inch.
 3. Bars and wire fabric shall be placed to the following tolerances:
 - a. Concrete cover to formed surfaces: +/- one-quarter inch.
 - b. Top bars in beams, girders and slabs:

Members more than 8" deep: +/- one-half inch.
Members 8" deep or less: +/- one-quarter inch.
 - c. Horizontal tolerance from vertical surfaces: +/- one-quarter inch.
 - d. Vertical bars in columns: +/- one-half inch.

- e. Vertical and horizontal bars in walls: +/- one-half inch.
 - f. Lengthwise of member: +/- two inches.
 - g. Wire fabric: + one and one-half inches from tops of slabs-on-grade or topping slabs.
4. Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits or embedded items where approved by the Engineer. If the bars are moved more than one bar diameter or enough to exceed the specified tolerances, the resulting arrangement of bars shall be subject to approval by the Engineer.

3.02 WELDING:

- A. When approved by the Engineer in writing, welding of reinforcing steel shall conform to "Structural Welding Code - Reinforcing Steel, including Metal Inserts and Connections in Reinforced Concrete Construction" (AWS D1.4). No welding shall be done at the bend in a bar. Welding of cross bars (tack welding) shall not be permitted.
- B. When welding reinforcing bars to plates and structural shapes, the preheat requirements of both metals shall be considered. The minimum preheat requirement shall be the higher of the value given for the reinforcing steel in Table 5.2 of AWS D1.4 or the value given for the structural steel in Table 4.3 of AWS D1.1.

3.03 PLACING:

- A. Unless shown or noted otherwise on the Drawings, minimum concrete protective covering for reinforcement in cast-in-place concrete shall be as follows:
 - 1. Concrete deposited against the ground: 3".
 - 2. Formed surfaces exposed to weather or in contact with the ground: 2".
 - 3. Interior surfaces: 1.5" for beam stirrups and column ties and 1.5" for slabs and walls. Beam and column bars shall be anchored against stirrup and ties.
- B. Reinforcement, at the time concrete is placed, shall be free of mud, oil, or other materials that may adversely affect or reduce the bond. Reinforcing steel that has developed rust due to exposure to the weather during storage on the project shall be cleaned of all loose rust and corrosion protection.
- C. Splices for column vertical bars shall be mechanical or lap splices as shown on the Drawings. Mechanical splices shall be installed and inspected in strict accordance with the manufacturer's printed instructions.
- D. Metal, plastic, or other approved bar chairs, bolsters, and spacers shall be furnished and installed over formwork. Where the concrete surface will be exposed to weather in the

finished structure, or where rust would impair architectural finishes, the portions of accessories in contact with the formwork shall be stainless steel or non-corrosive polymer materials. Nails shall not be driven into formwork to support reinforcement.

- E. Splices and offsets in reinforcement in beams, slabs and girders at points of maximum stress shall not be made. Splices shall be approved by the Engineer and shall be sufficient to transfer the stress between the bars. The character and design of each splice shall conform to the requirements of ACI 318.
- F. Reinforcing steel shall be cut and shop-fabricated and delivered to the project properly tagged, bundled and ready to place.
- G. Bars shall not be bent after being embedded in hardened concrete.
- H. Bars with kinks or bends not shown on Drawings shall not be placed. The heating of reinforcement for bending or straightening will be permitted only if the entire operation is approved in advance by the Engineer.
- I. The minimum clear distance between parallel bars shall be equal to 1.5 times the nominal diameter of the bar. In no case shall the clear distance between the bars be less than 1" or less than 1.33 times the maximum size of the coarse aggregate.
- J. The Contractor shall securely maintain the metal reinforcement accurately in place until the concrete is placed. Disturbances of reinforcing shall be fully corrected prior to placing of concrete, and damaged bar supports and spacers shall be repaired or removed and replaced.
- K. Bars shall be extended beyond stress points the development length of the bar or terminated with an ACI-approved hook with the embedment required for development of hooked bars.

3.04 SECURING REINFORCEMENT:

- A. Reinforcing bars shall be supported and wired together to prevent displacement by construction loads, or by placing of concrete, beyond tolerances as set forth hereinbefore.
 - 1. Mats of reinforcing steel in slabs-on-grade shall be properly supported on bricks and shall be tied securely prior to placing concrete.
 - 2. The setting of mats of steel on grade and "hooking up" will not be permitted.
- B. Maintain steel reinforcement securely and accurately in place until concrete is placed.
- C. Use bar bolsters on side-forms for concrete walls and piers.
- D. Disturbances of reinforcement shall be corrected prior to placing of concrete. Damaged bar-supports and spacers shall be repaired or shall be removed and replaced.
- E. To ensure proper placement of dowels for piers or columns, templates shall be furnished for each dowel.

- F. Steel reinforcement shall be discontinuous at construction and control joints in concrete slabs on grade

3.05 WELDED WIRE FABRIC:

- A. Welded wire fabric shall be lapped at least one mesh plus end extension of wires, but not less Than 6".
- B. Wire fabric shall be placed so as to secure it positively at a position 1/3 of slab thickness below top of slab for slabs on grade, or as indicated on Drawings.
- C. Welded wire fabric shall be discontinuous at construction and control joints in concrete slabs on grade.

3.06 SHOP DRAWINGS:

- A. Shop drawings shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, except as noted herein.
 - 1. Concrete walls shall be shown in elevation. The location, elevation and dimension of each opening, offset, beam pocket, etc., shall be shown on the elevations. Reinforcing steel shall be shown on these elevations with the locations of splices, laps and ends clearly indicated.
 - 2. Column reinforcing shall be shown in schedule format with the elevation of mechanical splices shown.

3.07 SPLICES OF REINFORCEMENT:

- A. Splices and offsets in reinforcement shall not be made at points of maximum stress.
- B. Splices shall be as accepted by the Engineer. Splices shall provide sufficient lap to transfer required stress.
- C. Stagger splices of adjacent bars and mechanical splices whenever possible.
- D. Character and design of each splice shall conform to requirements of ACI 318. Minimum splice shall be 36 bar diameters, or Class B, whichever is greatest.

3.08 FIELD QUALITY CONTROL:

- A. Review of Placement of Reinforcing Steel:
 - 1. Engineer or his designated representative shall be given advance notice of not less than 24 hours prior to placing concrete to allow review of reinforcing steel.

2. Engineer or his designated representative shall be given notice required hereinbefore and shall be given opportunity to review (for correction) placement of reinforcing steel before placing of concrete. Any concrete placed without acceptance by the Engineer or his designated representative will be subject to rejection.
3. Review of placement of reinforcement in a section will be made only after placement of the reinforcing steel for that section is complete.
4. Such reviews shall not relieve Contractor of his responsibility to provide work in accordance with requirements of Contract Documents. Such reviews are for the purpose of minimizing errors in field work.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

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. Related Sections include the following:
 - 1. Division 03 20 00 – Concrete Reinforcement
- B. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- C. Work Included in this Section:
 - 1. Cast-In-Place concrete for new concrete placement, concrete repairs, and miscellaneous concrete not addressed in other portions of the project specifications. Specification 03 30 00 shall not apply when a manufactured polymer modified cementitious repair material is used.
 - 2. In general, this work includes providing cast in place concrete consisting of Portland cement, fine and coarse aggregates, selected admixtures, mixing, transporting, placing, finishing, and curing as herein specified.
 - 3. This section further includes related items of quality control, testing, and evaluation of concrete strength.

1.3 INDUSTRY STANDARDS:

- A. Reference: Some products and execution are specified in this section by reference to published specifications or standards of the following (with respective abbreviations used):

American Concrete Institute (ACI)

The American Society for Testing and Materials (ASTM)

- B. Standard References: The current edition of the following standard references shall apply to the work of this section as indicated. Suffixes indicating issue date are omitted from reference numerals elsewhere in the text. Concrete work shall comply with the following standards except as indicated otherwise on the drawings or herein:

ACI 117	"Standard Specifications for Tolerances for Concrete Construction Materials"
ACI 301	"Specifications for Structural Concrete"
ACI 306.1	"Standard Specifications for Cold Weather Concreting"
ACI 305	"Hot Weather Concreting"
ACI 214	"Recommended Practice for Evaluation of Compressive Test Results of Field Concrete"

ACI 212 "Guide for Use of Admixtures in Concrete"

1.4 SUBMITTALS REQUIRED FROM THE CONTRACTOR:

- A. Submittals shall comply with Section 01 33 00 of these specifications. Unless otherwise specified in Section 01 33 00, submit four copies of all required information. Provide drawings in the form of one reproducible and two prints for each sheet.
- B. Unless otherwise specified in Section 01 33 00, submit the proposed design mix for each class of concrete specified herein. The cost of the design mix shall be paid for by the Contractor. See mix design requirements in this section.
- C. Submit to the Engineer, each week, records of all concrete placements showing exact location of placement, date of placement, quantity of placement, and class of concrete placed.
- D. The data reported in the mix design submittals shall be as specified in Section 2.02 of this document.

1.5 PRE-CONSTRUCTION CONFERENCE:

- A. At least 14 days prior to installation of the concrete repairs, the Contractor shall hold a pre-construction conference to review the detailed requirements for preparing the concrete design mixes and to review the requirements of the specifications for proper concrete construction.
- B. The Contractor shall require responsible representatives of every party who are concerned with the concrete work and quality control of the concrete work to attend the conference, including, but not limited to the following: Contractor's superintendent, laboratory responsible for the concrete design mix, laboratory responsible for field quality assurance testing, subcontractors, ready-mix concrete producer, reinforcing installers, finishers, and Designer.
- C. Minutes of the meeting shall be recorded, typed and printed by the Contractor and distributed by him to all parties concerned within 5 days after the meeting.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Portland Cement shall conform to ASTM C-150, Type II. The same brand shall be used throughout unless changes are approved in writing by the Engineer.
- B. Aggregates for normal weight concrete shall conform to ASTM C-33. Aggregate that exhibits potentially deleteriously reactivity as a result of alkali-Silica aggregate reaction shall not be used. Potential reactivity shall be determined by conducting one of the following tests:

<u>Test</u>	<u>Test Description</u>	<u>Reactivity Threshold</u>
ASTM C227	Mortar Bar Test	< 0.05% expansion in 6 months Or < 0.75% expansion in 1 year
ASTM C1293	Concrete Prism Test	< 0.025% expansion in 6 months Or < 0.04% expansion in 1 year
ASTM C289	Quick-Chemical test	As defined by ASTM C289

ASTM C295 (petrographic) may also be conducted to assess potential aggregate reactivity.

Reactive aggregate may be used in concrete containing pozzolans if, 1) the concrete mixture is tested per ASTM C 441 and successfully meets the criterion listed in ASTM C618, or 2) the concrete mixture is made from low alkali cement (per ASTM C150) and is tested per ASTM C227 or C1293 and passes the criteria listed above. Written approval from the Engineer of Record is required prior to using and reactive aggregate.

1. Fine aggregate shall be clean, sharp, natural, and free from loam, clay, lumps, or other deleterious substances.
 2. Coarse aggregate shall be clean, uncoated aggregate containing no clay, mud, loam, or foreign matter, processed from natural granitic, limestone, or quartz based materials. Aggregate for repair and field batched concrete shall be rounded stone (river gravel). Crushed stone will not be allowed for use in the repair or field batched concrete. Aggregate size shall not be larger than one-fifth of the narrowest dimension between sides of forms, one-third of the depth of slabs, nor three-fourths of the minimum clear spacing between individual reinforcing bars.
- C. Fly Ash: Fly ash shall conform with ASTM C-618 Type F. The loss on ignition (LOI) shall not be greater than 5% and shall not vary by more than +/- 1%. Fly ash may be allowed to replace up to 25% of the cement by weight. If Fly ash is used, a minimum of 18% percent of fly ash, by weight of cement, shall be used to replace cement.
- D. Admixtures:
1. Concrete admixtures shall conform to the appropriate specification listed. Do not use admixtures that have not been incorporated and tested in the accepted mixes unless otherwise authorized in writing by the Engineer. Admixtures containing more than 0.05% chloride ions are not permitted. Additionally, each admixture shall not contribute more than 5 ppm by weight of chloride ions to total amount constituents. Where possible, all admixtures shall be supplied by the same manufacturer. Written verification of compatibility is required for using admixtures from different manufacturers.
 2. Air-entraining admixtures shall exceed the requirements of ASTM C260 "Specifications for Air-Entraining Admixtures for Concrete". Use air-entraining admixture in all concrete exposed to the exterior. Add air-entraining admixture if the manufacturer's prescribed rate in the plant to result in concrete at the point of placement having air contents within the limits of Table 4.2.1 of ACI 318-05 for

moderate exposure. Dosage rates shall be determined using maximum temperatures and slumps specified herein. If a non-vinsol resin based air-entraining admixture is used, strength test results shall be conducted at the maximum allowed slump with the maximum specified air content, and at the maximum allowed temperature. These results shall be submitted to the Engineer of Record for approval.

3. Water-reducing admixtures shall exceed the requirements of ASTM C-494, Type A. Water-reducing admixtures shall be chloride-free and non-corrosive.
4. Calcium chloride shall not be permitted.
5. High Range Water Reducing Admixtures (Superplasticizers) shall conform to ASTM C 494 Type F or G. High Range Water Reducers will only be permitted with written approval of the design engineer. High-range water-reducers shall be either a sulfonated naphthalene formaldehyde condensate or a sulfonated melamine formaldehyde condensate conforming to ASTM C494 Type F. In concrete mixes containing other chemical admixtures, water reducers and air entrainment, the compatibility between these admixtures and the high-range water-reducers shall have been investigated by the manufacturer and the results found to be satisfactory. Dosage rates of normal Type A water-reducers and air-entraining admixtures shall be adjusted in concrete mixes with high-range water-reducers in accordance with the recommendations of the manufacturer of the admixtures.
6. Accelerators shall not be permitted.
7. Corrosion-Inhibiting Admixtures: Where required by contract documents, provide corrosion inhibiting concrete admixture for all concrete addressed in this section. Materials such as Sika Ferrogard 903 or Cortec's MCI 2005 are approved corrosion inhibitors. Manufacturer's dosage rate for required chloride protection levels shall be strictly followed.
 - a. Manufacturer: Concrete admixtures shall be manufactured by a firm with a minimum of ten years' experience in the production of corrosion inhibitors for concrete. Manufacturers proposed for use but not named in these specifications shall submit evidence of ability to meet all requirements specified, and include a list of projects of similar design and complexity completed more than 10 years ago.
 - b. Materials: For each type of material required for the work of this section, provide primary materials that are the products of one manufacturer.
 - c. Manufacturer's Representative: A representative of the manufacturer shall be present for project start-up during initial concrete placement. Engineer may waive requirement for manufacturer's representative if Contractor provides sufficient evidence that producer and finisher have adequate experience with admixtures required.
8. Shrinkage reducing admixture: Shall comply with ASTM C-494, Type S (WR Grace

- Eclipse or equal). Shall be compatible with all other admixtures.
- E. Curing Materials:
1. Burlap shall be free of sizing or any substances that are injurious to cement or can cause discoloration. Burlap shall be rinsed in water prior to use. Burlap shall be sufficient thickness to retain water without frequent wetting.
- F. Unless otherwise noted, perimeter premolded expansion joint fillers shall be 1/4" wide non-asphaltic type.
- G. Embedded Shapes: Embedded steel plates, angles and other shapes shown on the Drawings shall conform to ASTM A36. Reinforcing bars welded to embedded shapes shall be Grade 40 weldable. All embedded shapes shall be hot dipped galvanized in accordance with ASTM A153, Class B. Surface preparation and painting shall occur on all surfaces including the embedded anchors.
- H. All materials are to be stored in an acceptable manner to prevent contamination and damage.

2.2 MIX DESIGNS:

- A. Prepare design mixes for each class of concrete used in accordance with Section 5.3 (field experience) or (trial mixtures) of ACI 318. Submit written reports of each proposed mix for each class of concrete prior to start of work. Do not begin concrete production until mixes have been reviewed and approved by the Engineer. Include the following for each mix design:
1. Method used to determine proposed mix design (ACI 301, Article 3.9).
 2. Current sieve analysis of fine and coarse aggregates.
 3. Proportions of all ingredients including all admixtures added either at time of batching or at job site.
 4. Water/cementitious materials ratio.
 5. Slump, ASTM C143.
 6. Certification of the chloride content of admixtures.
 7. Air content of freshly mixes concrete by pressure method, ASTM C231, or volumetric method, ASTM C173.
 8. Unit weight of concrete, ASTM C138.
 9. Compressive strength at 7 and 28 days, ASTM C39.
 10. Water soluble chloride ion content of concrete.
 11. Repair concrete (see Paragraph 2.05) shall also include shrinkage test results as

specified in Paragraph 2.05.

B. Laboratory Trial Batches:

Where a test record is not available including the information required in Paragraph 2.03, laboratory batches shall be prepared and tested as required (Paragraph 2.02, A) to verify all of the required properties of the concrete mix.

1. Laboratory trial batches shall be prepared, batched, and tested by an approved independent testing laboratory.
2. Establish a curve showing relationship between water/cement ratio or cement content and compressive strength, with at least three points representing batches that produce strengths above and below that required. Use not less than three specimens tested at 28 days, to establish each point on the curve.
3. The proposed design mix shall achieve a compressive strength of 1,200 psi greater than the specified strength, except when satisfactory records are submitted representing similar mixes in past projects.

C. Strength data for establishing standard deviation and required over-strength factors will be considered suitable if the concrete production facility has certified records consisting of at least 30 consecutive tests in one group or the statistical average for two groups totaling 30 or more tests representing similar materials and project conditions. Records of tests shall be submitted with the proposed design mix.

D. Standard Deviation: If standard deviation exceeds 600 psi or if no suitable records are available, select proportions to produce an average strength of at least 1200 psi greater than the required compressive strength of concrete.

E. After sufficient experience and test data become available from the job, strengths may be increased if test results indicate the standard deviation is greater than the accepted value.

F. Design mixes for laboratory trial batching shall be proportioned using the **maximum** specified slump, air content, and concrete temperature.

G. Laboratory test data for revised mix designs and strength results shall be submitted to and accepted by the Engineer before using in the work.

H. Admixtures shall be used in strict accordance with the manufacturer's written instructions.

I. If a non-vinsol resin based air-entraining admixture is used, strength test results shall be conducted at the maximum allowed slump with the maximum specified air content, and at the maximum allowed temperature. These results shall be submitted to the Engineer of Record for approval.

2.3 DURABILITY:

A. Air-entraining admixtures shall be used for all concrete potentially exposed to freezing and

thawing or subjected to hydraulic pressure.

- B. Entrained air shall be as specified in paragraph 2.5.

2.4 SLUMP:

- A. All concrete without a field added high range water reducer shall be proportioned and produced to have a maximum slump of 4" and a minimum slump of 2" unless noted otherwise herein.
- B. The addition of the high range water reducer shall be by a truck mounted mechanical dispenser or by a qualified certified concrete technician of the concrete supplier. The admixture shall not be manually dispensed by the concrete truck driver. After the addition of the high range water reducer, the concrete shall be rotated at maximum speed for a minimum of three minutes (60 revolutions minimum).
- C. The acceptance criteria for slumps shall be as follows:
1. Any slump that exceeds the maximum specified slump prior to the addition of the superplasticizer shall be rejected.
 2. A tolerance up to 1" above the specified slump will be permitted for one truck in any five consecutive trucks delivering concrete to the site.
 3. Slumps less than 2" shall not be allowed.
 4. For concrete placed with a pump, the slump limits shall apply at the discharge end of the pump.

2.5 CONCRETE MIX:

- A. Concrete shall be mixed at batch plants or it may be transit mixed as specified herein. Concrete batch plants must comply with the requirements of ACI 304 with sufficient capacity to produce concrete of the quantity and quality as specified herein. All plant facilities are subject to inspection by the Engineer or his Agent. For smaller concrete placements, concrete may be site mixed in the field by construction personnel. All field mixed concrete shall comply with Section 2.05G of this specification
- B. Concrete shall comply with the requirements of ASTM C-94 and as specified herein unless otherwise noted. During hot weather or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C-94 will be required as follows: When air temperatures are between 80°F. and 90°F., reduce the mixing and delivery (placing) time from 1-1/2 hours to 1 hour. When temperatures are above 90°F, reduce the mixing and delivery (placing) time from 1-1/2 hours to 45 minutes.
- C. Addition of water at job site, when approved in writing by the Engineer, shall not be permitted unless the delivery ticket states the amount of water that can be added without exceeding (the mix design water amount less 1 gallon) per cubic yard and the slump of the mix, and the amount of water and mix proportions shown on the delivery ticket are based on a computer

printout of the proportions of materials used in each truck. Water shall not be added on the job site if this requirement is not met and if not accepted in writing by the Engineer. The addition of water shall also be done under the direct supervision of a certified concrete technician employed by the concrete supplier. Any addition of water, except as stated above, shall be cause for rejection of concrete.

- D. Maintain equipment in proper operating condition, with drums cleaned before charging of each batch. Drums shall be reversed at full speed for 20 seconds immediately prior to charging each batch. Schedule delivery of trucks in order to prevent delay of placing after mixing.
- E. Repair Concrete, Overlay Concrete, and Concrete Exposed to Vehicular Traffic:

Repair concrete may be batch mixed, truck mixed, field mixed, or prepackaged bag mixes. Laboratory batches are required for all repair concrete unless prepackaged bag mixes are being used. The costs for laboratory batching shall be paid by the Contractor and shall be included in the Contractor's bid. The following laboratory mixes are required.

1. The concrete shall have the following material types and properties:

Max. water/cement ratio = 0.42

Normal weight aggregates complying with ASTM C-33

Minimum 28-Day Compressive Strength 4,000 psi

Minimum 3-Day Compressive Strength: 3,000 psi

Entrained Air: 5% +/- 1 1/2%

Slump: If concrete has a mid-range water reducer: maximum slump = 4" and minimum slump = 2". The concrete shall be proportioned to a 1" to 1 1/2" slump prior to the addition of a mid-range water reducer. The concrete shall arrive at the site with a slump of 2" to 4" slump verified and recorded.

Admixtures: Corrosion Inhibitor: Per Section 2.1 D dosage rate as recommended by the manufacturer.

Shrinkage Reducing Admixture: Eclipse by W. R. Grace (or equal) with a dosage rate as determined by paragraph 2.5, E, 1.

2. Unless permitted otherwise, the following laboratory trial batches are required to establish mixture properties:

- a. Trial batches shall be mixed to establish the performance of the repair concrete. A minimum of four batches will be required and shall be included in the Contractor's bid. Trial batching will be performed to determine the optimum dosage rate of the shrinkage-reducing admixture. The trial batches shall be as follows:

- i. One trial batch containing no shrinkage reducing admixtures.
- ii. One trial batch containing the minimum quantity of shrinkage reducing admixture recommended by the manufacturer.
- iii. Trial batches shall be mixed containing additional shrinkage reducing admixture as recommended by the admixture manufacturer until the optimum content of the shrinkage-reducing admixture is determined.

A plot of the 28-day shrinkage versus the dosage rate of the shrinkage-reducing admixture shall be plotted and used to determine the optimum content of the shrinkage-reducing admixture to be used in the repair concrete.

- b. Shrinkage specimens shall be wet cured for 7 days. All other concrete shall be cured according to that specified in the individual test criterion.
 - c. Four compressive strength cylinders (6"x12") and three shrinkage specimens (ASTM C-157) shall be made from each trial batch for testing of the hardened material.
 - d. The following tests shall be conducted on all trial batches:
 - i. Testing as required to report the properties listed in Section 2.2, A of this specification.
 - ii. Shrinkage tests shall be performed according to ASTM C-157 with the following modifications.
 - Specimens shall be wet cured for 7 days only.
 - Shrinkage measurements shall be conducted at 7, 14, 28, and 56 days.
 - Shrinkage specimens shall be conveyed, undamaged, to the Engineer at the completion of the shrinkage testing.
3. The aggregate shall be the following:
- a. For concrete placements 3.5 inches thick or less: Coarse Aggregate shall be natural rounded gravel a maximum size of 3/4. Aggregates shall conform to the requirements of ASTM C-33 except grading of combined coarse and fine aggregates shall conform to the following:

3/4 inches	95% to 100% passing
3/8 inches	80% to 100% passing
No. 4	60% to 80 passing
No. 8	40% to 60% passing
No. 16	30% to 40% passing
No. 30	10% to 20% passing
No. 50	5% to 10% passing
No. 100	2% to 5% passing
 - b. For concrete placements greater than 3.5 inches: Coarse Aggregate shall be natural rounded or angular with a maximum size between 3/4" and 1-1/2" meeting ASTM C33 gradation criteria.
4. In the absence of a standard mixes meeting the requirements of this specification, the following mix design may be used as a guide for the trial mixture. The content of the shrinkage reducing admixture shall be as determined by paragraph 2.5, E, 1 of this Section.

e. Cementitious Material	590 lbs.
f. Coarse aggregate	1900 lbs.
g. Fine aggregate	1180 lbs.
h. Water (Potable)	30 gallons
i. Mid-range water reducing admixture	As recommended
j. Corrosion Inhibitor	As recommended
k. Shrinkage reducing admixture	1.5 gallon (min.) or as Recommended. Adjust water for SRA content.
l. Paste Volume (Cement + FA + Water)	<30%

F. General Use Concrete Mix:

Unless noted otherwise on construction drawings, plant batched concrete, not used for concrete repairs or overlays where a single repair is less than 1 cubic yard, shall comply with the following criterion.

1. A preconstruction meeting is required. Attendees shall be the project superintendent, the subcontract superintendent, the crew foreman responsible for the concrete placement, and a representative from the testing agency.
2. The concrete shall have the following material types and properties:
 1. Max. water/cement ratio = 0.45. A lower water cement ratio may be required on the construction drawings if the concrete is exposed to elevated sulfates or other hazardous materials.
 2. Normal weight aggregates complying with ASTM C-33. Maximum size aggregate shall be 1 ½" unless reinforcing congestion, concrete cover, or member thickness dictate a smaller aggregate. Coarse aggregate shall be granite, quartz, or limestone based materials.
 3. Minimum 28-Day Compressive Strength 4,000 psi tested according to the provisions in this specification
 4. Entrained Air: 5% +/- 1 1/2%.
 5. Slump: If concrete has a mid-range water reducer: maximum slump = 4" and minimum slump = 2". The concrete shall be proportioned to a 1" to 1 ½" slump prior to the addition of a mid-range water reducer. The concrete shall arrive at the site with a slump of 2" to 4" slump verified and recorded.
 6. Admixtures: As required to achieve appropriate plastic and hardened properties.
 7. Water (Potable): Less than 32 gallons when using 1 ½" maximum sized coarse aggregate.
 8. Paste Volume (Cement + FA + Water) <30%

G. Field Mixed Concrete:

1. A field mixed concrete may be approved for use in repairs.
2. The field mixed concrete shall meet the same criteria as the repair concrete with the exception of the following: NA

3. A preconstruction meeting for field mixed concrete is required. Attendees shall be the project superintendent, the subcontract superintendent, the crew foreman responsible for the concrete mixing, the engineer, and a representative from the testing agency. Field mixed concrete shall be mixed with a minimum batch quantities of 3 cubic feet. All cost for materials, field trial batching (up to three trial batches), and testing of trial batches shall be paid by the contractor.
4. The mix design for field mixed concrete shall be as established by laboratory trial batches or as established and approved from a break history.
5. There shall be one person responsible for proportioning and batching of each mix. The Engineer will work with the contractor to ensure that the person responsible for the batching has a clear understanding of the requirements for measuring and mixing for the concrete batches. Field mixed concrete shall not be batched by crews that have not received training on proper batching procedures.
6. All mix ingredients, including aggregates, shall be protected from environmental moisture until they are used. Ingredients that become contaminated shall not be used.
7. Proportioning may be performed by volume if the measuring containers are calibrated, clearly marked for the quantity of mix ingredient, and clearly labeled for their intended mix ingredient. Volume calibration of the measuring containers will require the use of an on site, calibrated, digital scale. Recalibration is required on new measuring containers that replace broken or lost measuring containers. Liquid admixtures shall be measured with calibrated flasks with permanent volume markings.
8. Trial Batches:
 - a. Trial batches shall be mixed on site to establish the performance of the field-batched concrete. The field engineer will be present during the initial two trial batches. The trial batches shall be proportioned as established from Paragraph 2.02 of this Specification.
 - b. Trial batching shall be mixed in the equipment to be used for field batch concrete.
 - c. Specimens for shrinkage testing shall be wet cured for 7 days.
 - d. Four compressive strength cylinders (6"x12") and three mortar shrinkage bars shall be made for testing of the hardened material.
 - e. The field batched concrete mix design shall be established by use of an existing test record or laboratory batching and testing of trial mixtures. All repair concrete shall undergo laboratory batching and testing according to paragraph 2.05, E of this specification. Testing on the field batched concrete shall be the same as that for the laboratory trial batches.

- f. At least one field trial batch is required to establish the properties of the field batched concrete. Additional trial batches may be required pending the tests results on the trial batch.

PART 3 - EXECUTION

3.1 PREPARATION OF EQUIPMENT AND PLACE OF DEPOSIT:

- A. Before placing concrete, equipment for mixing and transporting and placing concrete shall be cleaned, debris and ice removed from spaces to be occupied by the concrete, forms thoroughly cleaned of soil, ice or other coatings which will prevent proper bond; reinforcement shall be securely tied in place and expansion joint material, anchors and other embedded items shall be securely positioned.
- B. Hardened concrete and foreign materials shall be removed from the conveying equipment.

3.2 REVIEW PRIOR TO PLACEMENT:

- A. Before placing concrete, inspect and complete the formwork installations, reinforcing steel, post-tensioning tendons, and items to be embedded or cast-in. Notify other crafts to permit the installation of their work; cooperate with other trades in setting such work, as required.
- B. Coordinate the installation of joint materials with placement of forms and reinforcing steel.
- C. Notify the Engineer at least twenty-four (24) hours in advance of each placement of concrete in the elevated beam and column repairs, and infill pour strips.

3.3 CONCRETE PLACEMENT:

- A. Place concrete in compliance with the practices and recommendations of ACI 304, ACI 302, and ACI 117 or as herein specified.
- B. Concrete shall be handled from the mixer to the place of final deposit as rapidly as practical by methods which will prevent separation or loss of ingredients and in a manner which will assure that the required quality concrete is obtained.
- C. Conveying equipment shall be of size and design to insure a continuous flow of concrete at the delivery end. Competent personnel shall be employed to handle and place the concrete.
- D. Concrete shall be deposited continuously or in layers of such thickness that no concrete will be deposited on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. If a section cannot be placed continuously, construction joints as herein specified shall be located at points as provided for in the Drawings or as accepted by the Engineer. To avoid cold joints, placement shall be carried on at such a rate that the concrete which is being integrated with fresh concrete is still plastic. Deposit concrete as near as possible to its final location to avoid segregation due to rehandling or flowing. Do not subject concrete to any procedure which will cause segregation.

- E. Concrete shall not be allowed to "free fall" a distance greater than 5'-0". Use accepted tremies for placement where conveying equipment cannot deposit concrete within this distance above its final location.
- F. Screed concrete which is to receive other construction to the proper level to avoid excessive skimming or grouting.
- G. Do not use concrete which has become non-plastic and unworkable or does not meet the required quality-control limits, or which has become contaminated by foreign material. Remove rejected concrete from the Project Site and dispose of in an acceptable location.
- H. Deposit concrete in forms in horizontal layers not deeper than 24" and in a manner to avoid inclined construction and cold joints.
- I. Remove temporary spreaders in forms when concrete placing has reached the elevation of such spreaders.
- J. Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding and tamping. Vibration of forms and reinforcing steel will not be permitted. The use and type of vibrator shall be in accordance with ACI 309R. Low-frequency vibrators shall be used with concrete containing high-range water-reducers while the concrete is in a fluid state. Consolidation of concrete shall be by electric- or pneumatic-drive immersion-type vibrators of sufficient power and capacity to consolidate the concrete effectively and quickly. Immersion-type vibrators shall maintain a frequency, when immersed in concrete, of not less than 8000 rpm and shall have a minimum amplitude of not less than 0.02 inches (0.5 mm). An adequate number of units capable of handling the rate and volume of concrete placed shall be provided. The duration of vibration shall be limited to that necessary to produce satisfactory consolidation.
- K. In consolidating each layer of concrete, the vibrator shall be operated in a near vertical position, and the vibrating head shall penetrate and re-vibrate the concrete in the upper portion of the underlying layer. The vibrator shall be inserted such that it quickly penetrates the layer and shall be slowly withdrawn such that the concrete layer is consolidated from the bottom upward. Vibration shall be performed in a systematic pattern to ensure overlap of the radius of action of the vibration and complete coverage. Additional concrete shall not be placed until concrete previously placed has been vibrated thoroughly as specified. Special attention shall be given to the consolidation of concrete at construction joints, against forms, and around embedded items.
- L. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther apart than the visible effectiveness of the vibrators. At each insertion, limit the duration of vibration to the time necessary to consolidate the concrete and complete embedment of reinforcement and other embedded items without causing segregation of the mix.
- M. Do not place concrete in supported elements until the concrete previously placed in columns and walls is no longer plastic.

- N. Deposit and consolidate concrete in slabs using a continuous operation, within the limits of construction joints, until the placing of the entire section is complete.
 - O. Bring surface of slabs to the correct elevations with a straight edge and strike off. Rescreed surface with a "highway" straightedge to remove all humps and hollows. Do not sprinkle water or dry cement on the plastic surface during the finishing operations. Do not disturb the surface prior to beginning the finishing operations.
 - 1. The use of a laser-screed system for concrete consolidation in the slabs on grade and elevated floor slabs will be permitted. Test-data results on depth of consolidation shall be submitted prior to final acceptance of the laser-screed system.
 - P. Concrete mixes may be pumped to point of deposit in conformance with the following provisions:
 - 1. Concrete pumps shall be of the positive piston-type. No squeeze pumps will be permitted.
 - 2. Concrete slumps for slabs and miscellaneous concrete shall not exceed 6" at the truck, or be less than 2" at the discharge end of the nozzle. Slumps shall be tested at the truck and at the discharge end of the nozzle by the Contractor.
 - 3. The submitted concrete mix design shall indicate that the mix is designed or acceptable to be pumped. Once mix designs are accepted by the Engineer, changes in the mix to accommodate pumping will be prohibited unless new mix designs are submitted for review by the Engineer.
 - 4. The ratio of coarse aggregate to total aggregate by weight shall not be less than 62% in mix designs.
 - Q. Curing: Unless manufacturer states, in writing, that wet curing will damage the material, all patches shall be wet cured 7 days.
- 3.4 CONSTRUCTION, ISOLATION AND CONTROL JOINTS:
- A. Construction joints not shown on the Drawings shall be made at locations that will least impair the strength of the structure and shall be accepted by the Engineer prior to construction. In general, they shall be located near the middles of the spans of members. Place construction joints perpendicular to the main reinforcement across construction joints unless shown otherwise on the Drawings.
 - B. Roughen surfaces of hardened concrete to expose bonded coarse aggregate at construction joints. Clean surfaces of laitance, coatings, loose particles and foreign matter to expose aggregate. See contract drawing details for more detailed information.
 - C. Prepare for bonding of fresh concrete to new concrete that has hardened as follows:
 - 1. At joints between foundation systems and walls or columns, and between walls or

columns and beams or slabs they support, and elsewhere unless otherwise specified herein, sandblast or coarse wire brush the bonding surface and wash surface. Then dampen, but do not saturate, the roughened and cleaned surface of hardened concrete immediately before placing fresh concrete.

2. At joints in exposed work, at vertical joints in exposed work, saturate the roughened and cleaned surface of hardened concrete and apply a liberal coating of neat cement grout. Grout shall consist of equal parts of cement and fine aggregate by weight and shall contain no more than 6 gallons of water per bag of cement. Apply grout with a stiff brush to a minimum thickness of 1/16". Deposit fresh concrete before grout has attained its initial set.

In lieu of neat cement grout, bonding grout may be a commercial bonding agent. Written approval is required before using a bonding agent. Apply to cleaned concrete surfaces in accordance with the printed instructions of the bonding-material manufacturer. If approved, strict control shall be maintained on the maximum open time for the bonding agent.

- D. After joints have been cleaned and accepted for sealing, provide sealants as specified herein and shown on the Drawings for joints.

3.5 COLD WEATHER PLACING:

- A. Protect all concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with the requirements of ACI 306 except as superseded herein.
- B. Do not place concrete when temperature is 40°F. and falling and when freezing weather is predicted within 24 hours.
- C. "Cold Weather Concreting", ACI 306, shall be followed for placing concrete in cold weather with the noted exceptions:
 1. No calcium chloride or "anti-freezes" shall be used.
 2. Only the specified and approved non-chloride accelerators shall be used.
 3. High early strength (Type III) cement shall not be used.
 4. In addition to laboratory cured test specimens, additional concrete test specimens shall be cured under field conditions as required and directed by the Engineer to check the adequacy of curing and protection of the concrete.
- D. Adequate equipment shall be provided for heating the concrete material and protecting the concrete during the freezing weather. No frozen material or material containing ice shall be used. The length of protection shall be that time specified for curing. Maintain a minimum temperature of 50°F surrounding the concrete during the entire curing period.

- E. Slabs and other members are to be covered with insulated blankets. Supplement with external heating as required. Provide tented, heated areas surrounding concrete walls. Heaters which exhaust gases that contain carbons are not allowed.

3.6 HOT WEATHER PLACING:

- A. Comply with ACI 305, except as superseded herein. Cool reinforcing by wetting sufficiently so that the steel temperature will not exceed the ambient air temperature immediately before placing concrete. Use an approved admixture design to retard the rate of set when outside temperatures exceed 70°F. Admixtures shall be tested in the design mix prior to use. Admixtures shall not contain any chlorides.
- B. Wet forms and subgrade thoroughly before placing concrete by fog spraying. No standing water allowed.
- C. Erect wind breaks and sun shades if rate of evaporation is expected to approach 0.2 lb./ft²/hr.
- D. Prompt curing shall be exercised.
- E. The concrete supplier shall make provision for cooling the coarse and fine aggregate during hot weather by pre-wetting the aggregates on the conveyor belt and/or maintaining stockpiles covered with crushed ice during the hot part of the day.
- F. Temperature of concrete before placing is not to exceed 90°F.

3.7 MISCELLANEOUS CONCRETE ITEMS:

- A. Set and build into the work, anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings and directions provided by the suppliers of the items to be attached thereto.
- B. Filling-In: Fill-in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place as specified in the Concrete Finishes Section.

3.8 TESTING AND QUALITY CONTROL:

- A. Unless otherwise permitted, the Contractor will employ an accredited (Class I) testing laboratory to perform concrete testing during construction. Concrete testing shall be performed by a laboratory meeting the requirements of ASTM E-329, Standard Recommended Practice for Testing Agencies for Concrete as Used in Construction. Specimens shall be taken as follows:
 - 1. A set of four (4) test cylinders shall be taken on each type and class of concrete for each day's pour for every 100 cubic yards, or fraction thereof, placed, but not less than one for each 5000 sq. ft. of surface area for walls or slabs.
 - 2. For field mixed concrete, a set of four (4) test cylinders shall be taken for each day's

pour up to 100 cubic feet of concrete mixed, and four (4) test cylinders for every 100 cubic feet of concrete thereafter.

3. Cylinders for compressive strength test shall be molded and cured in accordance with ASTM C31 and tested in accordance with ASTM C39.

B. In addition to the strength tests on standard test cylinders, the following additional tests shall be made by the Owner's testing laboratory.

1. Slump - one test for each load at point of discharge made in accordance with ASTM C143. Slump tests other than those made by the Owner's testing laboratory from concrete sampled for test cylinders shall be made by the Contract.
2. Air Content - one test for each set of test cylinders made in accordance with ASTM C173 or ASTM C231 and random tests on loads as directed by the Engineer.
3. Concrete Temperature - one test for each truck when outside air temperature is 50° F and below, or 80° F and above, and one for each set of standard test cylinders.
4. Unit Weight - one test for each set of test cylinders.

C. Test results shall be reported in writing to Engineer, Owner and Contractor within three days after the tests are conducted. Reports of compressive-strength tests shall contain project identification name and number, date of concrete placement, name of contractor, name of concrete supplier and truck number, name of concrete-testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests, slump, air content, unit weight, and concrete temperature. List types and amounts of admixtures on report.

3.9 WORKMANSHIP: Concrete work which does not conform to the specified requirements, including strength, tolerances and finishes, shall be corrected as directed by the Engineer, at the Contractor's expense, without extension of time thereof, including additional engineering fees incurred for correction of the work. The Contractor shall also be responsible for the cost of corrections to any other work affected by or resulting from corrections to the concrete work, including additional engineering fees incurred for correction of the work.

3.10 EVALUATION AND ACCEPTANCE CRITERIA OF CONCRETE:

A. The strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:

1. Average of all sets of three consecutive strength tests equals or exceeds the specified 28-day compressive strength.
2. No individual strength test (average of two cylinders) falls below the specified 28-day compressive strength by more than 500 psi.

- B. If either of these requirements is not met, steps shall be taken to increase the average of subsequent strength tests. If any individual strength test falls more than 500 psi below the specified 28-day strength tests or if tests of field-cured cylinders indicated deficiencies in protection and curing, the Engineer will direct the Contractor to perform additional tests at the Contractor's expense to assure that the load-carrying capacity of the structure is not jeopardized. These tests shall consist of core tests, load tests, or an analytical analysis using the lower-strength tests. The acceptance criteria for either core tests or load tests shall be in accordance with the requirements set forth in ACI 318-89.
- C. As data becomes available during construction, the amount, by which the specified 28-day compressive strength must be exceeded, may be reduced provided the following criteria are met:
1. The results of 30 or more strength-tests are available and the average of the results exceeds that required by Section 5.3.2.1 of ACI 318-89 using the standard deviation calculated in accordance with Section 5.3.1.1 of ACI 318-89.
 2. The results of 15 to 29 strength tests are available and the average of these results exceeds that required by Section 5.3.2.1 of ACI 318-89 using the standard deviation calculated in accordance with Section 5.3.1.2 of ACI 318-89.
 3. Exposure requirements of these Specifications are met.
- D. If any concrete test data indicate the concrete does not meet project requirements, the Contractor shall take all necessary steps to ensure the installed product is acceptable to the Owner. All costs incurred by the Owners Engineer to verify quality of end product resulting from testing data that does not meet contract requirements shall be borne by Contractor.

CONCRETE MIX DESIGN FORM

PROJECT: _____ CITY: _____

GENERAL CONTRACTOR: _____

MIX DESIGN NO.: _____ SPECIFIED CONCRETE CLASS: _____

METHOD SELECTED FOR MIX DESIGN PREPARATION:

A. Field Experience Data:

1. Standard Deviation _____
2. Comp. Strength (7da) _____ psi
3. Comp. Strength (28da) _____ psi
4. No. of Consecutive Tests _____
5. Overstrength Required _____ psi

B. Trial Mixture Data:

1. Standard Plant Deviation _____
2. No. of Consecutive Tests _____
3. Overstrength Required _____ psi

MIX PROPERTIES:

Density _____ pcf
7-Day Strength _____ psi
28-Day Strength _____ psi

Air _____ %
Temperature _____ °F
Slump (max.) _____ Inches

AGGREGATES:

Coarse: Type _____
Size _____
Source _____
ASTM Spec _____

Fine: Type _____
Source _____
ASTM Spec _____
F.M. _____
Colorimetric _____

CEMENT: Type _____
Source _____
ASTM Spec _____

Fly Ash: Type _____
Source _____
L.O.I. _____

WATER REDUCER:

Type _____
ASTM Spec _____
Source _____

MID-RANGE WATER REDUCER:

Type _____
ASTM Spec _____
Source _____

AIR ENTRAINMENT:

Type _____
ASTM Spec _____
Source _____

RATIOS

Water^{***} _____ lbs.
 Cement _____ lbs. = _____ %
 Fine Agg. _____ lbs.
 Total Agg. _____ lbs. = _____ %

MIX PROPORTIONS*

	WEIGHT (LBS.)	ABSOLUTE VOL. (CU. FT.)
CEMENT:	_____	_____
FINE ** AGGREGATE:	_____	_____

SPECIFIC GRAVITIES

Fine Agg. _____	COARSE** AGGREGATE:	_____	_____
Coarse Agg. _____	WATER***	_____	_____
(Other) _____			

ADMIXTURES

W.R. _____ oz. per 100# cement	OTHER:	_____	_____
A.E. _____ oz. per 100# cement	TOTALS:	_____	_____
OTHER _____ oz. per 100# cement			
MRWR _____ oz. per 100# cement			

- * Proportions per cubic yard
- ** Saturated surface dry weights
- *** Includes free water contained on aggregates

STANDARD DEVIATION ANALYSIS:

Number of Test Cylinders Evaluated: _____ Standard Deviation: _____

Mix Designs Proportioned to Achieve $f'_{cr} = f'_c +$ _____ psi

$f'_{cr} = f'_c + 1.34s$ or $f'_{cr} = f'_c + 2.33s - 500$

TRIAL MIXTURE TEST DATA:

Age (days)	Mix #1 (comp. str.)	Mix #2 (comp. str.)	Mix #3 (comp. str.)	(comp. str.)
7	_____	_____	_____	_____
7	_____	_____	_____	_____
28	_____	_____	_____	_____
28	_____	_____	_____	_____

Mix #1:

Initial Slump = _____ in., Final Slump = _____ in., Air Content = _____ %
Unit Wet Wt. = _____ pcf, Unit Dry Wt. = _____ pcf Temperature = _____ °F

Mix #2:

Initial Slump = _____ in., Final Slump = _____ in., Air Content = _____ %
Unit Wet Wt. = _____ pcf, Unit Dry Wt. = _____ pcf Temperature = _____ °F

Mix #3:

Initial Slump = _____ in., Final Slump = _____ in., Air Content = _____ %
Unit Wet Wt. = _____ pcf, Unit Dry Wt. = _____ pcf Temperature = _____ °F

REMARKS:

Note: Fill in all blank spaces. Use -0- (zero) or N.A. (Not Applicable).

Submitted by _____

Ready Mix Supplier: Name _____

Address _____

Phone Number _____

Date _____

END OF SECTION

SECTION 05 15 00

ADHESIVE ANCHORS

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Furnishing and installing adhesive anchors as dowels or with washers and nuts into holes drilled into the existing cast-in-place concrete members as indicated on the drawings and as specified herein.
- B. Equipment required for drilling the holes and for locating the existing embedded reinforcing steel.
- C. Equipment required for mixing, proportioning and dispensing the epoxy gel into holes drilled for adhesive anchors.
- D. Items of testing, quality control, and evaluation of in-place adhesive anchors.

1.02 RELATED SECTIONS:

- A. Cast-In-Place Concrete (Section 03 30 00)

1.03 QUALITY ASSURANCE:

- A. References: Some products and execution are specified in this section by reference to published specifications or standards of the following (latest edition, with respective abbreviations used):

American Society for Testing and Materials (ASTM)

American Institute of Steel Construction (AISC)

American Concrete Institute (ACI)

- B. Standard Specifications and Codes: The following latest edition of the specification and codes form a part of this specifications where reference is made to a specific paragraph or section of the specific standard or code:

ACI 503.1 "Standard Specification for Bonding Hardened Concrete, Steel, Wood, Brick, and Other Materials to Hardened Concrete with a Multi-Component Epoxy Adhesive"

ACI 318 Building Code Requirements for Reinforced Concrete

ACI 349 Appendix 'B' "Steel Embedments"

ASTM E488 "Standard Test Methods for Strengths of Anchors in Concrete and Masonry"

AISC "Specification for the Fabrication and Erection of Structural Steel for Buildings"

ICC-ES Report AC308, "Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements"

- C. Building Code: Alabama State Building Code.
- D. Testing of anchors shall be performed in accordance with paragraph 3.04 of this specification.
- E. Conduct pull testing as outlined in the Execution section of this specification.

1.04 SUBMITTALS AND PREINSTALLATION CONFERENCE:

- A. Submit ICC-ES Evaluation Service Report (ESR) for the anchor system used. Testing for this report shall be performed according to AC308. Test results shall certify tensile, bond, and shear strength of anchors specified herein or shown on the contract drawings. Tests of anchors shall be made on nearly identical materials, embedment lengths, and conditions indicated on the drawings. Alternately, and if specifically permitted by written approval of the Engineer, tests may be made in accordance with ASTM E488 "Standard Test Methods for Strength of Anchors in Concrete and Masonry".
- B. Unless permitted otherwise or specifically noted, anchors acceptable for use on this project shall have the following minimum allowable loads when tested with materials and conditions nearly identical to those on this project and with the embedment lengths indicated on the construction drawings. Values are based upon A193 Grade B steel anchors tested in concrete having a minimum compressive strength of 3500 psi. Embedment shall be nine (9) times the bolt diameter for bolts or twelve (12) times the bar diameter for reinforcing bars.

Anchor Diameter	Allowable Bond	Loads in Shear	Pounds for 9x Embedment Tensile of Rod
3/8"	2100	1500	4,500
1/2"	3600	2200	8,200
5/8"	5700	4100	12,900
3/4"	8200	5000	18,600
7/8"	9400	7500	25,500

Allowable tensile loads shall be based upon the tensile stress area of the rod per AISC Section 1.5 = 0.33 F_u

Allowable tensile loads for bond strengths shall be based on the following formulas or as published by adhesive anchor manufacturer, whichever is least:

$$\frac{F_t - 2SX}{3} \text{ Where } F_t = \text{Average allowable bond load determined by tests}$$

$$SX = 10\% \times F_t$$

Allowable shear loads shall be based on the following formulas:

$$\frac{F_s - 2(SX)}{3} \quad \text{Where } F_s = \text{Average allowable shear load determined by tests}$$
$$SX = 10\% \times F_s$$

- C. Submit three copies of the manufacturer's written instructions for installation of the adhesive anchors specified.
- D. Submit type of equipment to be used for drilling the holes in the concrete for the adhesive anchors.
- E. Submit type of equipment to be used for proportioning, mixing, and dispensing the epoxy gel adhesive.
- F. Certification that the epoxy resin will not be affected by the alkalinity of the cement and that there is no shrinkage of the resin, and that the creep coefficients are insignificant.
- G. The Contractor shall have a preinstallation meeting with the adhesive manufacturer to ensure proper crew training has been provided. Contractor shall notify Engineer one week in advance of this meeting.

1.05 QUALIFICATIONS:

- A. Manufacturer:

Source: Epoxy resin for bonding the anchors into the existing concrete shall be of one manufacturer unless specifically noted otherwise herein.

Manufacturer Testing: Manufacturer shall have tested the product for load reduction factors for wet, dirty, and oversized holes and report data and load reduction factors.

1.06 PRODUCT HANDLING:

- A. Delivery and Storage: Deliver all materials of this section to the job site in original unopened containers with all labels intact. Store only under conditions recommended by the manufacturer. Do not retain on the job site any material that has exceeded the shelf life recommended by the manufacturer.
- B. Replacement: In the event of damage, replace as necessary to the approval of the Engineer at no additional cost to the Owner.

PART 2 - PRODUCTS

- 2.01 ACCEPTABLE MANUFACTURERS: Only products of the following manufacturer will be acceptable for use on this project when approved by the Engineer, if ICC ES AC-308 testing has been conducted, and the results of all tests on products proposed by the manufacturer meets all the requirements of these specifications:

- A. Simpson Strong Tie of McKinney, Tx
- B. Hilti of Tulsa, OK

Other manufacturer's will not be considered unless testing has been conducted, data submitted, and load reduction factors reported for the tests listed in 2.02, C, 3 below.

2.02 MATERIALS:

A. Anchor Rods and Dowels:

- 1. Unless otherwise noted, anchor rods, washers, and nuts shall be stainless steel manufactured from steel conforming to ASTM F593 (AISI 304). Galvanized anchor rods, washers and nuts shall be mechanically galvanized per ASTM B695, Class 55 or hot dipped Per ASTM A 193 with 1.5 oz/sq. ft. of zinc coating. Clean threads of hot dipped galvanized bolts and nuts before installing. Anchor rods shall have minimum depth of embedment as indicated on construction drawings or above, whichever is greatest. Anchor rods shall have threads for their full length.
- 2. Dowels shall be the same material as anchor rods or reinforcing steel as specified on the Contract Drawings.

B. Nuts and Washers: Unless noted otherwise, nuts shall be manufactured from steel conforming to ASTM F594 (A563 for A307 rods). Unless noted otherwise, all washers and nuts shall conform to ANSI B18.22.1 (1965) Type A plain.

C. Adhesive Injection Gel: shall be a two-component solvent-free, moisture-insensitive, creep resistant paste epoxy bonding agent for bonding rigid materials exposed to sustained loads and/or high ambient temperatures. Injection gel shall have the following properties.

1. Properties of the two adhesive components:

Part A - shall be a blend of modified resins with inert fillers.

	<u>Test Method</u>	<u>Specification Requirements</u>
Color	Visual	White
Form	Visual	Smooth paste
Weight per gallon	ASTM D1963	12.3 lb. min.

Part B - shall be a blend of modified amine curing agents with inert fillers.

	<u>Test Method</u>	<u>Specification Requirements</u>
Color	Visual	Black
Form	Visual	Smooth Paste
Weight per gallon	ASTM D1963	13.3 lb. min.

2. Properties of the Cured Adhesive: When cured for 7 days at 77 + 3°F, unless otherwise specified shall be:

	<u>Test Method</u>	<u>Specification Requirements</u>
Tensile Strength, psi	ASTM D638	2,500 minimum
Tensile Elongation at Break, %	ASTM D638	2.0 max.
Compressive Yield Strength, psi	ASTM D695	12,000 minimum
Compressive Modulus, psi	ASTM D695	5.0 x 10 ⁵ min.
Slant Shear Strength, psi Damp/Damp Concrete	ASHTO T-237	5,000 minimum
Heat Deflection Temperature	ASTM D648	130°F minimum
Hardness	ASTM D2240	80 minimum
Sag Flow	ASTM D2730	1/8" - none

3. Quality Control: Quality control tests are required on each lot of adhesive supplied under this specification.

- a. Testing: All tests shall be conducted using the test methods prescribed in Sections 2.0 and 3.0.
- b. Tests: The actual quality control tests to be performed shall be as stated in paragraphs 3.4 and elsewhere as applicable.
- c. Certification and Test Report: Manufacturer shall certify that every batch of material supplied to this specification meets all of the requirements of Sections 2.0 and 3.0. The certification shall include results from all of the tests listed in Paragraph 2.2.
- d. Laboratory quality control testing and data reporting shall include the following:
 - Oversized Holes: Manufacturer shall report load reduction factor for various sizes of oversized holes and an upper limit allowed for the hole size.
 - Holes not Brushed: Manufacturer shall report a reduction factor for anchor capacity when installed in proper sized, but holes that are not brushed clean.
 - Holes no Blown: Manufacturer shall report a reduction factor for anchor capacity when installed in proper sized, but holes that are not blown clean.

- Holes no Blown or Brushed: Manufacturer shall report a reduction factor for anchor capacity when installed in proper sized, but holes that are not blown or brushed clean.
- Temperature Affects: Manufacturer shall report strength reduction graph or equation for use of adhesive at elevated temperatures up to 150 degrees F.
- Creep: Manufacturer shall report creep equation or graph for properly installed anchors and for various sizes of oversized holes.

4. Labeling, Packaging, Storage:

- a. Labeling Information: The label shall include, in a clear and distinct manner, the following information:
 - (1) Product name and lot number
 - (2) Health hazard warnings, precautions or handling and recommended first aid procedures in cast of contact
 - (3) Mix ratio by volume
 - (4) Directions for use
- b. Packaging: The adhesive material shall be packaged in new, sealed containers. Each container will be clearly labeled.
- c. Storage: The material shall be stored in its original sealed containers at a temperature not below 32°F or above 90°F for a period not to exceed 1 year. If these limits are exceeded, the material shall be retested prior to use to determine conformance to this specification. The expense of any retest shall be borne by the purchaser.

5. Acrylic adhesives may be approved by written consent of the Engineer.

D. Drilling Equipment: Unless permitted otherwise in writing, equipment shall be a percussion type rotary hammer drill using carbide bits and shall be the type recommended by the manufacturer of the adhesive and shall be capable of drilling the holes to the required depth and diameter leaving a clean hole with minimal side wall residue. Air operated drilling equipment shall not discharge air into the holes while drilling unless the equipment is equipped to provided oil-free air at discharge.

E. Equipment for Dispensing:

- 1. Hand held dual cartridge dispensers are permitted.
 - a. Dual cartridges where the pistons can move independently as to vary the ratio of components are not permitted. Dispensing pistons shall be connected as to move together.

PART 3 - EXECUTION

3.01 PROJECT EXAMINATION:

- A. Prior to the installation of any adhesive anchors, the Contractor shall examine the site and all concrete surfaces and members to receive the anchors and identify conditions which adversely affect the execution of the work. Prior to beginning this work, the manufacturer of the epoxy shall provide instructions and technical assistance to the personnel installing the anchors on the procedures for drilling and installing the anchors. Unless waived by the Engineer based upon demonstrated past experience in epoxy anchor installation, this instruction shall be on site. Only a contractor or subcontractor who has been trained and approved by the epoxy manufacturer will be permitted to install the epoxy gel and anchors on this project.
- B. Do not proceed with work until all unsatisfactory conditions have been corrected and the personnel have been properly trained on drilling and installing the anchors.

3.02 HOLES FOR ANCHORS:

Locating Holes: All holes shall be accurately located and as near as possible to the location shown on the contract drawings to miss the existing reinforcing steel. Where holes have to be shifted due to job conditions more than 1" from the location shown or closer than 1" from the edge of the steel plate connection or angle, notify the Engineer.

3.03 EXECUTION OF THE WORK:

- A. Drilling of Holes: All holes shall be drilled using only the manufacturer recommended and approved equipment to the specified diameter recommended by the manufacturer for the size of anchor specified. Use a depth gage to drill hole to the specified depth. Holes shall be clean with minimal side wall residue. All holes shall be thoroughly clean of all dust, debris, and other bond inhibiting contaminants using methods and procedures recommended by the manufacturer. A minimum of a stiff bristle brush shall be used to brush the holes. Holes shall be cleaned using oil-free compressed air and nylon brushes. Hand pumps, gas blowers, or electric blowers are not allowed. Oil free compressed air shall have a minimum 120 psi pressure. Holes shall be approved prior to installing the adhesive gel.
- B. Unless waived by the Engineer, all holes shall be inspected and approved by the Engineer or a representative of the testing laboratory prior to the installation of the anchor. Acids shall not be permitted for cleaning.
- C. After cleaning, epoxy adhesive and anchor bolts shall be placed immediately to prevent contamination of the concrete and metal.
- D. Holes that are drilled and abandoned shall be filled with a moisture insensitive epoxy mortar. Where exposed, tint the epoxy mortar to match the color of the adjacent surfaces.
- E. Dispense epoxy from cartridges onto waste board or paper until a uniform color is achieved prior to dispensing epoxy in holes.

- F. Dispensing of epoxy adhesive shall begin at bottom or back of hole or void. Upon filling the hole with adhesive, the adhesive shall displace the fitting and pipe nozzle from the hole, without travel of adhesive past the fitting.
- G. Anchor bolt holes shall be filled to three-quarters the depth of the hole to ensure full depth contact of adhesive and anchor bolt. Follow manufacturer's written instructions for filling hole with adhesive.
- H. Placing of the anchor bolt should be done with one continuous stroke. Turn the bolt 360 degrees as it is placed to ensure that all surfaces will be in intimate contact with the epoxy adhesive. Adhesive shall be squeezed out of the hole while inserting bolt. The anchor bolt shall not be moved back and forth, as this will entrap air, as does excessive turning of the anchor bolt. Do not twist the anchor after inserting it the full depth of the hole.
- I. Once the anchor bolt is installed, wooden shims or bent wire shims shall be placed below the bolt to keep it centered in the hole. In addition to shimming, use other approved means to keep it centered in the back of the hole.
- J. Do not install nuts and washers until adhesive has reached full cure per manufacturer's instructions.
- K. Torque nuts as recommended by anchor manufacturer. Do not over-torque as this could cause debonding of the adhesive or damage to the rod.

3.04 FIELD QUALITY CONTROL - QUALITY ASSURANCE:

A. Dispensing Test:

Maintain initial epoxy dispensed onto the waste board until the epoxy is hardened. Record any epoxy that is dispensed, that is properly mixed, but that does not harden within 4 hours. Record time of initial dispensing and location of all holes into which that cartridge was dispensed.

B. Proof Load Testing:

Pull test shall be conducted according to the following procedures:

1. The Contractor shall employ a testing agency to conduct pull tests of anchors throughout the project. Pull test results shall be reported to the Engineer within 3 days after the test. The Contractor shall keep pull test reports on file throughout the project.
2. Pull tests shall be conducted on 50% of the first 20 anchors installed by each contractor. Pull tests shall be conducted on 10% of the remaining anchors until 50 consecutive successful pull tests have been conducted. 5% of the remaining anchors shall be tested. Unsuccessful pull tests may result in remedial action including additional pull tests. The cost for all remedial action will be the responsibility of the Contractor. If, at any time and single test fails, the full testing regime shall be

repeated. If more than three failures are recorded in any 20 consecutive tests, 100% testing of bolts may be required at no additional cost to the owner.

3. The minimum load that each anchor shall resist is 24 ksi (2/3 of the yield strength of the anchor rod) when testing reinforcing or ASTM A307 and A36 rod. Otherwise, the anchor shall resist $\frac{1}{2}$ of the ultimate strength of the anchor rod. Reinforcing bars shall be pulled to 2/3 of yield strength.
4. After reaching test load, lock hydraulic pressure for ten (10) minutes. Record load after ten (10) minutes and discontinue testing. Load shall not decrease during the ten minutes while load is being held.

3.05 CURING: Curing for all anchors shall be as recommended by the manufacturer for the environmental condition at the time the anchor is installed.

3.06 WORKMANSHIP: Remove and replace any anchor that does not meet all the requirements of these specifications at no additional cost to the Owner.

END OF SECTION

SECTION 31 10 00
SITE CLEARING

PART 1 – GENERAL

A. SUMMARY

1. This section includes the necessary clearing and grubbing of vegetation, shrubs, grasses, stumps, roots, trees, or other objects within the Project area.

B. CLEARING AND GRUBBING

1. All areas within the construction limits shall be cleared of any and all surface objects such as but not necessarily limited to trees, stumps, roots, grasses, shrubs, vegetation, or other objectionable obstructions resting on or protruding through the existing ground surface except for those designated to be retained or relocated.
 - i. Damage to natural terrain, areas of vegetation, trees, shrubs, etc. outside of the designated clearing limits or limits established in the field during construction shall be repaired, replaced, or otherwise compensated for, as determined by the Owner's Representative, solely at the Contractor's expense.
 - ii. Any trees, shrubs, vegetation, or other landscape areas within the project area but designated to be retained shall be protected by any and all means necessary by the Contractor. Repair, replacement, or compensation for such shall be as determined by the Owner's Representative, solely at the Contractor's expense.
2. All areas within the grading limits shall be grubbed of all objectionable matter on or projecting thru to the existing ground surface.
 - i. All areas of proposed embankment fill shall be grubbed to a minimum depth of six (6) inches or as indicated otherwise within Section 31 2000, Earth Moving.

C. LIMITS OF CLEARING AND GRUBBING

1. The limits of clearing and grubbing shall be to the grading limits as shown on the cross-sections, grade elevations, and / or to the new contours as indicated on the construction plans, to a line or location as specifically indicated on such construction plans, or that necessary for completion of the project.
2. Clear and grub a minimum of five (5) feet beyond all building lines, pavement lines, behind curbs, sidewalks, or other finished surfaces. In areas of utilities, clearing and grubbing limits shall be determined by the area necessary to complete the utility installations unless specifically indicated otherwise on the construction plans.
3. All cut or scarred surfaces of trees or shrubs shall be treated with an asphaltic base paint especially prepared for tree surgery, or as further directed by the Owner's Representative. Any broken limbs shall be pruned as directed by the Owner's Representative and treated likewise. Any costs associated with such remediation or replacement of such damaged trees, as determined by the Owner, shall be the responsibility of the Contractor.
4. In no situation shall clearing and grubbing operations extend beyond property and / or easement lines of the Owner unless the Contractor obtains authorization from the

adjoining owner(s). The Owner shall not be responsible for communications with such adjacent owner(s), nor any costs associated with damages to such property. The Contractor shall be solely responsible for all such remediation work on adjoining property(s) and shall be liable for any and all resulting damages, costs, etc.

5. The Contractor shall not enter upon private property for any purpose without first obtaining permission from its Owner. The Contractor shall be solely responsible for the preservation of, and shall use every precaution necessary to prevent damage to all trees, shrubbery, fences, culverts, bridges, pavement, driveways, sidewalks, etc., and to all water, sewer, gas, telephone, and electric lines thereof, and to all other public or private property along or adjacent to the work.

D. MATERIAL DISPOSAL

1. Unless specifically designated otherwise in the Contract Documents, the Contractor shall reserve the right to profit of any timber harvested as part of the clearing and grubbing operations of this project.
2. All material removed from the project shall be disposed of off-site at a location of the contractor's discretion. Disposal shall follow any and all local, State, or Federal requirements.
3. No dumping material on adjacent property(s) or burial of such material shall be allowed.
4. Burning of perishable debris or material on-site will not be allowed unless written consent is provided by the Owner. If written consent for such burning is provided by the Owner, the contractor shall still remain responsible and liable for all pollution and environmental control of such burning activities.

E. QUALITY ASSURANCE / CONTROL

1. Comply with any and all governing State, Local, Federal notification regulations or requirements prior to beginning any clearing and grubbing. Hauling and disposal regulations of authorities having jurisdiction shall also be followed.

F. PROJECT CONDITIONS

1. Clearing and grubbing operations schedule shall not interfere with the day to day use of the site or the surrounding areas by the Owner. All elements associated with such work shall be performed in such a manner to not disturb on-going activities of the Owner.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

A. Existing Conditions

1. Contractor shall be responsible for verifying all utilities have been properly located in areas of required clearing and grubbing.
2. Contractor shall conduct field observations and document the condition of items designated to be retained.

B. PREPARATION FOR CLEARING AND GRUBBING ACTIVITIES

1. Conduct clearing and grubbing operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
2. Clearing and grubbing operations shall be conducted in such a manner to prevent injury to pedestrians along with damage to adjacent buildings, streets, utilities, and facilities to remain. A safe and protected passage for pedestrians around the project area(s) shall be provided by the contractor. As a minimum, the following shall be provided:
 - a. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways where required by authorities having jurisdiction.
 - b. Protect existing site improvements, appurtenances, and landscaping to remain.
 - c. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
3. Pollution Controls: Water mist, temporary enclosures or covers, or any other means, methods, techniques to limit the spread of dust, dirt, or debris shall be the responsibility of the Contractor.
 - a. Hazardous conditions such as ice, flooding, and pollution when using water shall be avoided or mitigated.
 - b. Remove and haul debris in such a manner that spillage onto existing surfaces shall be prevented.
 - c. Any dust, debris, dirt, etc. caused by the clearing and grubbing process on existing buildings, streets, structures, vehicles, etc. shall be immediately cleaned by any and all means necessary as directed by the Owner at the sole expense of the Contractor.

END OF SECTION

SECTION 31 21 00
TRENCHING, BACKFILL, AND COMPACTION OF UTILITY TRENCHES

PART 1 - GENERAL

A. SUMMARY

1. This section includes the necessary requirements associated with trenching, backfill, and compaction for utilities such as but not limited to water mains, sanitary sewer mains, storm sewers, gas mains, sanitary force mains, etc. placed beneath pavement, hardscape, and improved or unimproved lawn areas.
2. The Contractor is solely responsible for the means, methods, techniques, and sequences required to perform the trench excavation, backfill, and compaction operations to complete the work. No portion of the Contract Documents shall be interpreted as limiting either the extent of such work required or the equipment required to affect the work.
3. The Contractor shall be fully responsible for the disposal of all excess materials resulting from trenching and backfill operations at no additional cost to the Owner.
4. The Contractor shall be fully responsible for location, construction, maintenance, and removal of all haul roads.
5. The Contractor shall be responsible for the prevention of erosion, runoff control, and for the protection of surrounding, adjacent, and existing streams, sewer systems, and / or drainage ways. Hay bales, silt fencing, and sheeting, or any other means, methods, techniques shall be utilized to minimize sediment transport from all exposed areas. Any areas damaged or impacted as a result of erosion / sedimentation run-off shall be immediately repaired to a condition equal to or better than as before construction as determined by the Owner's Representative at no additional cost to the Owner.
6. Where trench excavations are made adjacent to existing buildings, other structures, utilities, or in paved streets or alleys, the Contractor shall take particular care to sheet, shore, and brace the sides of the excavation adequately so as to prevent any undermining of or settlement beneath such structures, utilities or pavements. Where necessary, the Contractor shall be responsible for underpinning or bracing existing structures, utilities or pavement to prevent settlement or other damage. Where necessary, the Contractor shall be responsible for temporarily relocating existing utilities. All such relocations shall be coordinated with the Owner of the utility.
 - a. Sheeting, shoring, and bracing materials shall not be left in place unless shown in the contract documents or approved by the Owner's Representative. Such materials shall be removed in such manner as to protect the work, workmen, the Owner's facilities, adjacent property and the general public.
7. The Contractor shall take all due precautions for the safety of the work, the workmen, the Owner's facilities, the general public, adjacent utilities and structures.

- a. Excavated surfaces too steep to be safe and stable if unsupported shall be supported as necessary to safeguard the work and workmen, to prevent sliding or settling of the adjacent ground, and to avoid damaging existing improvements. The width of the excavation shall be increased if necessary to provide space for sheeting, bracing, shoring, and other supporting installations. The Contractor shall furnish, place and subsequently remove such supporting installations.
 8. The Contractor shall comply with federal, state, and local ordinances, laws, guidelines and regulations related to excavation.
 9. In all cases where materials are deposited around open trench excavations, they shall be placed so that in the event of rain, no damage will result to the work or adjacent property. All drainage ways, gutters, streams, etc. shall be maintained at all times. The Contractor, at no additional expense to the Owner, shall remove any and all eroded or washed material, debris, etc. that enters pipes, ditches, or streams as a result of the work on the project and as determined by the Owner's Representative.
- B. PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION
1. Ductile Iron Pipe and Fittings
 2. PVC Pipe and Fittings
 3. High Density Polyethylene Pipe and Fittings
 4. Grease Interceptor
 5. Valves, Valve Boxes, and Vaults
 - ~~6. Fire Hydrants~~
 - ~~7. Storm and Sanitary Sewer Structures~~
- C. REFERENCES
1. U.S. Department of Labor, Occupational Safety and Health Administration.
 2. Alabama Department of Transportation Standard Specifications for Highway Construction, latest edition.
- D. RELATED SECTIONS AND DOCUMENTS
1. Drawings and general provisions of the Contract Documents including General, Supplemental, and Special Conditions, and Division 01 Specification Sections, apply to this Section.
- E. QUALITY CONTROL / QUALITY ASSURANCE / TESTING
1. The Owner will secure a geotechnical services entity for all soil testing to perform in-place density testing, and also gradation analysis for any type of crushed stone materials used if requested by the Owner or the Owner's Representative. All initial soil density testing shall be paid for by the Owner. When such test(s) fail to meet the project specifications, any subsequent testing and associated scope shall be the responsibility of the Contractor.

- a. The location of the soil density test(s) shall be as determined in the field by the Owner's Representative.
 - b. The frequency of the soil density testing shall be as indicated within the Geotechnical Report or as determined in the field by the Owner's Representative based on field conditions.
2. The Contractor shall be responsible for providing all means, methods, techniques, sequences, labor, equipment, material, etc. necessary for trench excavations, backfill, and compaction that follows the Contract Documents.

PART 2 – PRODUCTS

A. MATERIALS

1. Select Backfill, crushed aggregate
 - a. Crushed stone select backfill, where specified or required, shall be crushed limestone. Crushed stone shall meet or exceed the requirements of the Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57 or 825 Type 'B' Stone as indicated on the construction plan details.
 - i. Any use of ALDOT No. 57 or similar gradation of crushed stone shall require such backfill material to be completely wrapped with a filter fabric.
2. Select Backfill, sand
 - a. Sand select backfill, where specified or required, shall be a local pit-run sand suitable for the purpose intended, generally consisting of hard, sound material, predominantly quartz or other hard durable, rock, including friable, loosely bound deposits of sandstone conglomerate. The sand shall be free from a coating of injurious material, lumps of clay, loam, organic matter, or other foreign material.
 - i. Any use of sand shall require such backfill material to be completely wrapped with a filter fabric.
3. Standard Backfill:
 - a. Standard backfill shall consist of native soils free of large rocks, boulders and other deleterious substances. The Contractor may elect to utilize crushed stone select backfill instead of standard native backfill material at their discretion. If so, such select backfill material type shall be as approved by the Owner and be at the sole expense of the Contractor.
4. Bedding
 - a. Class '1' Bedding shall conform to Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801 as follows, unless indicated otherwise on the construction plans:
 - i. Gravity pipe (all material types).....ALDOT No. 57 crushed limestone
 - ii. Non-gravity pipe (plastic material type)... ALDOT 8910 crushed limestone
 - iii. Non-gravity pipe (metallic material type)... ALDOT No. 57 crushed limestone
 - b. Class '2' Bedding shall be reinforced concrete (3000 psi 28-day compressive strength).
 - c. Class '3' Bedding shall be native soil, conforming to the above specifications for

Standard Backfill. Such bedding with native backfill shall be placed in uniform thicknesses and be compacted in place so as to eliminate any potential for settlement around the pipe or of the trench above. Native bedding shall be on a uniform base following the required grade of the associated pipe.

- d. Class '4' Bedding shall be sand conforming to the above specifications for Select Backfill, sand.
5. Trench Foundation
 - a. Trench foundation material shall be Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57 crushed limestone, unless a different gradation is otherwise directed by the Owner's Representative.
 - b. Trench foundation material shall only be used when approved in advance by the Owner's Representative.
 6. Filter Fabric – Filter fabric required in areas of Select Backfill and / or Bedding (No. 57 crushed stone or sand) shall be Terratex No. 4, or approved equal.

PART 3 – EXECUTION

A. EXAMINATION OF EXISTING CONDITIONS / PROTECTION, REMOVALS, REPLACEMENTS

1. Existing Underground Utilities:

- a. The Contractor shall protect all existing utilities during the trenching operation. The Contractor shall cooperate fully with the utility owner's request(s) for temporary and permanent supports during the trenching operation and shall furnish and install supports at no additional cost to the Owner. The Contractor shall be held liable for damage, including negligent or willful damage to any other utility and shall pay for the cost of all necessary repairs and any resulting damages.
- b. Storm sewers in conflict with the proposed trench may be carefully dislodged and stockpiled. The pipes shall be cleaned and replaced immediately after new construction is clear. Storm sewers damaged by the Contractor shall be replaced with new pipe at no additional cost to the Owner. All storm sewers removed shall be re-laid to proper grade on bedding and backfilled according to the above specifications for such bedding and backfill so that settlement will not occur.
- c. Sanitary sewer mains in conflict with the proposed trench may be carefully dislodged and stockpiled, but only if suitable by-pass pumping or other approved means for handling the sewage has been installed in order to keep the sanitary sewer service intact. If the sewer mains are left in place, the Contractor shall take whatever means necessary to support sewer mains to their true line and grade when they are encountered during excavation. The pipe shall be supported so that no leakage will occur. If a repair becomes necessary the contractor shall use materials of the same type and class of pipe as the existing if available. At a minimum, PVC pipe and fittings shall conform to ASTM D3034, SDR 26. All couplings to existing pipe shall be manufactured couplings and all metal parts shall be stainless steel. Under no circumstances shall sewage be

allowed to discharge into open trenches, storm sewers, or the ground surface. Sanitary sewers damaged by the Contractor shall be replaced with new pipe at no additional cost to the Owner. All storm sewers removed shall be re-laid to proper grade on bedding and backfilled according to the above specifications for such bedding and backfill so that settlement will not occur.

2. All streets, roads, alleys, etc. shall be accessible by emergency response vehicles at all times.
 - a. If private driveways are disrupted, access to the associated residence(s) or place of business shall be provided by the Contractor. The Contractor shall be responsible for communicating with such property owners prior to any disruptions to the driveways.
 - b. Any closure of existing pedestrian paths, sidewalks, etc. shall require proper signage in advance of such closure, and also adequate detour(s) / direction(s) to the nearest path for continuation of such pedestrian movement(s).
3. Ornamental Shrubs and Trees
 - a. Ornamental shrubs and trees shall not be removed unless directed by the Owner's Representative. When ornamental shrubs and/or trees are to be removed and replaced, the following steps shall be followed:
 - a. Remove all trees, shrubs or plants, which interfere with construction intact with root system and protect from drying during construction period.
 - b. Replace plant to original location as soon as possible, taking care to insure that hole is large enough, and no damage is done to root system.
 - c. Fill hole with good topsoil and tamp firmly into place.
 - d. Water plant(s) as necessary for reestablishment.
 - b. The Contractor shall confine his operations to the construction limits, rights-of-way, and/or easements designated. The Contractor shall be responsible for all repair or replacement of any damage to adjacent property at no additional cost to the Owner.
4. Existing Fencing
 - a. All fences in conflict with the proposed construction shall be removed in a neat and workmanlike manner and then replaced immediately following construction operations. Where materials removed are not suitable for reuse, they shall be replaced with new material of equal or better quality and construction. All fences shall be rebuilt to line, with posts well set, wires fastened with new staples or ties and well stretched. All corner and end posts shall be well braced and set a minimum of 30 inches in the ground.
5. Existing Utility Poles, Guy Wires, Etc.
 - a. All utility poles, guy wires, sign posts, signs, and similar private or public obstructions which are indicated on the plans or not but existing on the ground shall be removed and replaced by the Contractor at his own expense. In the event any such items are damaged or destroyed by the Contractor's operations, they shall be replaced by the Contractor at the Contractor's expense.
 - b. When it is necessary to remove, adjust, brace, support, stabilize any existing utility

poles, guy wires, etc., representatives of the utilities involved shall be notified to decide the method and nature of work to be done. The Contractor shall make satisfactory arrangements with such utility owners for the required scope. Any such work shall be at the Contractor's expense, unless otherwise specifically indicated otherwise by the Contract Documents.

B. TRENCH PREPARATION

1. Clearing and Grubbing.

- a. ~~Unless stated otherwise, clearing and grubbing operations shall follow all the requirements of Section 31 1000.~~
- b. In no situation shall any clearing and grubbing materials be buried in the trenches on the project.
- c. On public property, existing trees or limbs over 2 inches in diameter shall not be cut unless they are within 7 feet of pipe centerline or specific permission is received from the Owner. On private property, easements, or in lawns, no trees or brush shall be cleared or cut without prior approval of the Owner's representative following communication and coordination with the land owner. The Contractor shall be required to remove trees, shrubs or plants on private property intact, and to ball the roots, keep watered as required, and replant in their original location upon completion of pipe laying operations, unless written permission is obtained from the Owner's Representative, or unless otherwise specified. The Contractor shall replace, at his own expense, any trees, shrubs, or plants which shall be damaged as a result of project, or which shall die within 1 year of the time it was disturbed or damaged.

2. Existing Utility Verification - refer to Section 02 21 02

3. Saw-Cutting of Existing Pavement, Concrete, Curbs, Sidewalks, Gutters, etc.

- a. All existing pavement, concrete, curb, sidewalks, etc. shall be neatly saw-cut in a straight and orderly manner prior to beginning any trench excavation. Saw-cut lines shall be made at the existing joints lines for all concrete, curb, gutters, or sidewalks unless specifically directed otherwise by the Owner's field representative. The location(s) shown on the construction plans shall be used as a general guide to the actual saw-cut locations. Actual saw-cut locations shall be adjusted in the field as required to align with the existing joints.
- b. All appropriate permits, traffic control devices, barricades, cones, etc., shall be in place prior to beginning any saw-cutting activities which will impair vehicular traffic or pedestrian movements. Any necessary cleanup of debris, residue, etc. from the saw-cutting activities where demolition does not immediately follow shall be done as soon as saw-cutting operations are completed.

C. TRENCH CONSTRUCTION

1. General:

- a. The Contractor is solely responsible for the safety and welfare of all workers, personnel, public, etc. in regards to trench excavations or other work on the project. The Contractor shall take whatever actions, means, methods, techniques, or sequences that are needed to protect workers, staff, general public, the Owner and all of their representatives, etc. in regards to safety on the project. The Contractor shall be responsible for being knowledgeable of and following any and

all applicable OSHA guidelines.

- b. Trenching or excavation for pipe lines shall consist of the excavation necessary for the installation of sanitary or storm sewers, water lines, gas lines, and other utilities and all appurtenant facilities, including manholes, junction boxes, inlets, outlets, thrust blocks, and pipe protection.
- c. Trench excavation shall be made in an open cut method unless tunneling, boring, or other construction methods are specifically indicated in the construction plans or requested by the Contractor and approved by the Owner's Representative. Trenches shall be true to the lines and grades shown on the plans or established by the Owner's Representative.
- d. When vertical banks for trench excavation are not practical to construct or are unable to provide safe working conditions to workpersons per the most recent OSHA adopted standards, the banks may be sloped provided that such excavation does not damage adjacent structures. However, when trench banks are sloped, such banks shall be cut to vertical planes for that part of the trench up to twelve (12) inches above the top of the pipe.
- e. Every drain, gutter, culvert, or sewer for surface drainage encountered is to be kept open for both temporary and permanent flow, or if necessarily closed, other adequate provision for drainage is to be made.
- f. Pipe trenches shall not be excavated more than 300 feet in advance of pipe laying and temporary bridges or cross walks shall be constructed where required to maintain vehicular or pedestrian traffic.
- g. Trench widths shall be confined to dedicated rights-of-way or construction easements.
- h. Trench widths shall be kept as narrow as possible, adhering to any OSHA requirements, but shall be wide enough to accommodate the necessary mechanical consolidation of all backfill materials.
- i. Where select backfill is specified or required, all excavated materials shall be immediately removed from the project site by the Contractor.

2. Sheeting, Shoring, and Bracing

- a. The Contractor shall be responsible for the selection, design, application, implementation, etc. of any and all types sheeting, shoring, and / or bracing necessary for the project.
- b. The sides of all trench excavations shall be sufficiently sheeted, shored, and braced whenever necessary to prevent slides, cave-ins, settlements, or movement of the banks and to maintain the excavation clear of obstructions that will, in any way, hinder or delay the progress of the work.
- c. Wood or steel sheet piling of ample design and type shall be used when necessary.
- d. All sheeting, shoring, and bracing shall have sufficient strength and rigidity to withstand the pressures exerted and to maintain the walls of the excavation properly in place and protect all persons and property from injury or damage.
- e. Where excavations are made adjacent to existing buildings or other structures, or in paved streets or alleys, the Contractor shall take particular care to sheet, shore and brace the sides of the excavation adequately so as to prevent any undermining of or settlement beneath such structures or pavement. Underpinning of adjacent structures shall be done when necessary. The Contractor will be liable for any damage to any structure that results from his operations.
- f. Sheeting, shoring or bracing materials shall not be left in place unless so shown by

the plans or approved by the Owner. Such materials shall be removed in such manner as will not endanger or damage the new structure or any existing structures or property, either public or private, in the vicinity, and so as to avoid cave-ins or slides. No trench sheeting and bracing shall be removed until the trench has been backfilled at least two (2) feet above the top of the pipe.

3. Rock Excavation

- a. Excavation of all hard, compacted, cemented, or rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material one (1) cubic yard or more in volume that exceeds a standard penetration resistance of 100 blows / 2 inches as tested by the Owner's Geotechnical Representative. ~~Rock material may be processed and re-used as embankment fill on the project as referenced under Section 31-2000, Part 1, Paragraph 5.A, Unclassified Excavation.~~
- b. All rock excavation shall be performed with the use of heavy machinery such as but not limited to ripper attachments to bulldozers, excavator with rock bucket, hydraulic hammering, or drilling. Unless approved otherwise by written consent from the Owner, no blasting shall be permitted. If granted, the Contractor shall be responsible for all aspects, including but not necessarily limited to, pre-blast surveys and observations, methods of blasting, post-blast surveys / observations, any damages associated with such blasting, etc. The Owner or the Owner's Representatives shall not be responsible for any communications, coordination, etc. associated with the blasting. All blasting shall be conducted with due regard to the safety of persons and property in the vicinity of the work and in strict conformity with all laws, ordinances, or regulations governing blasting and the use of explosives. The Contractor shall be licensed for this type of blasting and shall follow the insurance requirements of the general conditions. The Contractor shall also notify all applicable local emergency response entities (fire, police, etc.) at least 48 hours in advance of any blasting.
- c. Rock encountered in trench excavation for pipe lines shall be removed for the overall width of trench and to a minimum depth of twelve (12)-inches below the bottom of the outside of the pipe, if rock extends to such depths. Where pipelines are constructed on concrete cradles, rock shall be excavated to the bottom of the cradle as shown on the plans. When necessary to provide sufficient working space, rock shall be excavated to additional depth for bell holes.
- d. After the Owner's Representative has observed the completed excavation, the space below the pipe or structure grade shall be filled with an approved foundation material and compacted to the proper grade.
- e. Rock excavation near existing structures of all types shall be conducted with the utmost care, and every precaution shall be taken to prevent damage to such structures. Any damage or injury of whatever nature to persons or property caused directly or indirectly by rock excavation methods and operations shall be promptly repaired, replaced, or compensated for by the Contractor at his own expense and to the satisfaction of the persons injured or the property owners.

4. Dewatering

- a. All excavated areas shall be kept free of standing water once excavated and prior to trench backfill. The Contractor shall provide all necessary man-power, equipment, tools, machinery, etc., necessary for the removal of water at all times.
- b. Bedding, trench foundation, or select / standard backfill shall not be placed in trenches which have water standing or wet, unstable trenches. Any trench material that cannot be properly dewatered shall be removed and replaced with suitable backfill material as required to provide an adequate trench bottom appropriate for the pipe installations.
- c. All water removed or diverted from the trench excavations shall be disposed of in a manner that does not damage or destroy the adjacent or surrounding property. Under no circumstances shall the water be diverted in a manner that will create flooding of streets, adjacent or surrounding properties, sidewalks, gutters, etc. Diverting of the water through portions of the new pipeline not yet accepted by the Owner shall not be allowable unless approved by the Owner.

5. Trench Foundation

- a. Where unsuitable material for supporting pipe bedding is encountered as determined by the Owner's Representative, these materials shall be removed and replaced with trench foundation material. This shall only be done at the direction of the Owner's Representative.
- b. Trench foundation material shall be placed at the specified trench width from the bottom of the excess excavation to the bottom grade line of the pipe bedding.
- c. Trench foundation material so placed shall be as shown on the trench detail drawings or specified herein. If not shown on the drawings, trench foundation material shall consist of Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57 crushed limestone. Depending on the existing conditions, the Owner may direct the use of a different gradation of stone material.

6. Trench Bedding and Backfill

- a. All areas where bedding is not specifically called for or required, the pipe shall be bedded on native soils. Bell holes shall be excavated so that the entire pipe length rests on firm soil.
- b. Areas over excavated by the Contractor through negligence or convenience shall be backfilled and tamped with approved materials at the expense of the Contractor per the construction plan trench details or bedding requirements of these specifications.
- c. Backfilling shall not begin before the Owner's Representative has inspected the grade and alignment of the pipe.
- d. Pipe bedding and trench backfill material shall be as per the trench details on the construction plans and as specified herein.
- e. If select backfill is not specified or required based on the pipe material type and / or location, backfilling to a point 12-inches above the top of the pipe, defined as the pipe zone, shall be done with good earth, sand or gravel and shall be free from large rocks or hard lumpy materials. Large rocks shall be defined as any larger than 2-inches in diameter. No materials of perishable, spongy or otherwise unsuitable nature shall be used in backfilling. It is essential that the completed backfill be done in such a manner as to minimize voids in the backfill. All utility trenches shall be

- backfilled as per the construction plan trench details as a minimum.
- f. For backfilling up to twelve (12) inches above the top of the pipe, place trench backfill material at approximately the same rate along both sides of the pipe and mechanically consolidate by tamping in layers not to exceed eight (8) inches of loose fill up to the horizontal centerline of the pipe. The intent is to cradle the pipe so that the full length is uniformly supported on firm bedding and the weight of the pipe and backfill is borne uniformly by the lower half of the pipe barrel. Backfilling and tamping procedures shall be performed in such a manner to insure that no voids or un-compacted areas occur beneath the bottom haunch of the pipe which could potentially result in trench settlement. The Contractor shall utilize any and all methods necessary to properly compact the haunch area(s) of the pipe and associated trench. The trench width shall be adequately sized so as to allow for proper trench backfill placement and compaction while also providing adequate space for safe working conditions. Use of trench boxes or other type(s) of trench sheeting, shoring, or bracing shall not relieve the Contractor from any backfill or compaction requirements.
 - g. Backfill material of the remainder of the trench shall follow the construction plan details as per the type of pipe and location of such trench. Backfill material shall be uniformly placed in maximum twelve (12) inch loose lifts and be mechanically consolidated in place as per the density and moisture content requirements specified within the geotechnical report and indicated on the construction plan trench details.
 - h. All backfilling shall be done in such a manner that will not disturb or injure the pipe or structure over or against which it is being placed. Any pipe or structure injured, damaged, or moved from its proper line or grade during backfilling operations, shall be replaced or repaired and then re-backfilled as herein specified, at the expense of the Contractor.
 - i. The above procedures are intended to be the minimum requirements for the required trench backfill and compaction. The Contractor shall ultimately be responsible for the pipe laying, backfill, and compaction of all utility trenches in such a manner to prevent any future settlement, movement, or damage to the pipe, lawn / landscape, pavement surfaces, sidewalks, curbs, gutter, or other structures on the surface.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.1 SECTION INCLUDES:

- A. This Section of Specifications covers material and installation requirements for asphalt paving as required in the plan assembly.
- B. This Section of Specifications covers the material and installation requirements for asphalt patching over excavated trenches in roads, parking lots and driveways.

1.2 RELATED SECTIONS:

- A. Section 02 41 16 – Site Demolition

1.3 PAYMENT:

- A. Payment for all asphalt paving shall be included in the lump sum cost of the project.

If the average weight per square yard of any unit is found deficient by more than 10 percent of the specified average weight per square yard, the OWNER's Representative will determine (1) whether the CONTRACTOR shall remove and replace the deficient unit without payment for the removal or the material removed, or (2) whether the CONTRACTOR may leave the deficient unit in place and cover it with a layer of the same mix of adjusted maximum size aggregate, of not less than 90 pounds per square yard average with a maximum aggregate size of 3/8 inch. In case (2), the surface layer shall not be feather-edged at the end of the overlay layer, but a sufficient amount of the surface beyond the ends of the deficient unit shall be removed, to a neat line across the pavement, to allow placing the full 90 pounds per square yard and make a joint that will meet the surface requirements. All costs shall be incidental to the project.

1.4 REFERENCES:

- A. Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Ed.

1.5 QUALITY ASSURANCE:

- A. The work of asphalt paving shall be accomplished by skilled workmen experienced in the laying of asphalt.
- B. All equipment shall be of a design and size to successfully accomplish the work.

1.6 PROJECT CONDITIONS:

- A. The CONTRACTOR shall comply with all environmental laws and requirements pertaining to the work.

- B. The CONTRACTOR shall take adequate measures to control dust in the work area.
- C. The CONTRACTOR shall thoroughly inspect the roadway base and assure himself that proper laying conditions exist.
- D. The CONTRACTOR shall provide and maintain adequate and safe traffic control.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Prime Coat:
 - 1. Prime Coat shall be emulsified asphalt, Type AE-P, tar types RT2 or RT3, or cutback asphalts MC 250, RC70 or RC250 as defined in Section 401 of the Alabama Department of Transportation Standard Specifications.
 - 2. Prime Coat shall be applied at the rate of 0.22 to 0.25 gallons per square yard over the entire area to be treated with asphalt.
- B. Tack Coat:
 - 1. Tack coat shall be emulsified asphalt type SS-1, SS-1h, or RS-2 or Asphalt Cement Grade AC-10 or AC-20 as defined in Section 405 of the Alabama Department of Transportation Standard Specifications.
 - 2. Tack Coat shall be applied at a rate not to exceed a rate of 0.10 gallons per square yard.
- C. Asphalt Patch:
 - 1. Asphalt paving used in patching shall be Improved Bituminous Concrete Binder as defined in Section 424 of the Alabama Department of Transportation Standard Specifications.
 - 2. Materials shall meet the requirements of Article 429.02 of the above mentioned specifications.
 - 3. The CONTRACTOR shall refer to the Construction Plans for the quantity of material to be applied per square yard.
- D. Asphalt Paving:
 - 1. Asphalt paving shall be Improved Bituminous Concrete Plant Mix meeting the specification outlined in Section 424 of the Alabama Department of Transportation Specifications.
 - 2. Final layer of asphalt placed in streets and parking lots shall be Improved Bituminous Concrete Wearing Surface, Mix AA" with Polymer Additive and all materials conforming to Section 424 of the Alabama Highway Department specifications.

- E. Before overlaying the street, the CONTRACTOR shall raise or lower all valve boxes, manholes and other embedded items to the satisfaction of the OWNER's Representative. No extra payment will be made for these adjustments.

2.2 EQUIPMENT:

- A. Equipment used in asphalt patching and/or asphalt paving shall meet the requirements of Article 410.03a of the Alabama Department of Transportation Specifications.
- B. Equipment used in the application of Prime Coat and Tack Coat shall comply with Article 401.03a of the above mentioned Specifications.

2.3 TEMPERATURE AND WEATHER REQUIREMENTS:

- A. Prime and Tack Coat:
 - 1. Bituminous materials shall not be placed on wet surfaces or when the air temperature is below 60-degrees F.
 - 2. Bituminous materials shall not be placed when the temperature is expected to fall below freezing during the night regardless of the daytime temperature.
- B. Asphalt Patching and Overlay:
 - 1. The asphalt mixture shall be placed only upon an approved underlying course that is dry.
 - 2. Asphalt layers of 200-pounds per square yard or less shall not be placed when the air temperature is below 40- degrees F. The air temperature must be 40-degrees F. and rising before the spreading operation is started and the spreading operation shall be stopped when the air temperature is 45-degrees F. and falling.
 - 3. For asphalt layers over 200-pounds per square yard, the above temperatures shall be lowered by 5-degrees.

PART 3 - EXECUTION

3.1 EXECUTION:

- A. Prime and Tack Coat:
 - 1. All loose material, dust and foreign material shall be removed from the surface. Cleaning shall be continued until all caked and loose dirt and dust are removed.
- B. Asphalt Patching:
 - 1. All designated areas to be patched shall be trimmed to neat vertical lines to the depth of patch specified. All loose material shall be removed. A prime or tack coat shall be applied as specified above. The asphalt shall be placed and compacted to a degree that further consolidation of the patch is not anticipated.

2. Any patched areas that do consolidate shall be replaced or additional material brought in to bring the patch up to the surrounding level.
3. All asphalt or concrete streets, parking areas and drives shall be patched the same day they are cut. Temporary or cold patch material may be used until the permanent patch can be placed; however, no extra payment will be made for temporary patching.

The CONTRACTOR shall adequately protect his work and the public. Where unpaved or rough areas may exist, the CONTRACTOR shall provide adequate warning signs. The signs shall be equipped with flashing lights if the condition exists after darkness.

3.2 APPLICATION:

A. Prime and Tack Coat:

1. Prime and Tack Coat shall be uniformly applied at the rate specified by pressurized distributors.
2. All areas to be treated with an asphalt surface treatment shall be primed and/or tacked.

B. Asphalt Paving and Patch:

1. Asphalt Patching may be applied with spreaders, by hand, or with motor graders. All areas inaccessible to large equipment shall be spread by hand.
2. Asphalt patching shall be thoroughly compacted through the use of steel wheeled rollers and/or rubber tired rollers. Density shall be as specified on the drawings in the Bid Proposal or in the Alabama Department of Transportation Standard Specifications.
3. Asphalt paving shall be applied with spreaders; except in inaccessible areas spreading may be done by hand, uniformly placing the desired rate per square yard over the underlying surface.
4. As soon as the mixture has set sufficiently to prevent cracking, the mixture shall be rolled with steel wheel and rubber-tired rollers to compact the mixture. Density shall be as specified on the drawings or in the Bid Proposal.
5. All patching, including any temporary patching, shall be done in a professional manner, shall be smooth, and shall blend smoothly with adjacent paving.
6. Generally, unless called out differently elsewhere, the asphalt paving shall not be placed until the project has satisfactorily passed all tests and all construction activities are complete, and there is no need for any further construction traffic in the affected areas. However, the CONTRACTOR shall adequately maintain the patched areas for the safety of the public.

3.3 TESTING AND SURFACE REQUIREMENTS:

- A. Testing of the asphalt mixtures shall be performed at the discretion of the OWNER's Representative. Testing shall include but not be limited to density tests and extraction tests as outlined in the Alabama Department of Transportation Standard Specifications, latest ed.
- B. The finished surface of asphalt overlays shall be checked with string, level and/or straightedge. The finished surface shall not vary more than 1/4" from the required sections as measured at right angles to the roadway centerline. The finished surface shall not vary more than 3/8" in any 25-foot section measured parallel to the centerline at the following locations: one foot inside of the edges of pavement, at the centerline and at other points as designated.

3.4 MAINTENANCE:

- A. The CONTRACTOR shall maintain and protect the newly laid asphalt until final acceptance of the work.

END OF SECTION

SECTION 32 12 20

CRUSHED AGGREGATE BASE

PART 1 – GENERAL

A. WORK INCLUDED

1. This specification gives specific requirements for materials and installation of crushed aggregate base.

B. MATERIALS

1. Materials shall meet the requirements of the latest edition of the Alabama Department of Transportation Standard Specifications for Highway, Section 825, Gradation Type "B".
2. Only "limestone" shall be allowed for crushed aggregate base, no exceptions.

C. INSTALLATION

1. No material shall be placed until the preceding layer has been approved by the Owner's Geotechnical Representative. Such layer shall be properly shaped according to the contours and spot elevations shown on the grading plan.
2. Material shall be mixed to a uniform consistency by road-mixing, yard-mixing, or plant-mixing.
3. Materials found not meeting the requirements of this specification shall be removed by the Contractor or brought into conformance.
4. Material shall be spread to a uniform thickness and compacted to 100% S.P.D. as determined by ASTM D 698. Finished material shall be to the thickness shown in the drawings.
5. Material shall extend the full width and shaped to accept curbing as shown by the typical sections.
6. Material shall be kept at or near optimum moisture during the compaction process and until the succeeding layer is placed.
7. The Contractor shall shape the finished base to reasonably close conformity to the contours shown by the grading plan.
8. The Contractor shall maintain the base layer until such time as the succeeding layer is placed.
9. The Contractor shall install all underground utilities and sleeves prior to base installation. If base is installed, compacted tested, etc., and utilities are later installed, then the base shall be considered contaminated and shall be removed/reinstalled, recompacted, and retested at the Contractor's expense, no exceptions. Final base is not considered temporary stone; therefore, contamination shall not be allowed. Contaminated base shall be removed and replaced at the Contractor's expense.
10. When proof rolling is required by the Owner's Representative, it shall be proof rolled at a minimum with a fully loaded, triaxle dump truck. All proof rolling shall be done in the presence of the Owner's Representatives.

END OF SECTION

SECTION 32 17 23

PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 Scope

The work under this section shall cover the striping of all streets and parking lots as indicated on the construction plans. The work shall include the layout of all parking spaces, legends, markings and roadway stripe.

1.2 Related Sections

Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.

1.3 Payment

- A. Payment shall be incidental to the lump sum cost of the project. Removal of existing traffic stripes (both paint and thermoplastic) shall be a subsidiary obligation.
- B. The lump sum price shall cover all materials, equipment, labor and other incidentals necessary for a complete job.

1.4 Performance Requirements

- A. The CONTRACTOR shall allow newly placed bituminous concrete plant mix to cure for fourteen (14) days prior to any application of traffic stripe.
- B. Cleaning of pavement shall be in accordance with Section 701.03(b) of the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.
- C. The CONTRACTOR shall be required to prepare site for striping purpose. The work shall include but not limited to sweeping of pavement and removal of grass from top of curbs prior to paint application.

1.5 Construction Staking

Layout of parking will be the same as that shown on plans. The CONTRACTOR will be responsible for parking layout.

PART 2 - PRODUCTS

2.1 MATERIALS

All striping, arrows, legends, markings, etc. shall conform to Section 856.02 of the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.

END OF SECTION

SECTION 32 22 90
EROSION CONTROL

PART 1 – GENERAL

A. SUMMARY

1. This section of specifications covers the requirements of the contractor to protect the project site and adjoining properties from soil erosion and runoff, reviews methods of construction, erosion control measures, maintenance of erosion control features, and construction runoff permitting.

PART 2 – PRODUCTS

- A. Materials. All materials used for erosion and sedimentation control on the project shall follow the guidelines and requirements within the Alabama Handbook For Erosion Control, Sedimentation Control, and Stormwater Management On Construction Sites and Urban Areas, latest edition.

1. Temporary Berm. Temporary berm is constructed of compacted soil or riprap, with or without a shallow ditch, at the top of fill slopes or transverse to the centerline of fills. These berms are used temporarily at the top of newly constructed slopes to prevent excessive erosion until permanent controls are installed or slopes stabilized.
2. Temporary Slope Drain. Temporary slope drain is a facility consisting of temporary earthen swale, stone gutters, fiber mats, plastic sheets, concrete or asphalt gutters, half-round pipe, metal pipe, plastic pipe, sod or other material acceptable to the Owner that may be used to carry water down slopes to reduce erosion. These items shall be required at no additional compensation to manage the stormwater runoff during construction.
3. Sediment Structures. Sediment basins, ponds, and traps are prepared storage areas constructed to trap and store sediment from erodible areas in order to protect properties and stream channels below the construction areas from excessive siltation.
4. Check Dams. Check dams are barriers composed of logs and poles, large stones, or other materials placed across a natural or constructed drainageway in order assist in reducing run-off velocities and to protect properties and stream channels below the construction areas from excessive siltation.
5. Temporary Seeding and Mulching. Temporary seeding and mulching are measures consisting of seeding, mulching, fertilizing, and matting utilized to reduce erosion. All cut and fill slopes, including waste sites and borrow pits, shall be seeded when and where necessary to control erosion.
6. Brush Barriers. Brush barriers shall consist of brush, tree trimmings, shrubs, plants, and other approved refuse from the clearing and grubbing operations. Brush barriers are placed on natural ground at the bottom of fill slopes, where the most likely erodible areas are located, to retain sedimentation particles.

7. Baled Hay or Straw Checks. Baled hay or straw erosion checks are temporary measures to control erosion and prevent siltation. Bales shall be either hay or straw, containing five (5) cubic feet or more of material. Baled hay or straw checks shall be used where the existing ground slopes toward or away from the embankment along the toe of slopes, in ditches, or other areas where siltation erosion or water runoff is a problem.
8. Temporary Silt Fences. Silt fences are temporary measures utilizing woven wire or other approved material attached to posts with filter cloth composed of burlap, plastic filter fabric, etc., attached to the upstream side of the fence to retain the suspended silt particles in the run-off water.

PART 3 – EXECUTION

A. General

1. For projects involving ground disturbances equal to or greater than one (1) acre, a National Pollutant Discharge Elimination System (NPDES) General Permit Number ALR100000 (permit) from the Alabama Department of Environmental Management (ADEM) for discharge associated with regulated construction activity shall be required. For such projects, the Contractor shall be responsible for obtaining the NPDES permit in accordance with requirements of this section and in compliance with regulations established by the Environmental Protection Agency (EPA) and ADEM. The Contractor shall be responsible for providing a Qualified Credentialed Professional (QCP) and/or Qualified Credentialed Inspector (QCI) to perform inspections as required by the permit, including the monthly and / or per event monitoring / reporting requirements, and for monitoring oil, grease, other contaminants as part of the permit. The QCP/QCI shall inspect all BMP's daily and keep daily inspection reports in a log book that shall be submitted for review by the Owner's Representative prior to approval of the monthly pay request. The cost of the Permit and any associated renewals, preparation of the permit and the related Construction Best Management Practices Plan (CBMPP), the costs of any and all inspections, monitoring, reporting, and associated documentation shall be the responsibility of the Contractor.
2. The Contractor shall exercise planning and forethought in coordinating the work of protecting the project and adjoining properties from soil erosion by effective and continuous erosion control methods of either a temporary or a permanent nature. This shall also include measures to prevent soil, mud, debris, contaminants from tracking and accumulating on streets, roads, and other surfaces, leaving the project area, and / or entering into the storm drainage system ultimately leading to the streams or other bodies of water.
3. The erosion control plan and details included with the construction plans represents the minimum and shall be considered as a guide for the Contractor, not inclusive of all items potentially necessary. Based on the Contractors anticipated means, methods, techniques, sequences along with their proposed project phasing, prior to beginning construction the Contractor shall develop a detailed erosion control plan based on their intended scope. As part of the Owner Pre-Construction meeting, such plan shall be reviewed with any expected problem areas in regards to the erosion control work pointed out. Different solutions shall be discussed so that the best method might be determined. It is ultimately

the responsibility of the Contractor to develop and implement a final detailed erosion control plan on the project.

4. The Contractor shall plan his clearing work and his entire construction operations in such a manner as to effectively control soil erosion and prevent pollution of streams, ponds, and/or drains as would result from silt or soil runoff or as would result from any materials used in the construction operations such as oil, grease, paints, chemicals, or any construction debris.
 5. The Contractor shall intercept and protect drainage from the construction site by means of silt fences, silt barriers, sedimentation traps, or other measures as required.
 6. Silt fences, wherever used on the site, shall consist of fabric securely fastened in place or, if approved, permeable-barrier fabric designed to filter water and retain silt. Fabric shall be set securely in the ground and firmly held in place.
 7. The erosion control work shall cover all disturbed areas within the project. Erosion control work shall not be limited to the project area, but shall include all disturbed areas associated with any staging, material laydown, and / or storage.
- B. Construction & Installation of BMP's
1. The Contractor shall use any acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of silt fences, waddles, check dams, water diversion structures, diversion ditches, and settling basins.
 2. Construction operations shall be restricted to the areas of work which must be entered for the construction of temporary or permanent facilities. The Owner's Representative reserves the right to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow, and fill operations and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of any surrounding property, drainages, wetlands, and / or adjacent watercourses. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains, and use of temporary mulches, mats, or other best management practices (BMP's) or methods as necessary to control erosion.
 3. Excavated soil material shall not be placed adjacent to any surrounding property, drainages, wetlands, and / or adjacent watercourses in a manner that will cause it to be washed away by high water or runoff. Earthen berms or diversions shall be constructed to intercept and divert runoff water away from such areas. Diversion outlets shall be stable or shall be stabilized by means acceptable to the Owner. If, for any reason, construction materials are washed away during the course of construction, the Contractor shall immediately remove those materials from the fouled areas as directed by the Owner at no cost to the project.
 4. The Contractor shall not pump silt-laden water from trenches or other excavations into wetlands or adjacent watercourses. Instead, silt-laden water from excavations shall be

discharged within areas surrounded by baled hay, sediment traps, or other appropriate BMP's to ensure that only sediment-free water is returned to the watercourses. Damage to vegetation by excessive watering or silt accumulation in the discharge area(s) shall be avoided.

5. Prohibited construction procedures include, but are not limited to, the following:
 - a. Dumping of spoil material into any streams, wetlands, surface waters, or unspecified locations.
 - b. Indiscriminate, arbitrary, or capricious operation of equipment in wetlands or surface water areas.
 - c. Pumping of silt-laden water from trenches or excavations into surface waters or wetlands.
 - d. Damaging vegetation adjacent to or outside of the construction area limits.
 - e. Disposal of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, wash-water from concrete trucks or hydro-seeders, or any other pollutant in wetlands, surface waters, or unspecified locations.
 - f. Permanent or unauthorized alteration of any stream.

C. Maintenance

1. The temporary erosion control features installed by the Contractor shall be acceptably maintained by the Contractor until no longer needed or permanent erosion control methods are installed.
2. Silt fences shall have sediment deposits removed if it reaches a depth of fifteen inches (15") or ½ the height of the fence. Sediment removed from the silt fence shall be removed from the site.
3. In the event that temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of work as scheduled, and are ordered by the Owner or the Owner's Representatives, such work shall be performed by the Contractor at his own expense.

D. Fines, Fees, Penalties

1. The Contractor shall be responsible for any fines, fees, penalties, claims, legal actions, disputes, etc. arising from any faulty or negligent erosion control practices as levied by ADEM, EPA, local governments, or any such passed to the Owner.

END OF SECTION

CONSTRUCTION DRAWINGS

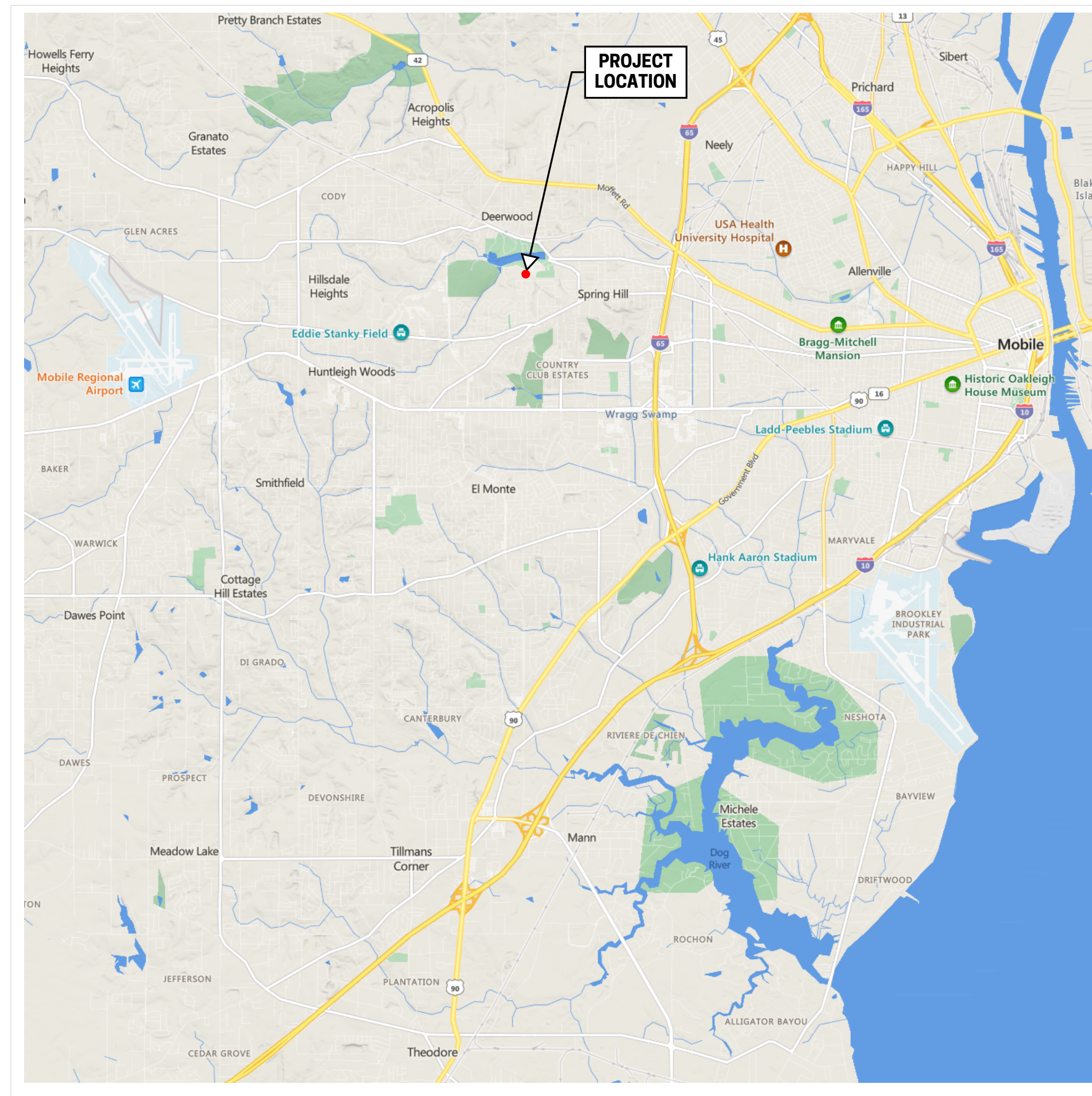
CITY OF MOBILE
WESTERN ADMINISTRATION COMPLEX
RECYCLING CENTER RELOCATION
4851 MUSEUM DRIVE, MOBILE, ALABAMA 36608

PROJECT No. MX-004-24

BID DOCUMENTS
OCTOBER 23, 2024

SURVEYOR / CIVIL
McCRORY & WILLIAMS, INC.
3207 INTERNATIONAL DRIVE, SUITE G
MOBILE, ALABAMA 36606
(251) 476-4720

ELECTRICAL & PLUMBING
DELL CONSULTING, LLC
813 DOWNTOWNER BOULEVARD, SUITE D
MOBILE, ALABAMA 36609
(251) 316-0015



 **VICINITY MAP**
NORTH



 **SITE MAP**
NORTH

DRAWING INDEX

- GENERAL**
G1.0 COVER SHEET
- CIVIL**
C-1 SITE PLAN & DEMOLITION PLAN
C-2 GRADING & DRAINAGE AND WATER & SEWER PLAN
C-3 CONSTRUCTION DETAILS
- ELECTRICAL**
E1.0 ELECTRICAL LEGEND & SPECIFICATIONS
E2.0 ELECTRICAL DEMOLITION SITE PLAN
E3.0 ELECTRICAL NEW WORK SITE PLAN
E4.0 ELECTRICAL SCHEDULE & DETAILS
- PLUMBING**
P1.0 LEGEND, NOTES, & ABBREVIATIONS
P2.0 DEMOLITION PLAN
P3.0 NEW WORK PLAN

PROJECT: **WESTERN ADMINISTRATION COMPLEX
RECYCLING CENTER RELOCATION**
4851 MUSEUM DRIVE
MOBILE, ALABAMA
COM Project No. PW-017-22

ISSUE DATE
October 23, 2024

DRAWN BY
DMC

REVISION SCHEDULE

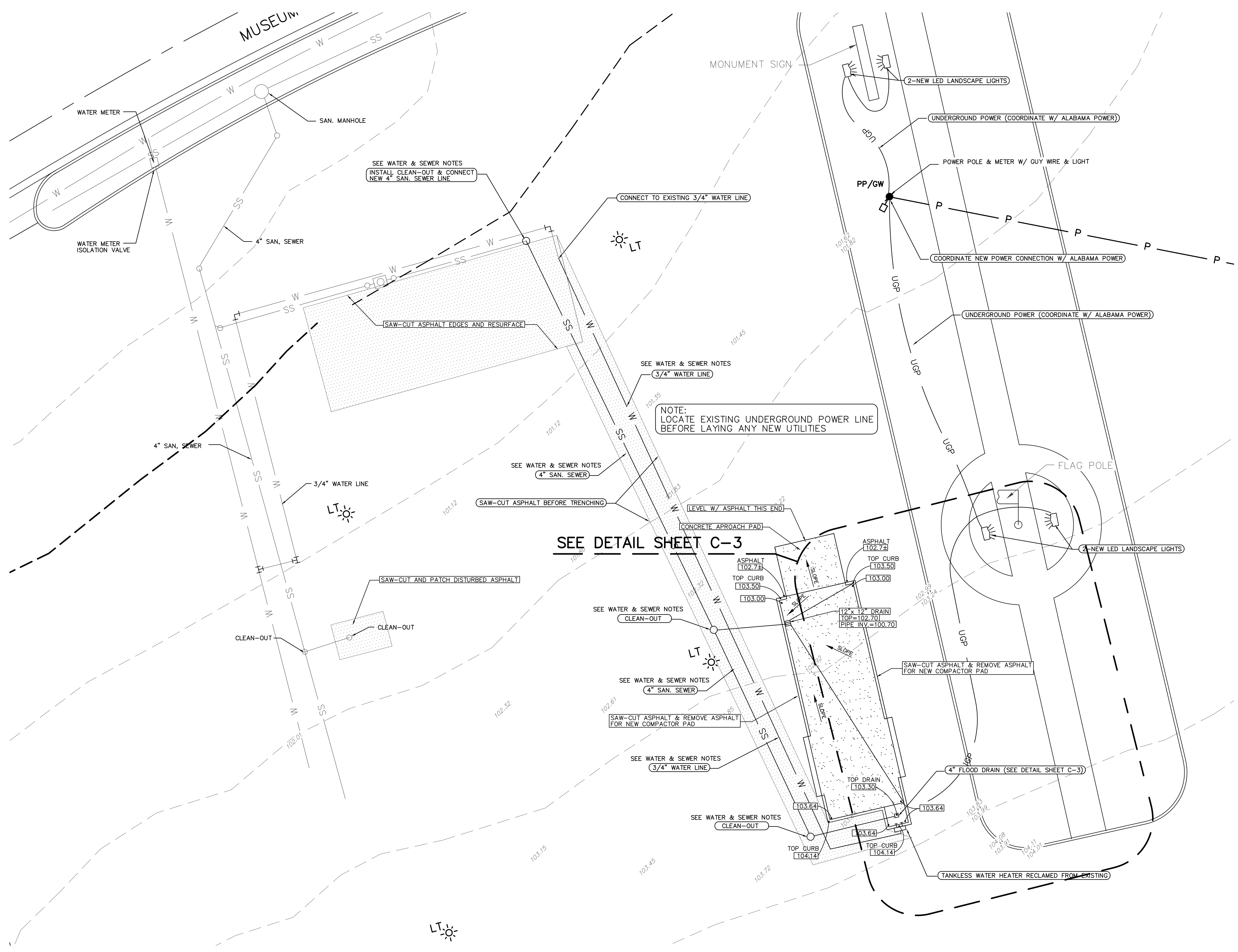
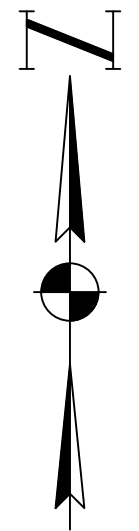
No.	Date	Description

DRAWING TITLE

COVER SHEET

SHEET NUMBER

G1.0

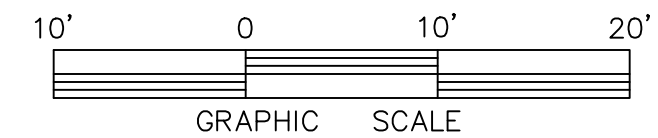


- GENERAL NOTES:
- 1) LOCATION OF BURIED UTILITIES WERE TAKEN FROM UTILITY COMPANY RECORD MAPS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE LOCATION OF ANY BURIED UTILITIES PRIOR TO CONSTRUCTION. ENGINEER IS NOT RESPONSIBLE FOR BURIED UTILITIES DAMAGED BY CONTRACTOR DURING CONSTRUCTION.
 - 2) CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES (BMP'S) AND IS RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS.
 - 3) CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER TRAFFIC CONTROL FOR PUBLIC SAFETY ADJACENT TO CONSTRUCTION SITE.
 - 4) ALL DISTURBED AREAS PLANNED FOR LANDSCAPING ARE TO RECEIVE A MINIMUM OF FOUR INCHES OF TOPSOIL. ALL AREAS NOT TO BE LANDSCAPED SHALL RECEIVE HYDROSEEDING AND MULCH.
 - 5) THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES IN CONFORMITY WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.

- ENGINEERS STANDARD NOTES:
1. THE CONTRACTOR SHALL NOTIFY THE CITY OF MOBILE ENGINEERING PERMITTING DEPARTMENT VIA EMAIL AT LAND.DISTURBANCE@CITYOFMOBILE.ORG A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY WORK ON THE SITE FOR ASSIGNMENT OF THE CITY ENGINEERING INSPECTOR AND TO SCHEDULE AN INITIAL ON-SITE BMP INSPECTION. FAILURE TO CONTACT THE CITY ENGINEERING DEPARTMENT PRIOR TO BEGINNING ANY WORK IS A VIOLATION OF THE STORM WATER MANAGEMENT AND FLOOD CONTROL ORDINANCE AND MAY INVOKE ENFORCEMENT ACTION IN THE FORM OF A MUNICIPAL OFFENSE TICKET.
 2. THE LAND DISTURBANCE PERMIT SHALL EXPIRE UPON THE COMPLETION OF THE WORK OR NOT LATER THAN ONE (1) YEAR FROM THE DATE OF APPROVAL. (COM ORDINANCE CH. 17-6.A)
 3. THE CONTRACTOR SHALL SIZE, INSTALL, AND MAINTAIN ADEQUATE CONTROLS FOR THE SITE. REFER TO THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LATEST EDITION.
 4. THE CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION AND CONTINUED MAINTENANCE OF EROSION CONTROL ELEMENTS.
 5. THE CONTRACTOR SHALL WORK TO MINIMIZE DISTURBED AREAS ON THE SITE AS MUCH AS PRACTICALLY POSSIBLE. ANY DISTURBED AREA(S) SHALL NOT REMAIN DENUDED LONGER THAN 10 DAYS.

NOTE:
ELEVATIONS WERE DERIVED FROM GPS OBSERVATIONS USING CORS STATION ALFO NAV88 DATUM.

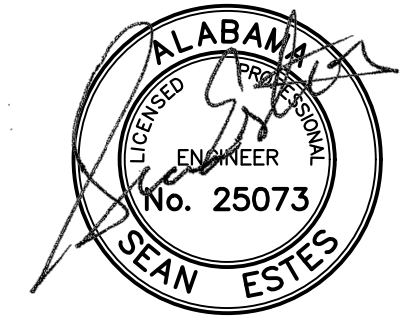
- WATER & SEWER NOTES:
1. SANITARY SEWER PIPE SHALL BE SDR-26 PVC SCH 40 D2665 OR STRONGER. ALL CLEAN-OUTS, FITTINGS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF PLUMBING CODE.
 2. WATER PIPE SHALL BE PVC SCH 40 AND MEET OR EXCEED THE ASTM-D2291 REQUIREMENTS. ALL FITTINGS, VALVES AND INSTALLATION SHALL BE DONE IN ACCORDANCE WITH MAWSS SPECIFICATIONS.
 3. SEWER CLEAN-OUT COVERS SHALL BE TRAFFIC RATED WITH LAMPHOLE COVER TYPE PROTECTION.
 4. SDR 35 NOT ALLOWED UNDER DRIVEWAYS OR PARKING LOTS. SDR 26, PVC SCH 40 D2665 OR STRONGER.
 5. TWO WAY CLEAN-OUT (SEWER SIZE) SHALL BE LOCATED OUTSIDE OF THE PAD WITHIN 30" OF THE PAD.
 6. ISOLATION VALVE REQUIRED OUTSIDE OF THE METER BOX (AT THE METER) FOR WATER SERVICE.
 7. ALL SEWERS TO BE 4" MIN.



REVISION	DATE	NO.	COMMENTS

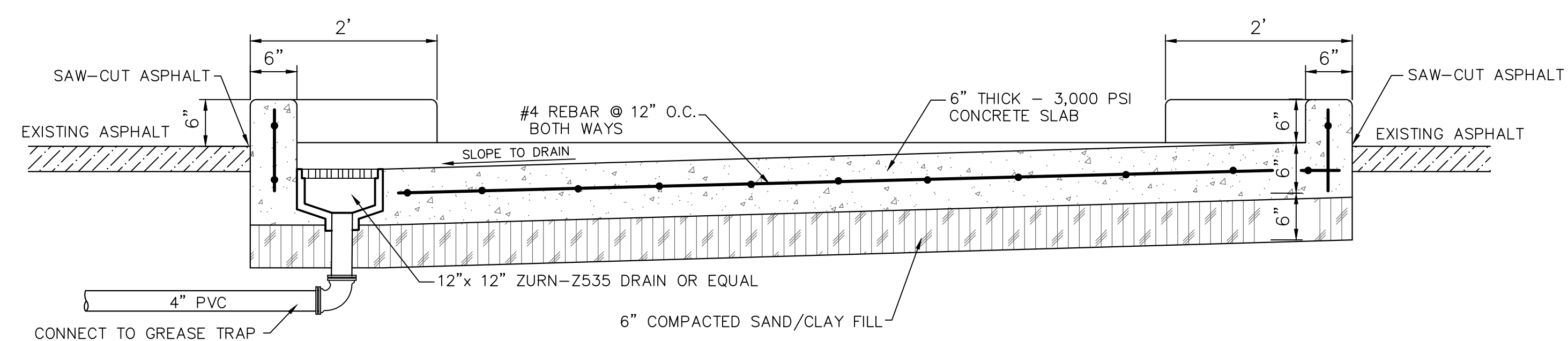
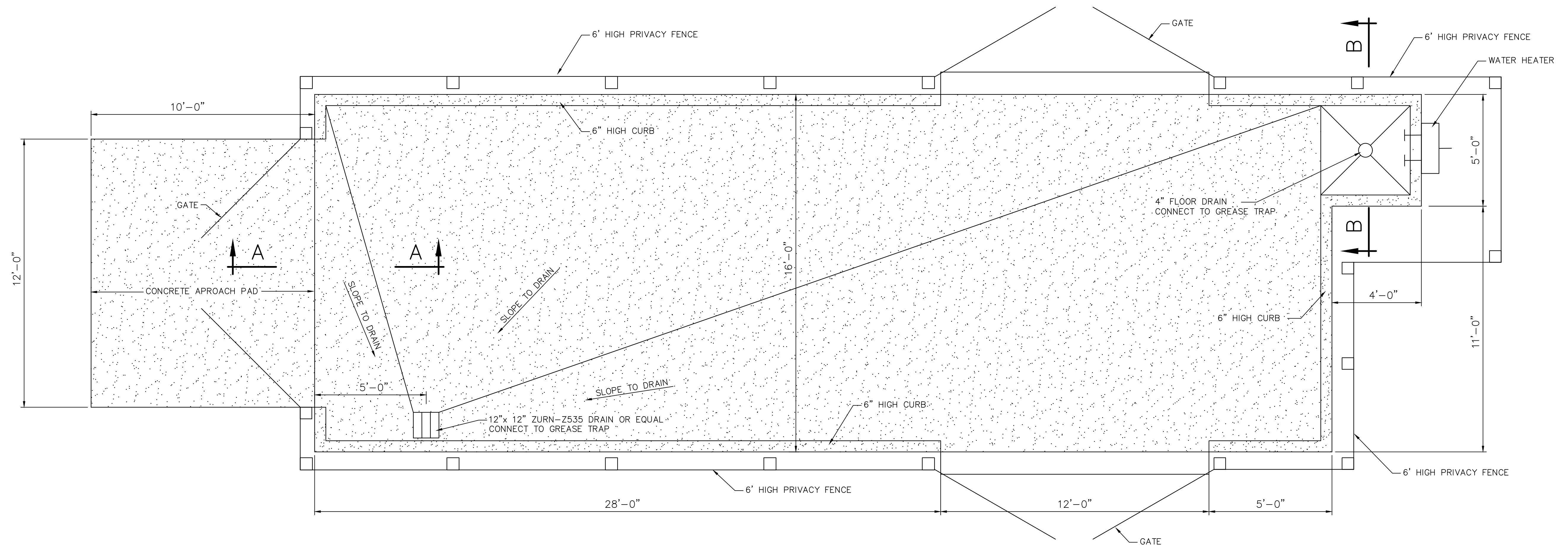
McCrary Williams
Engineers Surveyors

3207 INTERNATIONAL DRIVE
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36606
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FAX: (251) 476-4721

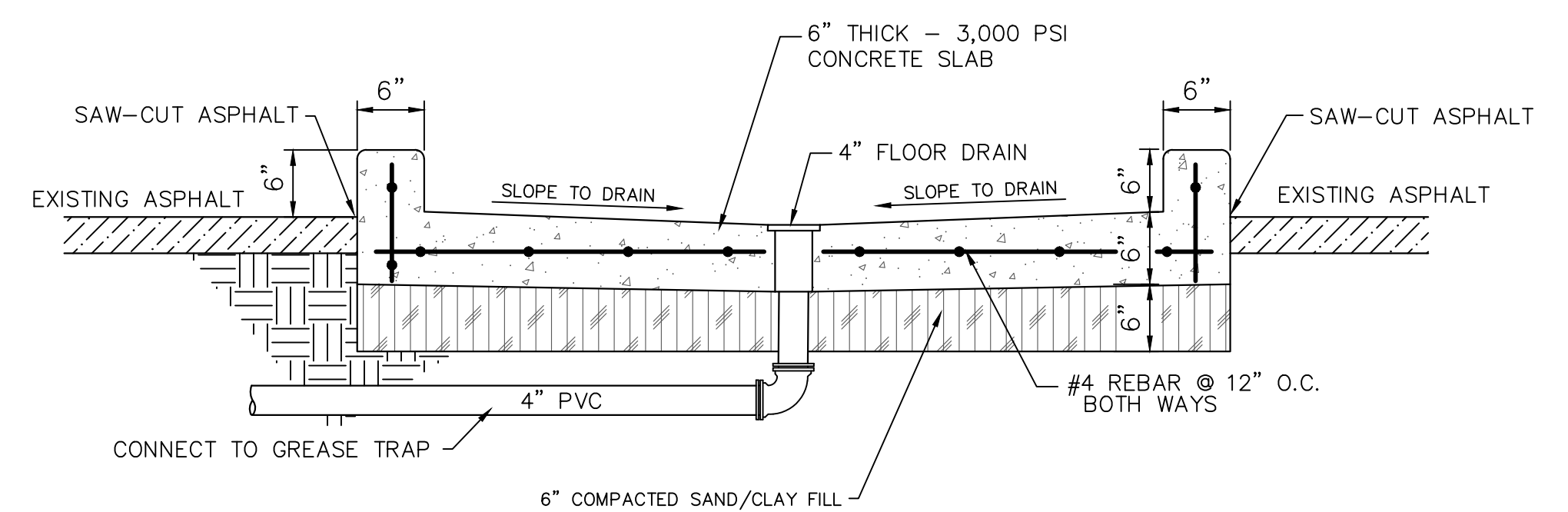


M5710-2202

GRADING & DRAINAGE AND WATER & SEWER PLAN
FOR
RECYCLE CENTER
4851 MUSEUM DRIVE



SLAB DRAIN SECTION A-A
NOT TO SCALE

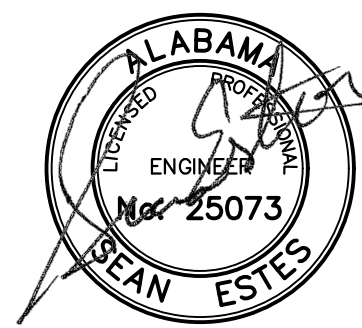


CAN WASH DRAIN SECTION B-B
NOT TO SCALE

REVISION	DATE	NO.	COMMENTS

McCrorry Williams
Engineers Surveyors

3207 INTERNATIONAL DRIVE
MOBILE, ALABAMA
36606
PHONE: (251) 476-4720
FAX: (251) 476-4721



M5710-2202

CONSTRUCTION DETAILS
FOR
RECYCLE CENTER
4851 MUSEUM DRIVE

SCALE: AS SHOWN

DATE: 6/8/2022

DRAWN BY: D.W.

APPROVED BY: S.E.

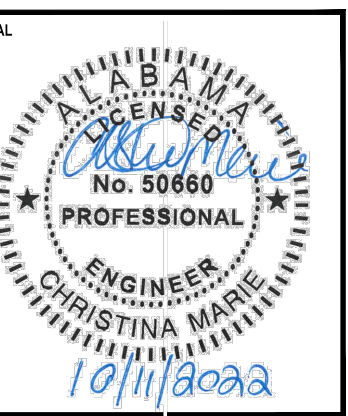
SHEET NO. C-3

ELECTRICAL SPECIFICATIONS

1. GENERAL ELECTRICAL:
 - 1.1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS INDICATED WITHIN THESE DRAWINGS. ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES AND WITH MANUFACTURER'S RECOMMENDATIONS.
 - 1.2. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND CONNECT ALL ITEMS AS INDICATED ON THE DRAWINGS.
 - 1.3. THE ARCHITECT SHALL BE NOTIFIED OF ANY CONFLICTS, OR INTERFERENCES THAT OCCUR BETWEEN INDIVIDUAL DRAWINGS.
 - 1.4. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN A NEAT, FIRST CLASS, WORKMANLIKE MANNER, TO THE APPROVAL OF THE ARCHITECT/ENGINEER AND GOVERNING AUTHORITIES.
 - 1.5. IN ADDITION TO THE MANUFACTURERS STANDARD GUARANTEES, THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP AGAINST DEFECTS FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE, AND SHALL CORRECT ANY DEFECTS AT NO ADDITIONAL COST TO THE OWNER. ALL LAMPS SHALL BE GUARANTEED FOR 30 DAYS AFTER ACCEPTANCE.
 - 1.6. THE LOADS SHOWN FOR APPLIANCES AND EQUIPMENT ARE BASED ON DESIGN INFORMATION. THE CONTRACTOR SHALL VERIFY ALL APPLIANCE LOADS PRIOR TO RUNNING THE CIRCUIT. THE MINIMUM CIRCUIT REQUIREMENTS SHALL BE BASED ON THE APPLIANCE NAMEPLATE VALUE OR CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ADDITIONAL COMPENSATION SHALL NOT BE ALLOWED FOR APPLIANCE MODIFICATIONS BY THE CONTRACTOR.
 - 1.7. PRIOR APPROVAL: PRIOR APPROVAL SHALL BE REQUIRED FOR ANY MANUFACTURER OTHER THAN THOSE LISTED FOR ALL SPECIFIED ITEMS IN THESE DRAWINGS. SUBMIT ALL REQUESTS FOR PRIOR APPROVAL 2 WEEKS PRIOR TO BID OPENING. ENGINEER'S APPROVAL WILL BE IN THE FORM OF AN ADDENDUM.
 - 1.8. APPROVAL SUBMITTALS: PROVIDE 6 COPIES OF APPROVAL SUBMITTALS FOR ALL EQUIPMENT BEING PROVIDED FOR ENGINEERS REVIEW.
2. CODES & STANDARDS:
 - 2.1. INSTALLATION AND MATERIALS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES & STANDARDS:
 - 2.1.1. NATIONAL ELECTRICAL CODE.
 - 2.1.2. NFPA 72. NATIONAL FIRE PROTECTION CODE.
 - 2.1.3. INTERNATIONAL BUILDING CODE.
 - 2.1.4. INTERNATIONAL ENERGY CONSERVATION CODE.
 - 2.1.5. NFPA 101.
 - 2.1.6. ADA .
 - 2.1.7. ANSI.
 - 2.1.8. NEMA.
 - 2.1.9. OSHA.
 - 2.1.10. UL.
3. ALTERATIONS & ADDITIONS TO EXISTING WORK:
 - 3.1. PROVIDE ALL NECESSARY ADDITIONS AND ALTERATIONS TO EXISTING WORK AS REQUIRED TO PROVIDE AND MAINTAIN A COMPLETE AND PROPER ELECTRICAL INSTALLATION.
 - 3.2. AS NECESSARY, RELOCATE EXISTING ELECTRICAL WORK SO OTHER TRADES CAN PURSUE THEIR WORK.
 - 3.3. MAINTAIN POWER TO EXISTING PORTIONS OF BUILDINGS FED FROM OR THROUGH AREA IN SCOPE OF THIS CONTRACT.
 - 3.4. COORDINATE ALL REQUIRED OUTAGES WITH OWNER.
4. BASIC MATERIALS & METHODS:
 - 4.1. ALL POWER AND DISTRIBUTION CABLING SHALL BE COPPER TYPE THWN/THHN.
 - 4.2. ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. LOCATED OUTDOORS SHALL BE WEATHERPROOF.
 - 4.3. ELECTRICAL CONTRACTOR SHALL PROVIDE ADEQUATE AND PROPER SUPPORT FOR ALL ELECTRICAL OUTLETS, DEVICES, LIGHT FIXTURES, ETC. BUILT IN OR MOUNTED ON CEILINGS. NO OUTLET BOX, DEVICE, LIGHT FIXTURE, ETC. SHALL BE SUPPORTED FROM ANY ACOUSTICAL CEILING TILE OR DRYWALL CEILINGS. PROVIDE METAL SUPPORTS THAT ARE MADE FOR USE WITH CEILING GRID SYSTEMS OR PROVIDE HANGERS FROM STRUCTURE ABOVE.
 - 4.4. CONDUIT ROUTINGS AND DEVICE/EQUIPMENT LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AND LOCATE AS REQUIRED. CONDUIT ROUTINGS SHALL BE PARALLEL OR PERPENDICULAR TO BUILDING LINES.
 - 4.5. JUNCTION BOXES LOCATED ABOVE CEILING SHALL BE INSTALLED FACING DOWN AND SHALL BE ACCESSIBLE AFTER INSTALLATION.
 - 4.6. COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES AND STRUCTURAL COMPONENTS.
 - 4.7. THE CONDUIT MATERIAL SHALL BE AS FOLLOWS:
 - 4.7.1. BELOW GRADE - RNC (POWER & SITE LIGHTING ONLY). ELBOWS >1-1/2" SHALL BE RGS.
 - 4.7.2. RISER FROM 36" BELOW GRADE - RGS.
 - 4.7.3. CONCEALED RISER FROM 36" BELOW GRADE - RNC (POWER ONLY).
 - 4.7.4. ABOVE GRADE SUBJECT TO PHYSICAL ABUSE - RGS.
 - 4.7.5. ABOVE GRADE NOT SUBJECT TO PHYSICAL ABUSE OR WEATHER - EMT.
 - 4.7.6. INDOORS NOT SUBJECT TO PHYSICAL ABUSE - EMT. OR METAL CLAD CABLE(AS ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION).
 - 4.7.7. FINAL CONDUIT CONNECTIONS TO HEAT PUMPS, AIR HANDLERS, EXHAUST FANS, AND WATER HEATERS SHALL BE LFMC WHETHER INTERIOR OR EXTERIOR.
 - 4.8. CONDUIT FITTINGS SHALL BE AS FOLLOWS:
 - 4.8.1. EMT - <=2" USE STEEL SET SCREW WITH INSULATED THROATS FOR INTERIOR/ USE COMPRESSION FITTINGS WITH INSULATED THROATS FOR EXTERIOR, >2" USE SET-SCREW STEEL WITH INSULATED THROATS.

- 4.8.2. RGS - THREADED GALVANIZED STEEL.
 - 4.8.3. PVC - PVC APPROVED FOR THE USE.
 - 4.8.4. FMC - ZINC-PLATED STEEL OR CADMIUM-PLATED MALLEABLE IRON SCREW TYPE WITH INSULATED THROAT.
 - 4.8.5. LFMC - CADMIUM-PLATED MALLEABLE IRON OR STEEL COMPRESSION TYPE WITH INSULATED THROAT.
 - 4.9. ALL OUTLET BOXES SHALL BE 4"X4"X1-1/2" DEEP MINIMUM.
 - 4.10. ELECTRICAL CONTRACTOR SHALL WORK CLOSELY WITH THE MASONRY CONTRACTOR ON THE INSTALLATION OF ALL ELECTRICAL BOXES, CABINETS, RINGS, ETC. IN MASONRY WALLS. THE BOXES SHALL BE INSTALLED AT THE UNIFORM HEIGHTS CALLED FOR ON THE DRAWINGS AND SPECIFICATIONS. PROVIDE APPROPRIATE DEPTH MASONRY RINGS FOR ALL OUTLETS IN MASONRY WALLS TO INSURE PROPER CUTTING AND FITTING. THE FACE OF THE CABINETS, BOXES, RINGS, ETC. SHALL BE PLUMB AND FLUSH WITH THE FACE OF THE FINISH MATERIAL. ANY CABINET, OUTLET BOX, ETC. NOT MEETING THE ABOVE REQUIREMENT SHALL BE REMOVED AND REINSTALLED AT NO ADDITIONAL COST TO THE OWNER.
 - 4.11. ALL SIDEWALKS AND PARKING LOT ASPHALT AREAS THAT ARE CUT DUE TO NEW ELECTRICAL SERVICES SHALL BE REPAIRED TO MATCH EXISTING.
 - 4.12. ALL DIMENSIONS TO DEVICES AFF SHALL BE TO CENTERLINE UNLESS NOTED OTHERWISE.
 - 4.13. WALL OUTLETS SHALL NOT BE INSTALLED BACK TO BACK.
 - 4.14. COORDINATE LOCATIONS OF ELECTRICAL EQUIPMENT, DEVICES, OUTLETS, FIXTURES, ETC., WITH ARCHITECTURAL PLANS, ELEVATIONS AND REFLECTED CEILING PLANS PRIOR TO ROUGH-IN WORK.
5. GROUNDING & BONDING:
 - 5.1. PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS.
 - 5.2. GROUND RODS SHALL BE 3/4"X20' COPPERCLAD STEEL.
 - 5.3. BELOW GRADE CONNECTIONS SHALL BE EXOTHERMIC TYPE.
 - 5.4. ALL CABLES SHALL BE COPPER, ALL BOLTED CONNECTIONS SHALL BE BRONZE.
 - 5.5. PROVIDE A #6AWG MINIMUM GROUND IN EMT FROM EACH TELCOM BACKBOARD TO THE MAIN ELECTRICAL SERVICE GROUND.
 - 5.6. WHERE AVAILABLE, BOND TO BUILDING STRUCTURAL STEEL, BUILDING FOUNDATION STEEL, METAL WATER SERVICE PIPING.
 - 5.7. PROVIDE THREE 20' GROUND RODS IN TRIANGLE ARRANGEMENT ON 20' CENTERS FOR MADE ELECTRODE SYSTEM. THE ELECTRICAL CONTRACTOR SHALL BOND NEW COPPER CLAD GROUND RODS WITH TINNED STRANDED BARE COPPER CONDUCTOR.
 6. IDENTIFICATION:
 - 6.1. PROVIDE ENGRAVED 1"X3" PHENOLIC LABELS FOR ALL PANELBOARDS, SAFETY SWITCHES, TRANSFORMERS, CABINETS, ETC.
 - 6.2. PAINT THE RACEWAY SYSTEM COUPLINGS AND BOX COVERS ABOVE CEILINGS FOR THE FOLLOWING SYSTEMS AS FOLLOWS:
 - 6.2.1. 240 VOLT SYSTEMS - BLACK.
 - 6.2.2. AFTER PAINTING, WRITE THE CIRCUIT NUMBER (I.E. "LPA-34") ON ALL BRANCH CIRCUIT JUNCTION BOX COVERS ABOVE CEILING WITH WHITE MARKER.
 7. GENERAL WIRING DEVICES:
 - 7.1. SWITCHES - SPECIFICATION GRADE, 20 AMP, COLOR BY ARCHITECT.
 - 7.2. RECEPTACLES - SPECIFICATION GRADE, 20 AMP, NEMA 5-20R, COLOR BY ARCHITECT.
 - 7.3. COVER PLATES - NYLON, COLOR BY ARCHITECT.
 - 7.4. SPECIAL RECEPTACLES - PER THE DRAWINGS, VERIFY WITH EQUIPMENT BEING SUPPLIED.
 - 7.5. APPROVED MANUFACTURERS - HUBBELL, LEVITON, EAGLE, PASS & SEYMOUR.
 8. SAFETY SWITCHES:
 - 8.1. GENERAL DUTY, VISIBLE BLADE, LOCKABLE, QUICK-MAKE/QUICK-BREAK, HORSEPOWER RATED, FUSED WHERE INDICATED.
 - 8.2. PROVIDE WITH GROUND LUG KIT.
 - 8.3. INTERIOR - NEMA 1.
 - 8.4. EXTERIOR - NEMA 3R.
 - 8.5. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER SIEMENS, EATON.
 9. MOTOR STARTERS:
 - 9.1. MANUAL TYPE SHALL BE TOGGLE WITH THERMAL OVERLOAD.
 - 9.2. MAGNETIC TYPE SHALL HAVE SOLID STATE OVERLOAD RELAY WITH Ø LOSS AND Ø UNBALANCE PROTECTION, HOA SWITCH, RED RUN AND GREEN STOP LED LIGHTS.
 - 9.3. INTERIOR - NEMA 1.
 - 9.4. EXTERIOR - NEMA 3R.
 - 9.5. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER, SIEMENS, EATON.
 10. PANELBOARDS:
 - 10.1. FRONT ACCESSIBLE, BOLT-ON MOLDED CASE C/Bs, COPPER PHASE & NEUTRAL BUSSING, COPPER GROUND BAR, FULLY RATED (SERIES RATING NOT ALLOWED).
 - 10.2. ENCLOSURES SHALL BE DOOR-IN-DOOR CONSTRUCTION.
 - 10.3. INTERIOR - NEMA 1.
 - 10.4. ALL INTERIOR PANELBOARDS ARE TO HAVE FOUR SPARE 3/4" CONDUITS INSTALLED TO AN ACCESSIBLE SPACE FOR FUTURE.
 - 10.5. EXTERIOR - NEMA 3R.
 - 10.6. PROVIDE TYPE-WRITTEN DIRECTORY IN CLEAR SLEEVE ON INSIDE OF DOOR.
 - 10.7. APPROVED MANUFACTURERS - SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER, SIEMENS, EATON.

A	AMPS	MCM	THOUSAND CIRCULAR MILS
AC	ABOVE COUNTER	MH	MANHOLE
AF	AMP FRAME	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	MISC	MISCELLANEOUS
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
AHU	AIR HANDLING UNIT	MNT	MOUNTING HEIGHT
AL	ALUMINUM	MTG	MOUNTING
ARCH	ARCHITECT OR ARCHITECTURAL	MTS	MANUAL TRANSFER SWITCH
AT	AMP TRIP	MV	MEDIUM VOLTAGE
ATS	AUTOMATIC TRANSFER SWITCH	N1	NEMA 1
ATU	AIR TERMINAL UNIT	N3R	NEMA 3R
AWG	AMERICAN WIRE GAUGE	N/A	NOT APPLICABLE
BAS	BUILDING AUTOMATION SYSTEM	NA	NOT APPLICABLE
BFG	BELOW FINISHED GRADE	NEC	NATIONAL ELECTRICAL CODE
BJ	BONDING JUMPER	NESC	NATIONAL ELECTRICAL SAFETY CODE
BKR	CIRCUIT BREAKER	NEU	NEUTRAL
BLDG	BUILDING	OCPD	OVERCURRENT PROTECTION DEVICE
BOD	BASIS OF DESIGN	OFOI	OWNER FURNISHED OWNER INSTALLED
C	CONDUIT	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CB	CIRCUIT BREAKER	OH	OVERHEAD
CL	CURRENT LIMITING	OHE	OVERHEAD ELECTRIC
CL	CENTERLINE	OHP	OVERHEAD PRIMARY
CLG	CEILING	OHS	OVERHEAD SECONDARY
CKT	CIRCUIT	PBD	PANELBOARD
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CU	COPPER	PNL	PANELBOARD
DDC	DIRECT DIGITAL CONTROL	PT	POTENTIAL TRANSFORMER
DEMO	DEMOLISH	PWR	POWER
EC	ELECTRICAL CONTRACTOR	REC	RECEPTACLE
EGC	EQUIPMENT GROUNDING CONDUCTOR	REQD	REQUIRED
ELEC	ELECTRICAL	RM	ROOM
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR	RGS	RIGID GALVANIZED STEEL CONDUIT
EF	EXHAUST FAN	RNC	RIGID NON-METALLIC CONDUIT
EX	EXISTING TO REMAIN	RVSS	REDUCED VOLTAGE SOLID STATE
EXT	EXTERIOR	SA	SURGE ARRESTER
EW	ELECTRIC WATER COOLER	SCA	SHORT CIRCUIT AMPS
EMT	ELECTRICAL METALLIC TUBING	SF	SUPPLY FAN
EQUIP	EQUIPMENT	SPEC	SPECIFICATION
FMC	FLEXIBLE METAL CONDUIT	SWBD	SWITCHBOARD
FACP	FIRE ALARM SYSTEM CONTROL PANEL	SWGR	SWITCHGEAR
FU	FUSE	TBB	TELECOMMUNICATIONS BONDING BACKBONE
FA	FIRE ALARM	TR	TELECOMMUNICATIONS ROOM
FLA	FULL LOAD AMPS	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
FLR	FLOOR	TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
FVNR	FULL VOLTAGE NON-REVERSING	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
G	GROUND (OR GFI FOR RECEPTACLE SUBSCRIPT)	UFR	UNDERFLOOR RACEWAY
GC	GENERAL CONTRACTOR	UG	UNDERGROUND
GND	GROUND	UGE	UNDERGROUND ELECTRIC
GEC	GROUNDING ELECTRODE CONDUCTOR	UGP	UNDERGROUND PRIMARY
HH	HANDHOLE	UGS	UNDERGROUND SECONDARY
HOA	HAND-OFF-AUTOMATIC	UL	UNDERWRITERS' LABORATORIES
HP	HEAT PUMP OR HORSEPOWER	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATION & AIR-CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	V	VOLT
IMC	INTERMEDIATE METAL CONDUIT	VA	VOLT-AMPERES
JB	JUNCTION BOX	VAR	VOLT-AMPERES REACTIVE
k	KILO	VAV	VARIABLE AIR VOLUME UNIT
KAIC	KILO-AMPERE INTERRUPTING CAPABILITY	W	WATTS
KCML	THOUSAND CIRCULAR MILS	WAO	WORK AREA OUTLET
LCP	LIGHTING CONTROL PANEL	WP	WEATHERPROOF
LTG	LIGHTING	WSR	WITHSTAND RATING
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT	XFMR	TRANSFORMER
LV	LOW VOLTAGE	XP	EXPLOSION PROOF
MAX	MAXIMUM	φ	PHASE
MCA	MINIMUM CIRCUIT AMPACITY	72°	DEGREES
MCC	MOTOR CONTROL CENTER	Δ	DELTA
MCE	MAIN COMMUNICATIONS EQUIPMENT ROOM	Ω	OHMS



REVISION	DESCRIPTION

**CITY OF MOBILE WAC RECYCLING CENTER
 COMPACTOR RELOCATION
 MOBILE, ALABAMA**

DESIGNED BY:
 TMM
DRAWN BY:
 TMM
CHECKED BY:
 CM
DATE:
 10/11/2022

SHEET TITLE:
 ELECTRICAL LEGEND AND SPECIFICATIONS

SHEET:
E1.0

ELECTRICAL LEGEND

GENERAL ELECTRICAL DEVICES:

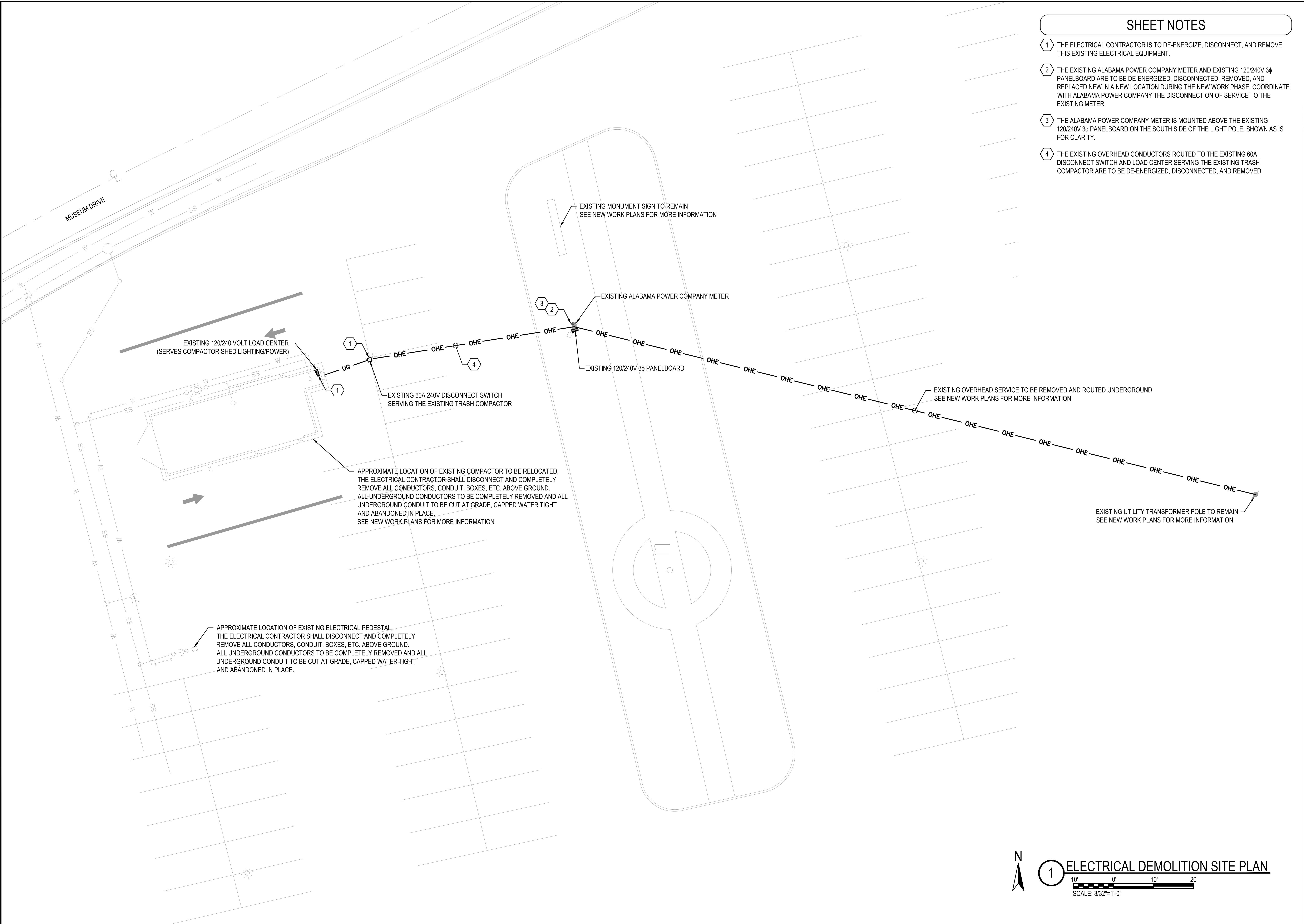
- DUPLEX RECEPTACLE NEMA 5-20R, MOUNT 18" AFF UNLESS NOTED OTHERWISE. VERIFY DUPLEX MOUNTING REQUIREMENTS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN. SUBSCRIPT INDICATES AS FOLLOWS:
WP - GFI DEVICE WITH DIECAST WEATHERPROOF BACKBOX & DIECAST COVER. IN EXTERIOR LOCATIONS MOUNT 30" AFG.
- LIGHTING CONTROL EQUIPMENT:**
- PHOTOELECTRIC CELL. CONNECT AS REQUIRED.

OTHER:

- HOMERUN TO PANELBOARD. ANY CIRCUIT WITHOUT FURTHER DESIGNATION SHALL BE 2#12, #12G, 3/4" C. TICK MARKS INDICATE # OF CONDUCTORS (EGC NOT SHOWN). MINIMUM SIZE ON 120V HOMERUNS GREATER THAN 50 FEET SHALL BE #10 AWG. MINIMUM SIZE ON 120V HOMERUNS GREATER THAN 100 FEET SHALL BE #8 AWG. MINIMUM SIZE ON 120V HOMERUNS GREATER THAN 160 FEET SHALL BE #6 AWG. MINIMUM SIZE ON 277V HOMERUNS GREATER THAN 100 FEET SHALL BE #10 AWG. INCREASE CONDUIT SIZE AS REQUIRED PER NEC. UNDERLINED TEXT INDICATES CIRCUIT DESIGNATION.
- LIGHT FIXTURE IDENTIFICATION TAG. SEE LIGHT FIXTURE SCHEDULE FOR SYMBOLS & DETAILS.
- SHEET NOTE TAG.
- PANELBOARD, SWITCHBOARD, TRANSFORMER & ELECTRICAL EQUIPMENT IDENTIFICATION TAG.
- LEADERS.

CABLE LEGEND

- UG** UNDERGROUND
- DISTRIBUTION & POWER EQUIPMENT:**
- PANELBOARD. MOUNT AS INDICATED. SEE PANELBOARD SCHEDULES.
- NON-FUSED GENERAL DUTY SAFETY SWITCH. SIZE FOR LOAD BEING SERVED.
- SITE EQUIPMENT:**
- ALABAMA POWER COMPANY METER.



SHEET NOTES

- 1 THE ELECTRICAL CONTRACTOR IS TO DE-ENERGIZE, DISCONNECT, AND REMOVE THIS EXISTING ELECTRICAL EQUIPMENT.
- 2 THE EXISTING ALABAMA POWER COMPANY METER AND EXISTING 120/240V 3 ϕ PANELBOARD ARE TO BE DE-ENERGIZED, DISCONNECTED, REMOVED, AND REPLACED NEW IN A NEW LOCATION DURING THE NEW WORK PHASE. COORDINATE WITH ALABAMA POWER COMPANY THE DISCONNECTION OF SERVICE TO THE EXISTING METER.
- 3 THE ALABAMA POWER COMPANY METER IS MOUNTED ABOVE THE EXISTING 120/240V 3 ϕ PANELBOARD ON THE SOUTH SIDE OF THE LIGHT POLE. SHOWN AS IS FOR CLARITY.
- 4 THE EXISTING OVERHEAD CONDUCTORS ROUTED TO THE EXISTING 60A DISCONNECT SWITCH AND LOAD CENTER SERVING THE EXISTING TRASH COMPACTOR ARE TO BE DE-ENERGIZED, DISCONNECTED, AND REMOVED.

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NUMBER	REVISION	REVISION DESCRIPTION

**CITY OF MOBILE WAC RECYCLING CENTER
 COMPACTOR RELOCATION
 MOBILE, ALABAMA**

DESIGNED BY:
TMM
 DRAWN BY:
TMM
 CHECKED BY:
CM
 DATE:
10/11/2022

SHEET TITLE:
ELECTRICAL DEMOLITION SITE PLAN

SHEET:
E2.0

1 **ELECTRICAL DEMOLITION SITE PLAN**
 SCALE: 3/32"=1'-0"

SHEET NOTES

1 THE ELECTRICAL CONTRACTOR IS TO ROUTE CONDUIT AND WIRING (2#12, 1#12G, 1" CONDUIT) UNDERGROUND AT 24" BELOW GRADE MINIMUM FROM THE PHOTOCELL MOUNTED ON THE NEW SERVICE PEDESTAL TO THE LIGHTING FIXTURES SERVING THE FLAG POLE AND ENTRY SIGN.



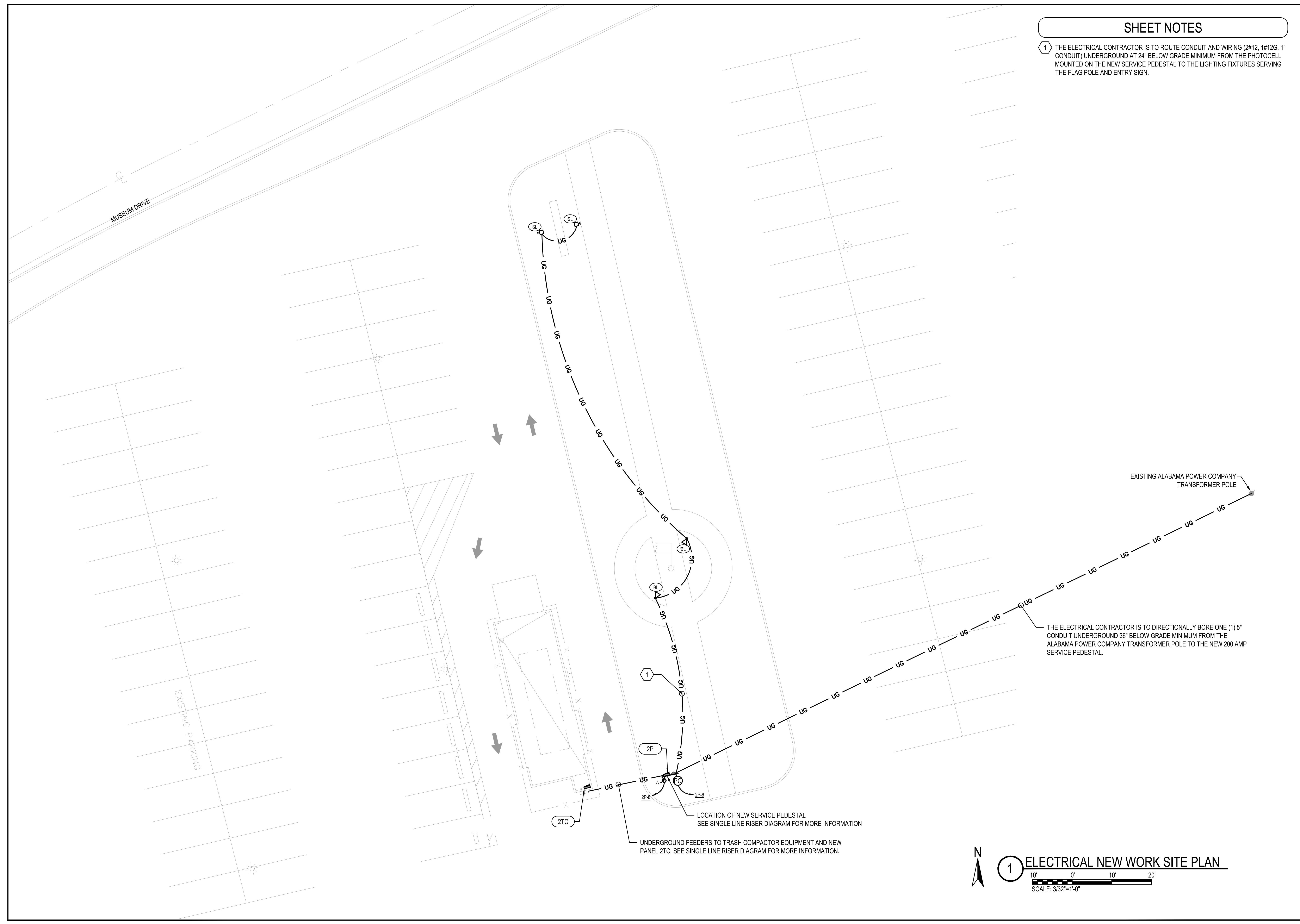
NUMBER	REVISION	REVISION DESCRIPTION

**CITY OF MOBILE WAC RECYCLING CENTER
 COMPACTOR RELOCATION
 MOBILE, ALABAMA**

DESIGNED BY:
TMM
 DRAWN BY:
TMM
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CM
 DATE:
10/11/2022

SHEET TITLE:
ELECTRICAL NEW WORK SITE PLAN

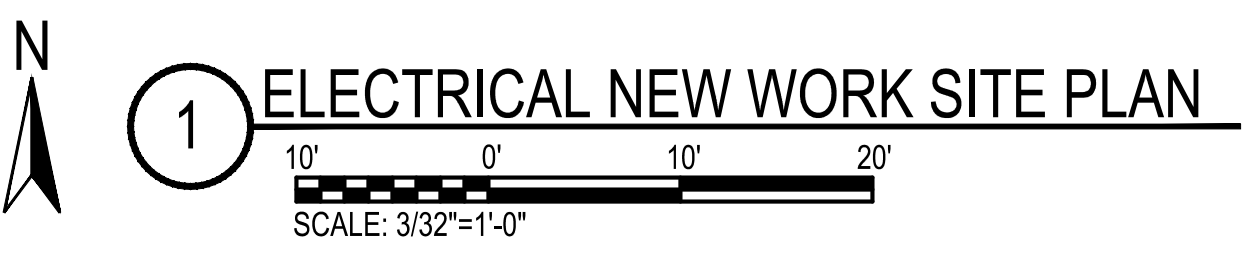
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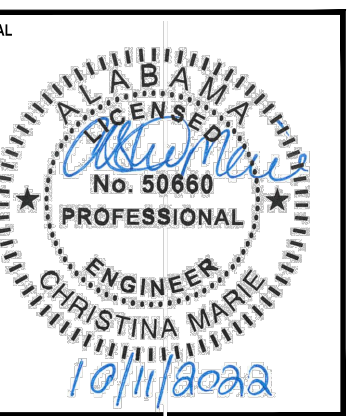


LOCATION OF NEW SERVICE PEDESTAL
 SEE SINGLE LINE RISER DIAGRAM FOR MORE INFORMATION

UNDERGROUND FEEDERS TO TRASH COMPACTOR EQUIPMENT AND NEW PANEL 2TC. SEE SINGLE LINE RISER DIAGRAM FOR MORE INFORMATION.

THE ELECTRICAL CONTRACTOR IS TO DIRECTIONALLY BORE ONE (1) 5" CONDUIT UNDERGROUND 36" BELOW GRADE MINIMUM FROM THE ALABAMA POWER COMPANY TRANSFORMER POLE TO THE NEW 200 AMP SERVICE PEDESTAL.





NUMBER	REVISION	REVISION DESCRIPTION

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COMPACTOR RELOCATION
MOBILE, ALABAMA**

DESIGNED BY:
TMM
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TMM
CHECKED BY:
CM
DATE:
10/11/2022

SHEET TITLE:
ELECTRICAL
SCHEDULE &
DETAILS

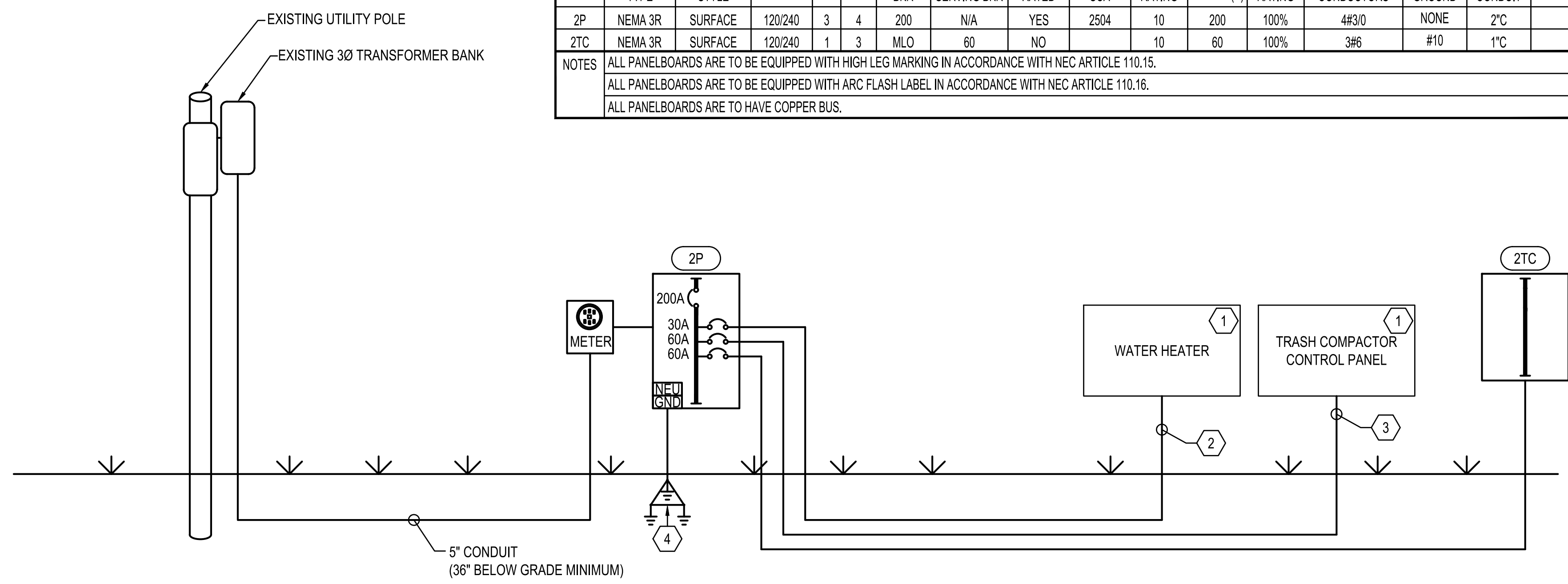
SHEET:
E4.0

SHEET NOTES

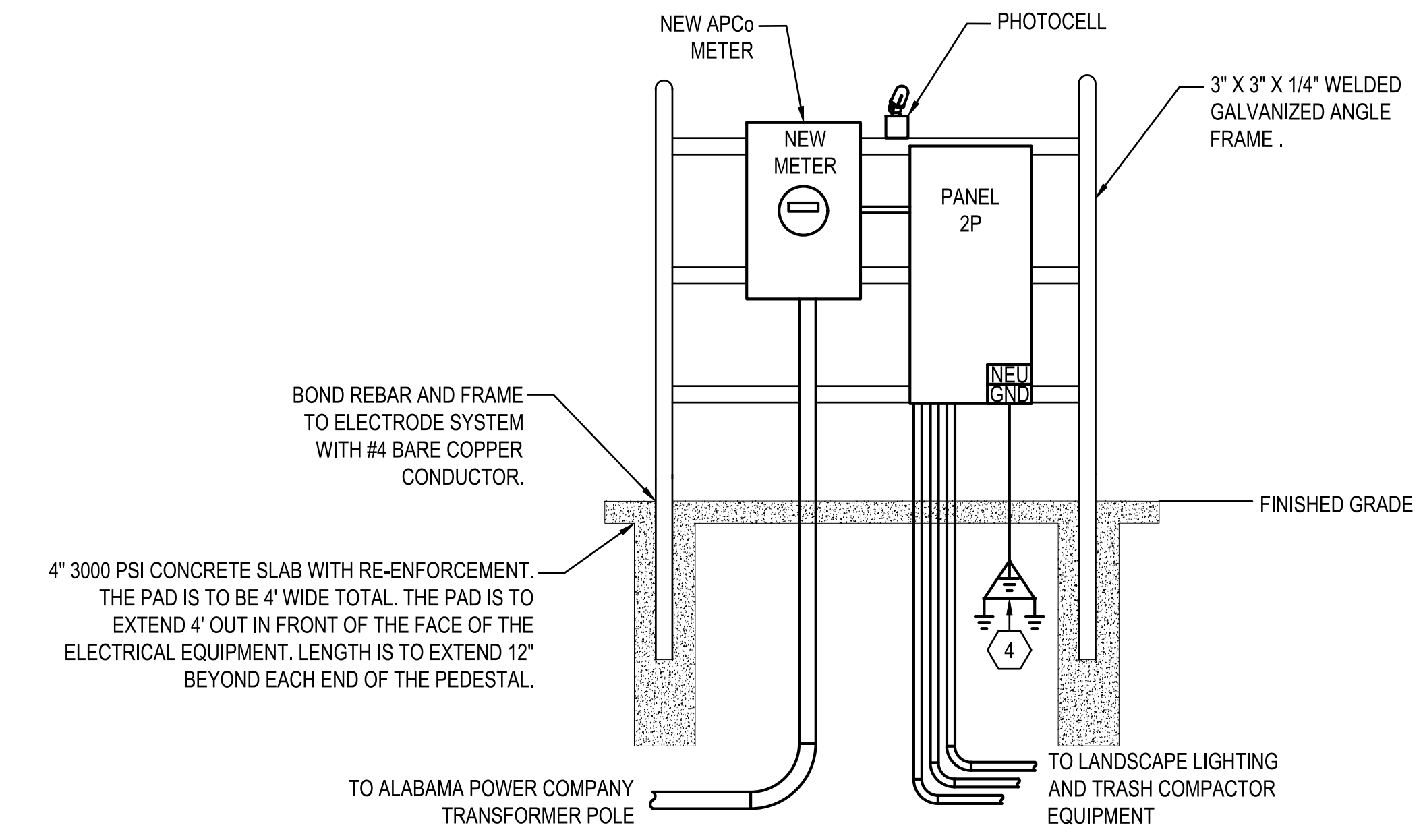
- 1 THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH THE TRASH COMPACTOR INSTALLER THE FINAL LOCATION AND POWER REQUIREMENTS FOR ELECTRICAL CONNECTION TO TRASH COMPACTOR EQUIPMENT.
- 2 THE ELECTRICAL CONTRACTOR IS TO ROUTE 3#6, 1#10G, 1" CONDUIT FROM THE NEW PANEL 2P TO THE RELOCATED WATER HEATER.
- 3 THE ELECTRICAL CONTRACTOR IS TO ROUTE 3#6, 1#10G, 1" CONDUIT FROM THE NEW PANEL 2P TO THE RELOCATED TRASH COMPACTOR CONTROL PANEL.
- 4 #4 GEC TO THREE 20' GROUND RODS ON 20' CENTERS IN EQUILATERAL DELTA ARRANGEMENT.

MARK	ENCLOSURE TYPE	MOUNTING STYLE	VOLTAGE	Ø	WIRE	MAIN BKR	IF MLO, SERVING BKR	SERVICE RATED	AVAILABLE SCA	kAIC RATING	Ø BUS RATING (A)	N BUS RATING	FEEDER			NOTES
													CONDUCTORS	GROUND	CONDUIT	
2P	NEMA 3R	SURFACE	120/240	3	4	200	N/A	YES	2504	10	200	100%	4#3/0	NONE	2" C	
2TC	NEMA 3R	SURFACE	120/240	1	3	MLO	60	NO		10	60	100%	3#6	#10	1" C	

NOTES
ALL PANELBOARDS ARE TO BE EQUIPPED WITH HIGH LEG MARKING IN ACCORDANCE WITH NEC ARTICLE 110.15.
ALL PANELBOARDS ARE TO BE EQUIPPED WITH ARC FLASH LABEL IN ACCORDANCE WITH NEC ARTICLE 110.16.
ALL PANELBOARDS ARE TO HAVE COPPER BUS.



1 NEW WORK SINGLE LINE DIAGRAM
NOT TO SCALE



2 NEW 480 VOLT SERVICE PEDESTAL
NOT TO SCALE

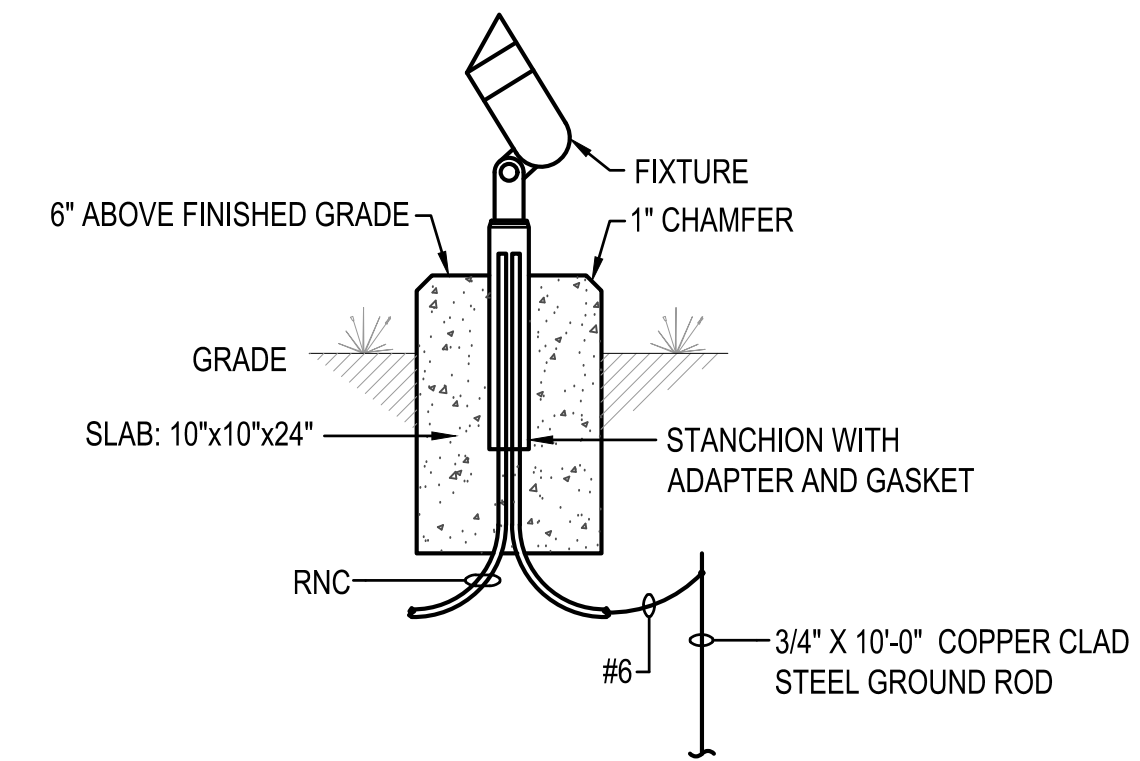
MARK	MANUFACTURER AND CATALOG NUMBER	LAMPS			TOTAL WATTS	VOLTAGE	MOUNTING	NOTES
		TYPE	#	WATTS				
SL	VOLT LIGHTING BDL-VFL-4509-L1-BBZ	LED	1	17	17	120	STANCHION	120V BRASS FLOOD LIGHT WITH KNUCKLE INTEGRATED LED 4000K 2000 LUMENS
BL	HYDREL PINE P2 80CRI 30K MVOLT 15DEG FLC KM IHL C2 BL DNA	LED	1	33	33	120VOLT	STANCHION	BULLET FLOOD LIGHT 3000K TIGHT BEAM BLACK FINISH

PANELBOARD SCHEDULE														
MARK	NEW PANEL 2P													
	CKT #	LOAD DESCRIPTION	BREAKER		PHASE (kVA)			PHASE (kVA)			BREAKER		LOAD DESCRIPTION	CKT #
P			TRIP	A	B	C	A	B	C	TRIP	P			
	1	PANEL 2TC	2	60							60	2	TRASH COMPACTOR	2
	3													4
	5	SPARE	1	20							20	1	LANDSCAPE LTG	6
	7	SPARE	1	20							20	1	PEDESTAL REC	8
	9	SPACE	1									1	SPACE	10
	11	SPACE	1	20							20	1	SPACE	12
	13	SPACE	1	20							20	1	SPACE	14
	15	SPACE	1									1	SPACE	16
	17	SPACE	1	20							20	1	SPACE	18
	19	SPACE	1	20							20	1	SPACE	20
	21	SPACE	1									1	SPACE	22
	23	SPACE	1	20							20	1	SPACE	24
	25	SPACE	1	20							20	1	SPACE	26
	27	SPACE	1									1	SPACE	28
	29	SPACE	1	20							20	1	SPACE	30

TOTAL (kVA) ØA _____ ØB _____ ØC _____ HIGH PHASE (AMPS) _____
TOTAL CONNECTED LOAD (kVA) _____ TOTAL LOAD (AMPS) _____
CREATE A DIRECTORY TO INDICATE INSTALLED LOADS. INDICATE LOAD TYPE (REC, LTG, AHU-1, ETC.) AND ROOM NUMBERS SERVED FOR EVERY BRANCH CIRCUIT.

PANELBOARD SCHEDULE														
MARK	NEW PANEL 2TC													
	CKT #	LOAD DESCRIPTION	BREAKER		PHASE (kVA)			PHASE (kVA)			BREAKER		LOAD DESCRIPTION	CKT #
P			TRIP	A	B	C	A	B	C	TRIP	P			
	1	TRASH COMPACTOR LTG	1	20							20	1	FAN REC	2
	3	TRASH COMPACTOR REC	1	20							20	1	SVC	4
	5	SPARE	1	20							20	1	SPARE	6
	7	SPARE	1	20							20	1	SPARE	8

TOTAL (kVA) ØA _____ ØB _____ HIGH PHASE (AMPS) _____
TOTAL CONNECTED LOAD (kVA) _____ TOTAL LOAD (AMPS) _____
CREATE A DIRECTORY TO INDICATE LOAD TYPE (REC, LTG, AHU-1, ETC.) AND ROOM NUMBERS SERVED FOR EVERY BRANCH CIRCUIT.



3 FLOOD LIGHT 'UP' MOUNTING DETAIL
NOT TO SCALE

PLUMBING SPECIFICATIONS

1. PLUMBING GENERAL (SECTION 220000)

- 1.1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE PLUMBING SYSTEM AS INDICATED WITHIN THESE DRAWINGS. ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES AND WITH MANUFACTURER'S RECOMMENDATIONS.
- 1.2. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND PLUMBING DRAWINGS PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL, AND CONNECT ALL ITEMS AS INDICATED ON THE DRAWINGS.
- 1.3. IN ADDITION TO THE MANUFACTURER'S STANDARD GUARANTEES, THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP AGAINST DEFECTS FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE, AND SHALL CORRECT ANY DEFECTS AT NO ADDITIONAL COST TO THE OWNER.
- 1.4. APPROVAL SUBMITTALS: SHOP DRAWINGS, PRODUCT LITERATURE, AND OTHER APPROVED SUBMITTALS WILL ONLY BE REVIEWED IF THEY ARE SUBMITTED IN FULL ACCORDANCE WITH THE GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS AND THE FOLLOWING:
 - 1.4.1. SUBMITTALS SHALL NOT INCLUDE ITEMS FROM MORE THAN ONE SPECIFICATION SECTION IN THE SAME SUBMITTAL PACKAGE.
 - 1.4.2. SUBMITTALS SHALL BE PROPERLY IDENTIFIED BY A COVER SHEET SHOWING THE PROJECT NAME, ARCHITECT AND ENGINEER NAMES, SUBMITTAL CONTROL NUMBERS, SPECIFICATION SECTION, A LIST OF PRODUCTS OR ITEM NAMES WITH MODEL NUMBERS IN THE ORDER THEY APPEAR IN THE PACKAGE, AND SPACES FOR APPROVED STAMPS. A SAMPLE COVER SHEET IS INCLUDED AT THE END OF THIS SECTION.
 - 1.4.3. SUBMITTALS SHALL HAVE BEEN REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR (OR PRIME CONTRACTOR). EVIDENCE OF THIS REVIEW AND APPROVAL SHALL BE AN "APPROVED" STAMP WITH A SIGNATURE AND DATE ON THE COVER SHEET.
 - 1.4.4. THE ELECTRICAL DESIGN SHOWN ON THE DRAWINGS SUPPORTS THE PLUMBING EQUIPMENT BASIS OF DESIGN SPECIFICATIONS AT THE TIME OF DESIGN. IF PLUMBING EQUIPMENT IS SUBMITTED WITH DIFFERENT ELECTRICAL REQUIREMENTS, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO RESOLVE ALL REQUIRED ELECTRICAL DESIGN CHANGES (WIRE AND CONDUIT SIZE, TYPE OF DISCONNECT OR OVERLOAD PROTECTION, POINT(S) OF CONNECTION, ETC.) AND CLEARLY SHOW THE NEW ELECTRICAL DESIGN ON THE PLUMBING SUBMITTAL WITH A WRITTEN STATEMENT THAT THIS CHANGE WILL BE PROVIDED AT NO ADDITIONAL COST. PLUMBING SUBMITTALS MADE WITH NO WRITTEN REFERENCE TO THE ELECTRICAL DESIGN WILL BE PRESUMED TO WORK WITH THE ELECTRICAL DESIGN. ANY CORRECTIONS REQUIRED WILL BE AT NO ADDITIONAL COST.
 - 1.4.5. PROVIDE SUBMITTALS FOR APPROVAL FOR THE FOLLOWING SPECIFICATION SECTIONS:
 - 1.4.5.1. PLUMBING PIPING INSULATION: SECTION 220719
 - 1.4.5.2. DOMESTIC WATER PIPING AND FITTINGS: SECTION 221116
 - 1.4.5.3. SANITARY & VENT PIPING AND FITTINGS: SECTION 221316
 - 1.4.5.4. PLUMBING FIXTURES: SECTION 224000
- 1.5. O&M MANUALS: PROVIDE ELECTRONIC COPIES OF OPERATIONS AND MAINTENANCE MANUALS PRIOR TO THE SUBSTANTIAL COMPLETION INSPECTION.
- 1.6. AS-BUILTS: PROVIDE A MARKED UP SET OF DRAWINGS FOR AS-BUILTS.

2. VALVES (SECTION 220523)

- 2.1. BALL VALVES:
 - 2.1.1. GENERAL: SELECT WITH PORT AREA EQUAL TO OR GREATER THAN CONNECTING PIPE AREA, INCLUDE SEAT RING DESIGNED TO HOLD SEALING MATERIAL.
 - 2.1.2. CONSTRUCTION: BALL VALVES SHALL BE RATED FOR 150 PSI SATURATED STEAM AND 600 PSI NON-SHOCK COLD WATER. PRESSURE CONTAINING PARTS SHALL BE CONSTRUCTED OF ASTM B-584 ALLOY 844, OR ASTM B-124 ALLOY 377. VALVES SHALL BE FURNISHED WITH BLOW-OUT PROOF BOTTOM LOADED STEM CONSTRUCTED OF ASTM B-371 ALLOY 694 OR OTHER APPROVED LOW ZINC MATERIAL. PROVIDE TFE PACKING, TFE THRUST WASHER, CHROME-PLATED BALL AND REINFORCED TEFLON SEATS. STEM EXTENSIONS SHALL BE FURNISHED FOR USE IN INSULATED PIPING WHERE INSULATION EXCEEDS 1/2" THICKNESS.
 - 2.1.3. THREADED ENDS 2" AND SMALLER: BRONZE TWO-PIECE FULL PORT BODY WITH ADJUSTABLE STEM PACKING. NIBCO T-585-70. STOCKHAM S216-BR-R-T. MILWAUKEE BA125. APOLLO 77-100.
 - 2.1.4. SOLDERED ENDS 2" AND SMALLER: BRONZE THREE-PIECE FULL PORT BODY WITH ADJUSTABLE STEM PACKING. NIBCO S-595-Y-66. MILWAUKEE BA350. APOLLO 82-200.

3. TESTING, CLEANING, & STERILIZATION (SECTION 220539)

- 3.1. GENERAL: PROVIDE TEMPORARY EQUIPMENT FOR TESTING, INCLUDING PUMP AND GAUGES. TEST PIPING SYSTEMS BEFORE INSULATION IS INSTALLED WHEREVER FEASIBLE, AND REMOVE CONTROL DEVICES BEFORE TESTING. TEST EACH NATURAL SECTION OF EACH PIPING SYSTEM INDEPENDENTLY BUT DO NOT USE PIPING SYSTEM VALVES TO ISOLATE SECTIONS WHERE TEST PRESSURE EXCEEDS VALVE PRESSURE RATING. FILL EACH SECTION WITH INDICATED MEDIUM AND PRESSURIZE FOR INDICATED PRESSURE AND TIME.
- 3.2. REQUIRED TEST PERIOD IS FOUR HOURS.
- 3.3. NO PIPING, FIXTURES, OR EQUIPMENT SHALL BE CONCEALED OR COVERED UNTIL THEY HAVE BEEN TESTED. THE CONTRACTOR SHALL APPLY EACH TEST AND ENSURE THAT IT IS SATISFACTORY FOR THE PERIOD SPECIFIED BEFORE CALLING THE ARCHITECT/ENGINEER TO OBSERVE THE TEST. TEST SHALL BE REPEATED UPON REQUEST TO THE SATISFACTION OF THOSE MAKING THE INSPECTION.
- 3.4. OBSERVE EACH TEST SECTION FOR LEAKAGE AT THE END OF THE TEST PERIOD. TEST FAILS IF LEAKAGE IS OBSERVED OR IF PRESSURE DROP EXCEEDS 5% OF THE TEST PRESSURE.
- 3.5. CHECK OF SYSTEMS DURING APPLICATION OF TEST PRESSURES SHOULD INCLUDE VISUAL CHECK FOR WATER LEAKAGE AND SOAP BUBBLE OR SIMILAR CHECK FOR AIR AND NITROGEN LEAKAGE.
- 3.6. REPAIR PIPING SYSTEMS SECTIONS WHICH FAIL REQUIRED PIPING TEST. DISASSEMBLE AND RE-INSTALL USING NEW MATERIALS TO EXTENT REQUIRED TO OVERCOME LEAKAGE. DO NOT USE CHEMICALS, STOP-LEAK COMPOUNDS, MASTICS, OR OTHER TEMPORARY REPAIR METHODS.
- 3.7. PRESSURE TEST REQUIREMENTS:
 - 3.7.1. SOIL, WASTE, AND VENT: TEST ALL PIPING WITHIN THE BUILDING WITH A 10 FOOT HEAD OF WATER. TEST PIPING IN SECTIONS SO THAT ALL JOINTS ARE TESTED. PROVIDE TEST TEES AS REQUIRED.
 - 3.7.2. DOMESTIC WATER: PERFORM HYDROSTATIC TEST ON ALL PIPING WITHIN THE BUILDING AT TWICE THE NORMAL STATIC PRESSURE AT SERVICE POINT, BUT NOT LESS THAN 100 PSIG. ONCE TESTED, FLUSH OUT PIPING AND LEAVE UNDER PRESSURE OF THE SUPPLY MAIN OR 40 PSIG FOR THE BALANCE OF THE CONSTRUCTION PERIOD.

4. PLUMBING PIPING INSULATION (SECTION 220719)

- 4.1. INSTALL THERMAL INSULATION PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, AND IN COMPLIANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT INSULATION SERVES INTENDED PURPOSE.
- 4.2. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, COVERINGS, SEALERS, MASTIC, AND ADHESIVE) WITH A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE-DEVELOPED RATING OF 50 OR LESS AS TESTED BY ANSI/ASTM E84.
- 4.3. FIBERGLASS PIPE INSULATION: ASTM C547, CLASS 1 UNLESS OTHERWISE INDICATED (PREFORMED SLEEVEING WITH WHITE ALL-SERVICE JACKET, SUITABLE FOR TEMPERATURES UP TO 450°F).
 - 4.3.1. INSULATE THE FOLLOWING PIPING SYSTEMS:
 - 4.3.1.1. DOMESTIC HOT WATER: 1-1/2" THICK;
 - 4.3.1.2. COLD WATER PIPE: 1/2" THICK.
 - 4.3.2. OUTDOOR LOCATIONS: COVER STRAIGHT PIPING WITH 0.016" THICKNESS SMOOTH ALUMINUM JACKET FASTENED WITH ALUMINUM BANDS ON NOT OVER 12" CENTERS. USE FACTORY-MADE 0.014" ALUMINUM COVERS FOR FITTINGS AND VALVES. METAL JACKETING SHALL BE APPLIED WITH THE LONGITUDINAL SEAM POSITIONED TO SHED WATER.
- 4.4. INSTALL INSULATION MATERIALS WITH SMOOTH AND EVEN SURFACES AND ON CLEAN AND DRY SURFACES. REDO POORLY FITTED JOINTS. DO NOT USE MASTIC OR JOINT SEALER AS FILLER FOR GAPPING JOINTS AND EXCESSIVE VOIDS RESULTING FROM POOR WORKMANSHIP.
- 4.5. DO NOT INSTALL INSULATION UNTIL SYSTEMS HAVE BEEN CHECKED AND FOUND FREE OF LEAKS. SURFACES SHALL BE CLEAN, COOL, AND DRY BEFORE ATTEMPTING TO APPLY INSULATION. A PROFESSIONAL INSULATOR WITH ADEQUATE EXPERIENCE AND ABILITY SHALL INSTALL INSULATION.
- 4.6. APPLY INSULATION TO PIPE WITH ALL SIDE AND END JOINTS BUTTED TIGHTLY. SEAL LONGITUDINAL LAP BY PRESSURIZING WITH PLASTIC SEALING TOOL. APPLY 3-INCH WIDE SELF-SEALING BUTT STRIPS TO JOINTS BETWEEN INSULATION SECTIONS.

5. DOMESTIC WATER PIPING AND FITTINGS (SECTION 221116)

- 5.1. GENERAL: PROVIDE PIPING MATERIALS AND FACTORY-FABRICATED PIPING PRODUCTS OF SIZES, TYPES, PRESSURE RATINGS, TEMPERATURE RATINGS, AND CAPACITIES AS INDICATED. WHERE NOT INDICATED, PROVIDE PROPER SELECTION AS DETERMINED BY INSTALLER TO COMPLY WITH INSTALLATION REQUIREMENTS. PROVIDE MATERIALS AND PRODUCTS COMPLYING WITH UNIFORM PLUMBING CODE WHERE APPLICABLE. PROVIDE SIZES AND TYPES MATCHING PIPE MATERIALS USED IN POTABLE WATER SYSTEMS.
- 5.2. INSTALL PIPES AND PIPE FITTINGS IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE PERMANENTLY-LEAKPROOF PIPING SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. INSTALL EACH RUN WITH MINIMUM JOINTS AND COUPLINGS, BUT WITH ADEQUATE AND ACCESSIBLE UNIONS FOR DISASSEMBLY AND MAINTENANCE OR REPLACEMENT OF VALVES AND EQUIPMENT.
- 5.3. MATERIALS:
 - 5.3.1. POLYVINYL CHLORIDE PIPE (PVC): ASTM D1785 SCHEDULE 40 WITH ASTM D2467 SCHEDULE 80 SOCKET FITTINGS AND VALVES SHALL BE IN ACCORDANCE WITH MAWSS SPECIFICATIONS.
- 5.4. LOCATE PIPING RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY (PITCHED TO DRAIN) AND AVOID DIAGONAL RUNS WHEREVER POSSIBLE. ORIENT HORIZONTAL RUNS PARALLEL WITH WALLS AND COLUMN LINES. LOCATE RUNS AS SHOWN OR DESCRIBED BY DIAGRAMS, DETAILS AND NOTATIONS OR, IF NOT OTHERWISE INDICATED, RUN PIPING IN SHORTEST ROUTE WHICH DOES NOT OBSTRUCT USABLE SPACE OR BLOCK ACCESS FOR SERVICING BUILDING AND ITS EQUIPMENT. HOLD PIPING CLOSE TO WALLS, OVERHEAD CONSTRUCTION, COLUMNS AND OTHER STRUCTURAL AND PERMANENT-ENCLOSURE ELEMENTS OF BUILDING; LIMIT CLEARANCE TO 1/2" WHERE FURRING IS SHOWN FOR ENCLOSURE OR CONCEALMENT OF PIPING, BUT ALLOW FOR INSULATION THICKNESS, IF ANY. WHERE POSSIBLE, LOCATE INSULATED PIPING FOR 1" CLEARANCE OUTSIDE INSULATION.

6. SANITARY & VENT PIPING AND FITTINGS (SECTION 221316)

- 6.1. GENERAL: PROVIDE PIPING MATERIALS AND FACTORY-FABRICATED PIPING PRODUCTS OF SIZES, TYPES, PRESSURE RATINGS, AND CAPACITIES AS INDICATED. WHERE NOT INDICATED, PROVIDE PROPER SELECTION AS DETERMINED BY INSTALLER TO COMPLY WITH INSTALLATION REQUIREMENTS. PROVIDE SIZES AND TYPES MATCHING PIPING AND EQUIPMENT CONNECTIONS; PROVIDE FITTINGS OF MATERIALS WHICH MATCH PIPE MATERIALS USED IN SANITARY WASTE SYSTEMS.
- 6.2. INSTALL PIPES AND PIPE FITTINGS IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE PERMANENTLY-LEAKPROOF PIPING SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. INSTALL EACH RUN WITH MINIMUM JOINTS AND COUPLINGS, BUT WITH ADEQUATE AND ACCESSIBLE UNIONS FOR DISASSEMBLY AND MAINTENANCE OR REPLACEMENT OF EQUIPMENT.
- 6.3. MATERIALS:
 - 6.3.1. ABOVE GROUND SANITARY WASTE AND VENT PIPING: ASTM D2665 SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC PIPE (PVC), TYPE DWV, WITH PVC PLASTIC TYPE DWV SOCKET-TYPE FITTINGS, SOLVENT CEMENT JOINTS.
 - 6.3.2. UNDERGROUND DRAIN PIPING: ASTM D2665 SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC PIPE (PVC), TYPE DWV, WITH PVC PLASTIC TYPE DWV SOCKET-TYPE FITTINGS, COMPRESSION GASKET JOINTS.
 - 6.3.3. SOLVENT-CEMENTED JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D2235 AND ASTM F402.
- 6.4. CUT PIPE FROM MEASUREMENTS TAKEN AT THE SITE, NOT FROM DRAWINGS. KEEP PIPES FREE OF CONTACT WITH BUILDING CONSTRUCTION AND INSTALLED WORK.
- 6.5. INSTALL BUILDING SOIL AND VENT PIPING PITCHED TO DRAIN AT MINIMUM SLOPE OF 1/4" PER FOOT (2%) FOR PIPING 3" AND SMALLER, AND 1/8" PER FOOT (1%) FOR PIPING 4" AND LARGER.

7. PLUMBING FIXTURES (SECTION 224000)

- 7.1. GENERAL: PROVIDE FACTORY-FABRICATED FIXTURES OF TYPE, STYLE, AND MATERIAL INDICATED. FOR EACH TYPE FIXTURE, PROVIDE TRIM, CARRIER, SEATS, AND VALVES AS SPECIFIED. WHERE NOT SPECIFIED, PROVIDE PRODUCTS AS RECOMMENDED BY MANUFACTURER, AND AS REQUIRED FOR COMPLETE INSTALLATION. WHERE MORE THAN ONE TYPE IS INDICATED, SELECTION IS INSTALLER'S OPTION; HOWEVER, ALL FIXTURES OF SAME TYPE MUST BE FURNISHED BY SINGLE MANUFACTURER. WHERE TYPE IS NOT OTHERWISE INDICATED, PROVIDE FIXTURES COMPLYING WITH GOVERNING REGULATIONS.
- 7.2. MODEL NUMBERS: BASIS OF DESIGN MODEL NUMBERS OF A PARTICULAR MANUFACTURER ARE LISTED IN THE FIXTURE SCHEDULE AS AN AID TO CONTRACTORS. WHERE CONFLICTS BETWEEN THE MODEL NUMBER AND THE WRITTEN DESCRIPTION OCCUR, THE WRITTEN DESCRIPTION SHALL GOVERN. WHERE ACCEPTABLE MANUFACTURERS ARE LISTED, PRODUCTS ARE SUBJECT TO COMPLIANCE WITH REQUIREMENTS.

- 7.3. EXAMINE ROUGH-IN WORK OF POTABLE WATER AND WASTE PIPING SYSTEMS TO VERIFY ACTUAL LOCATIONS OF PIPING CONNECTIONS PRIOR TO INSTALLING FIXTURES. ALSO EXAMINE FLOORS AND SUBSTRATES, AND CONDITIONS UNDER WHICH FIXTURE WORK IS TO BE ACCOMPLISHED. CORRECT ANY INCORRECT LOCATIONS OF PIPING, AND OTHER UNSATISFACTORY CONDITIONS FOR INSTALLATION OF PLUMBING FIXTURES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER.
- 7.4. INSTALL PLUMBING FIXTURES OF TYPES INDICATED WHERE SHOWN AND HEIGHTS; COORDINATE WITH ARCHITECTURAL INTERIOR ELEVATIONS. INSTALL IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, ROUGH-IN DRAWINGS, AND WITH RECOGNIZED INDUSTRY PRACTICES. INSTALL IN ACCORDANCE WITH ADA AND APPLICABLE ACCESSIBLE CODE REQUIREMENTS. ENSURE THAT PLUMBING FIXTURES COMPLY WITH REQUIREMENTS AND SERVE INTENDED PURPOSES. COMPLY WITH APPLICABLE REQUIREMENTS OF UNIFORM PLUMBING CODE PERTAINING TO INSTALLATION OF PLUMBING FIXTURES. FURNISH TEMPLATES FOR CUT-OUTS IN COUNTERTOPS. COORDINATE EXACT FIXTURE LOCATIONS WITH COUNTERTOP SHOP DRAWINGS.
- 7.5. FASTEN PLUMBING FIXTURES SECURELY TO INDICATED SUPPORTS OR BUILDING STRUCTURE, AND ENSURE THAT FIXTURES ARE LEVEL AND PLUMB. SECURE PLUMBING SUPPLIES BEHIND OR WITHIN WALL CONSTRUCTION SO AS TO BE RIGID, AND NOT SUBJECT TO PULL OR PUSH MOVEMENT. MOUNT AT HEIGHTS SHOWN ON THE DRAWINGS. FIXTURE HEIGHTS ARE FLOOR-TO-RIM DISTANCE. FITTING HEIGHTS ARE TO CENTERLINE.
- 7.6. INSTALL STOP VALVE IN WATER SUPPLY TO EACH FIXTURE.
- 7.7. PROTECT INSTALLED FIXTURES FROM DAMAGE DURING REMAINDER OF CONSTRUCTION PERIOD.
- 7.8. UPON COMPLETION OF INSTALLATION OF PLUMBING FIXTURES AND AFTER UNITS ARE WATER PRESSURIZED, TEST FIXTURES TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS. WHEN POSSIBLE, CORRECT MALFUNCTIONING UNITS AT SITE, THEN RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND PROCEED WITH RETESTING.
- 7.9. INSPECT EACH INSTALLED UNIT FOR DAMAGE TO FINISH. IF FEASIBLE, RESTORE AND MATCH FINISH TO ORIGINAL AT SITE; OTHERWISE, REMOVE FIXTURE AND REPLACE WITH NEW UNIT. FEASIBILITY AND MATCH TO BE JUDGED BY ARCHITECT/ENGINEER. REMOVE CRACKED OR DENTED UNITS AND REPLACE WITH NEW UNITS.
- 7.10. CLEAN PLUMBING FIXTURES, TRIM, AERATORS, AND STRAINERS OF DIRT AND DEBRIS UPON COMPLETION OF INSTALLATION.

PLUMBING LEGEND & SYMBOLS

- | | | |
|----------|--|---------------------------------------|
| 3"-W | | SANITARY SEWER |
| 1-1/2"-V | | VENT |
| 2"-DCW | | DOMESTIC COLD WATER (ABOVE GRADE) |
| 1/2"-DCW | | DOMESTIC COLD WATER (BELOW GRADE) |
| 3"-GW | | GREASE WASTE |
| | | EXISTING SANITARY SEWER & VENT |
| | | EXISTING DOMESTIC WATER (ABOVE GRADE) |
| | | DEMO PIPE |
| | | PIPE DOWN |
| | | PIPE UP |
| GCO | | EXTERIOR GRADE CLEANOUT |
| FD | | FLOOR DRAIN |
| | | FLOOR PIPE AND WALL PENETRATION |
| 1 | | SHEET NOTES TAG |
| | | CONNECT TO EXISTING |

PLUMBING ABBREVIATIONS

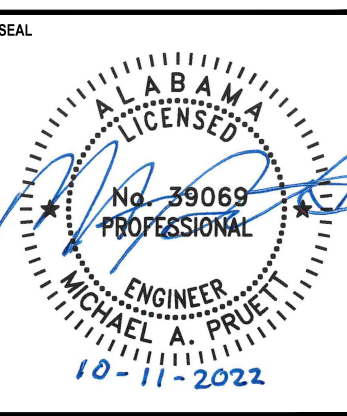
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|-----|----------------------|
| DCW | DOMESTIC COLD WATER |
| EX | EXISTING |
| FD | FLOOR DRAIN |
| GCO | GRADE LEVEL CLEANOUT |
| GW | GREASE WASTE |
| VTR | VENT THROUGH ROOF |
| W | WASTE |

PLUMBING GENERAL NOTES

1. THE CONTRACTOR SHALL EXECUTE ALL WORK SO THAT IT PROCEEDS WITH MINIMUM INTERFERENCE TO OTHER TRADES.
2. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS IN THE FIELD TO ENSURE A CLOSE, NEAT INSTALLATION WITH ALL OTHER TRADES' WORK AND EXISTING CONDITIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTIONS TO ALL PLUMBING FIXTURES AS INDICATED ON THE PLUMBING AND ARCHITECTURAL DRAWINGS. WHERE THERE EXISTS ANY DISCREPANCY IN THE DRAWINGS, THE SPECIFICATIONS OR DESIGN REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE THE MORE STRINGENT REQUIREMENT AND THEN BRING THE DISCREPANCY TO THE ARCHITECT.
4. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND LOCATIONS OF ALL PLUMBING UTILITIES WITH OTHER TRADES AND COORDINATE ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL OPENINGS IN FOUNDATION WALLS, FLOORS AND ROOF SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
5. SANITARY VENTS THRU ROOF SHALL BE FLASHED WATER TIGHT AND SHALL EXTEND A MINIMUM OF 12" ABOVE ROOF AND SHALL BE COORDINATED WITH THE ROOFING CONTRACTOR.
6. ALL FLOOR DRAIN P-TRAPS SHALL HAVE TRAP SEAL PROTECTION. THE TYPE OF TRAP SEAL PROTECTION SHALL BE AS INDICATED ON PLUMBING PLANS OR AS APPROVED BY LOCAL CODE OFFICIAL.
7. PROVIDE ANTI-SIPHON DEVICES ON ALL HOSE END CONNECTION FAUCETS AND HOSE BIBBS.
8. NO FITTINGS SHALL BE ALLOWED ON DOMESTIC WATER PIPING BELOW CONCRETE SLAB.
9. PROVIDE DI-ELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	CONNECTIONS				MAKE	MODEL	DESCRIPTION
		WASTE	CW	HW	VENT			
FD-1	FLOOR DRAIN	VARIOUS	-	-	1-1/2"	JAY R SMITH	2005	CAST IRON BODY FLOOR DRAIN WITH ROUND NICKEL BRONZE GRID STRAINER. PROVIDE WITH TRAP SEAL.
FD-2	FLOOR DRAIN	VARIOUS	-	-	1-1/2"	JAY R SMITH	2470	MEDIUM DUTY, TRAFFIC RATED FLOOR DRAIN WITH HINGED GRATE AND SEDIMENT BUCKET
GCO	GRADE CLEANOUT	VARIOUS	-	-	-	JAY R SMITH	4237-U	VANDAL RESISTANT, HEAVY TRAFFIC RATED, CAST IRON BODY UNFINISHED FLOOR CLEANOUT WITH ADJUSTABLE CAST IRON TOP.



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MOBILE, ALABAMA

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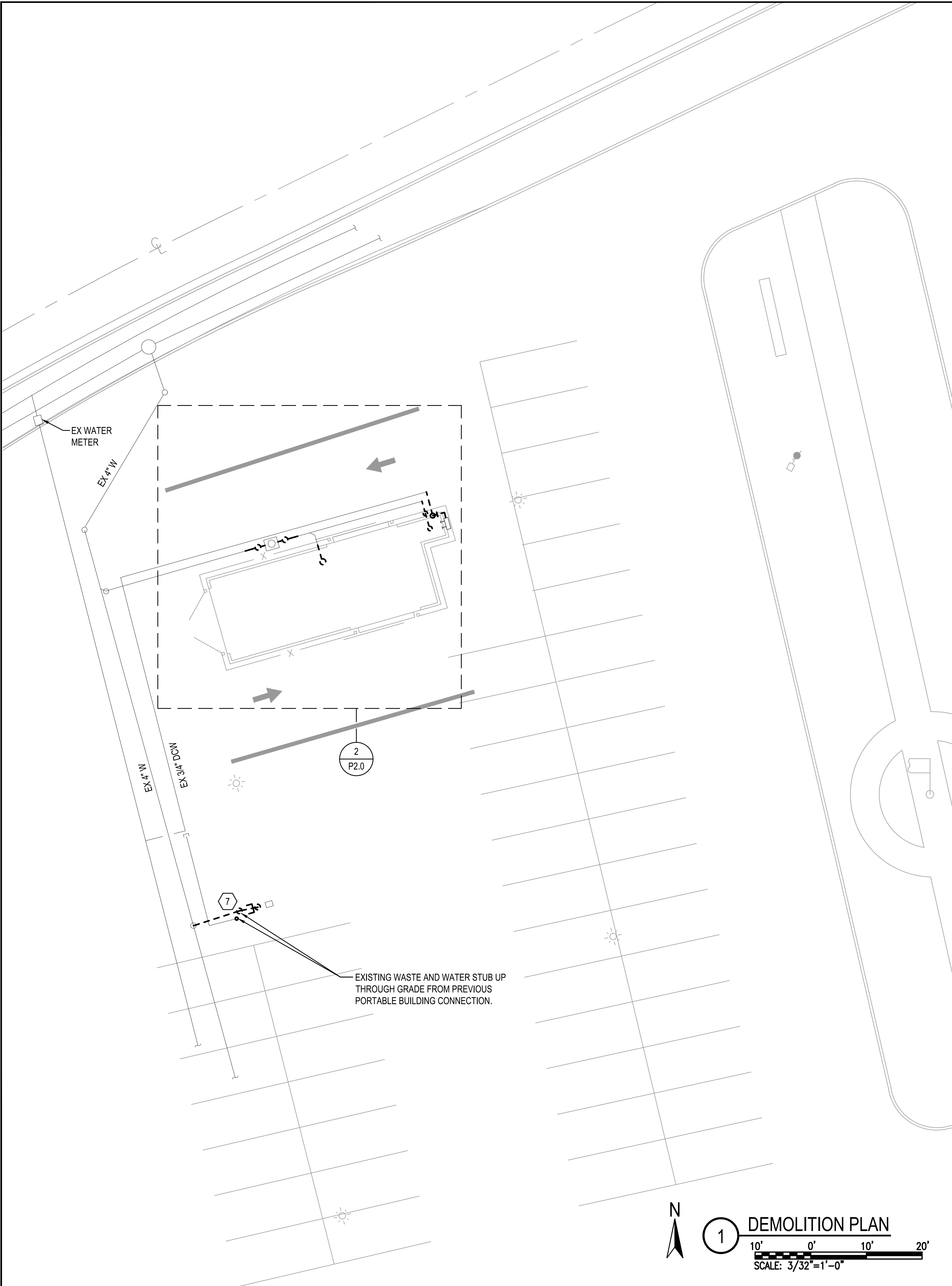
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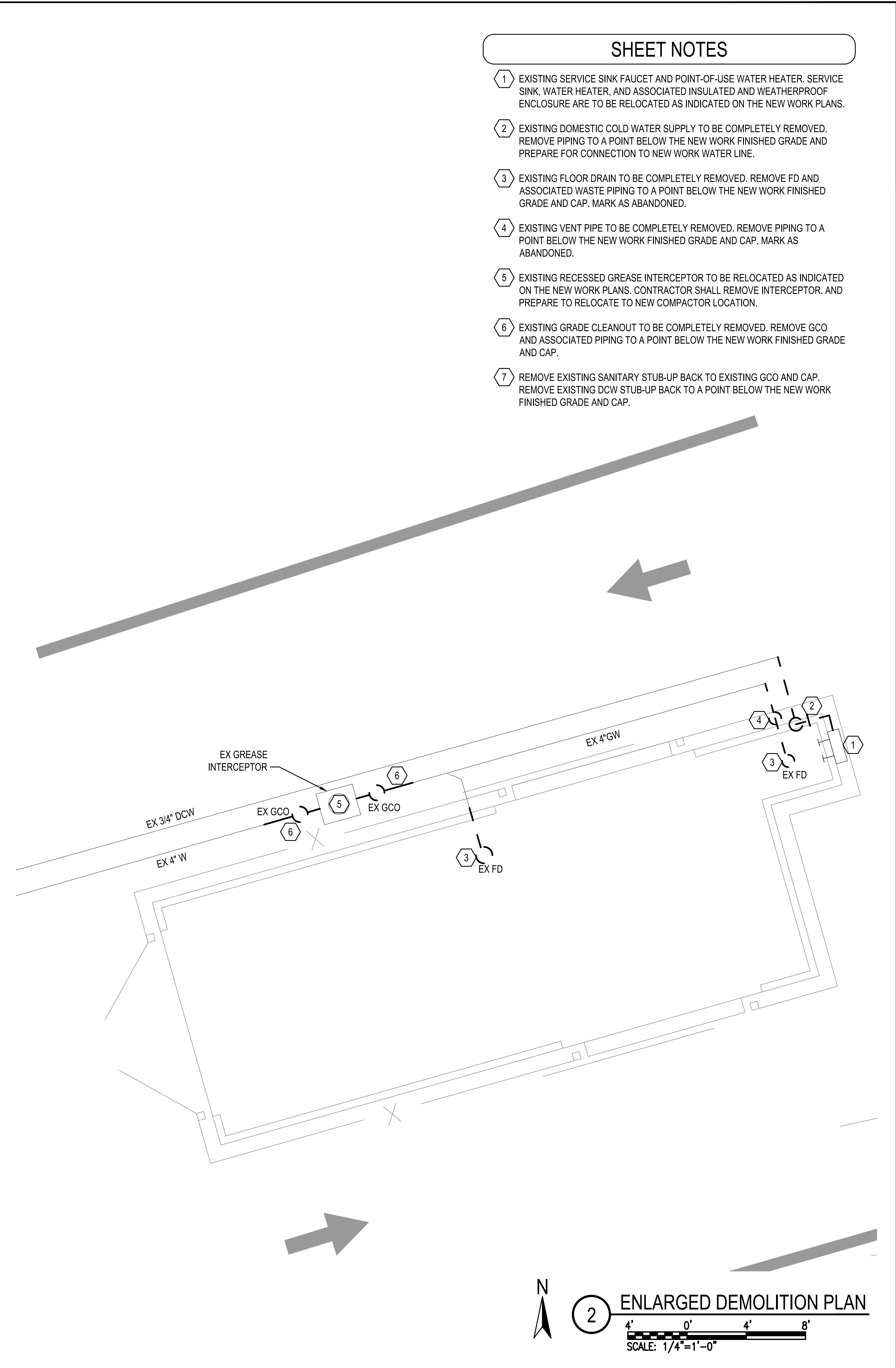
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LEGEND, NOTES, AND ABBREVIATIONS

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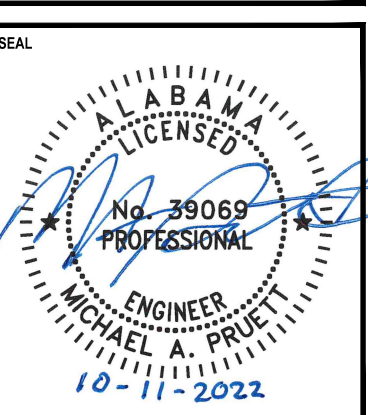
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 SCALE: 3/32"=1'-0"



2 ENLARGED DEMOLITION PLAN
 SCALE: 1/4"=1'-0"

SHEET NOTES

- 1 EXISTING SERVICE SINK FAUCET AND POINT-OF-USE WATER HEATER. SERVICE SINK, WATER HEATER, AND ASSOCIATED INSULATED AND WEATHERPROOF ENCLOSURE ARE TO BE RELOCATED AS INDICATED ON THE NEW WORK PLANS.
- 2 EXISTING DOMESTIC COLD WATER SUPPLY TO BE COMPLETELY REMOVED. REMOVE PIPING TO A POINT BELOW THE NEW WORK FINISHED GRADE AND PREPARE FOR CONNECTION TO NEW WORK WATER LINE.
- 3 EXISTING FLOOR DRAIN TO BE COMPLETELY REMOVED. REMOVE FD AND ASSOCIATED WASTE PIPING TO A POINT BELOW THE NEW WORK FINISHED GRADE AND CAP. MARK AS ABANDONED.
- 4 EXISTING VENT PIPE TO BE COMPLETELY REMOVED. REMOVE PIPING TO A POINT BELOW THE NEW WORK FINISHED GRADE AND CAP. MARK AS ABANDONED.
- 5 EXISTING RECESSED GREASE INTERCEPTOR TO BE RELOCATED AS INDICATED ON THE NEW WORK PLANS. CONTRACTOR SHALL REMOVE INTERCEPTOR, AND PREPARE TO RELOCATE TO NEW COMPACTOR LOCATION.
- 6 EXISTING GRADE CLEANOUT TO BE COMPLETELY REMOVED. REMOVE GCO AND ASSOCIATED PIPING TO A POINT BELOW THE NEW WORK FINISHED GRADE AND CAP.
- 7 REMOVE EXISTING SANITARY STUB-UP BACK TO EXISTING GCO AND CAP. REMOVE EXISTING DCW STUB-UP BACK TO A POINT BELOW THE NEW WORK FINISHED GRADE AND CAP.



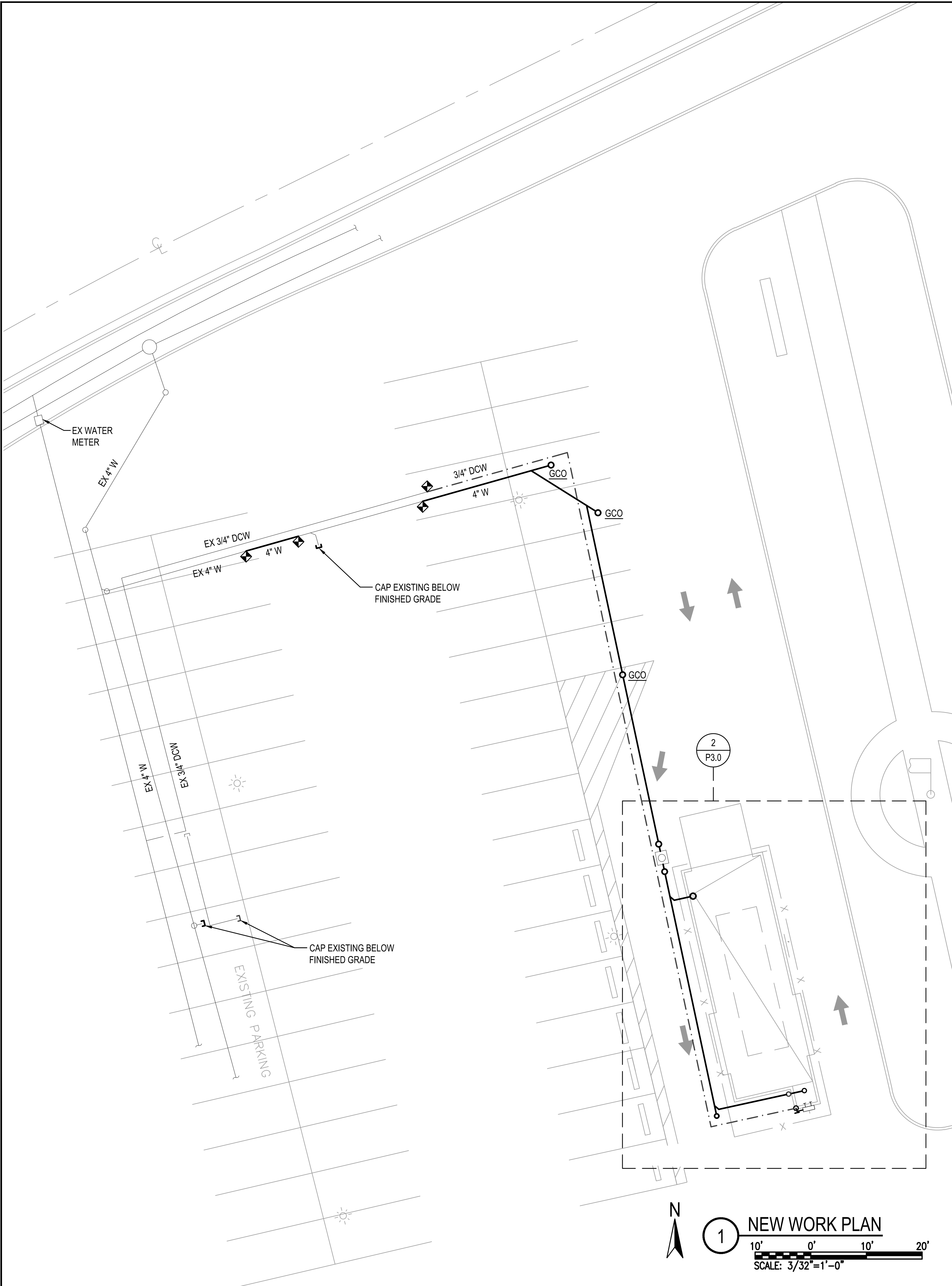
NUMBER	REVISION	REVISION DESCRIPTION

**CITY OF MOBILE WAC RECYCLING CENTER
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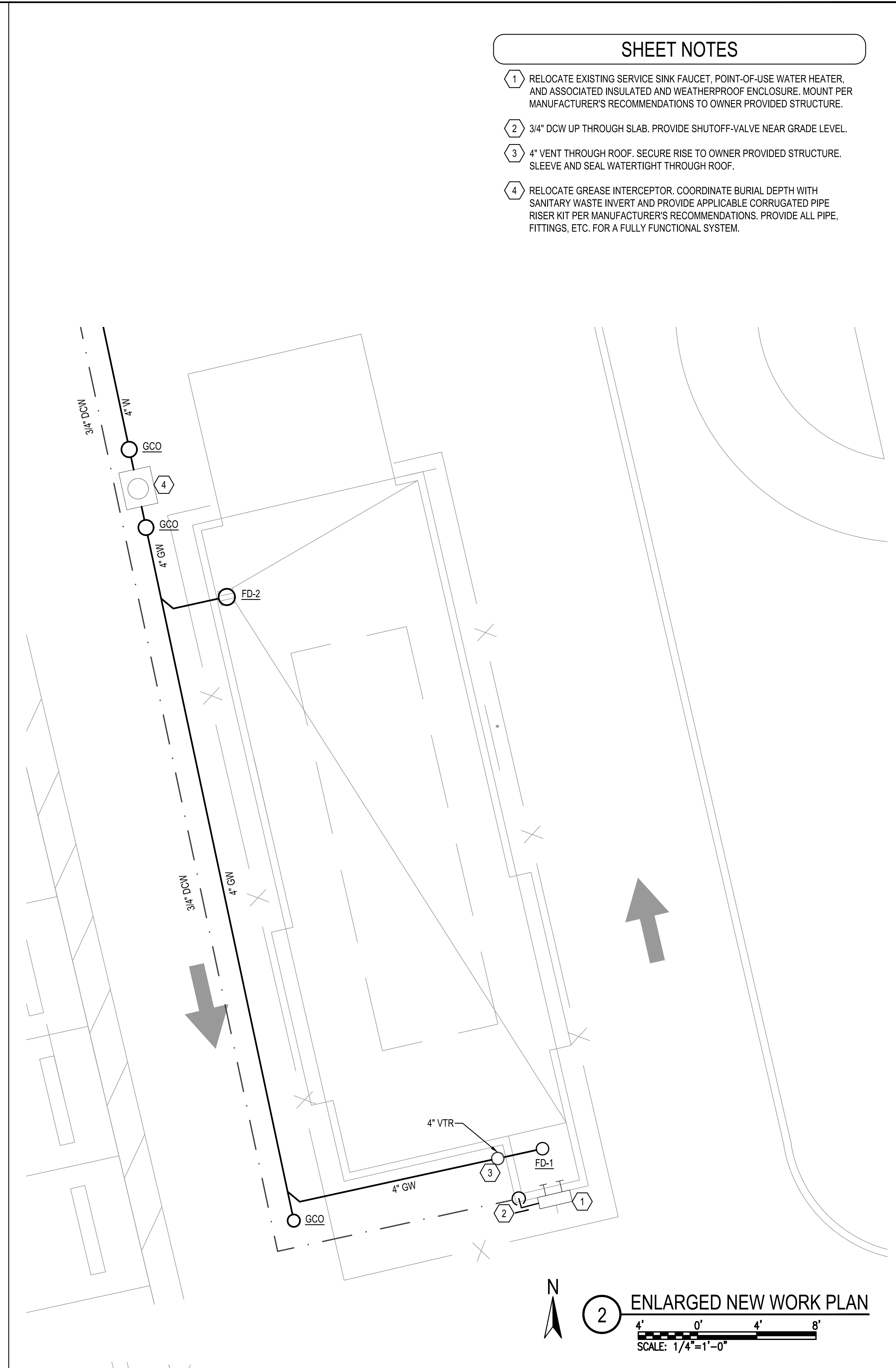
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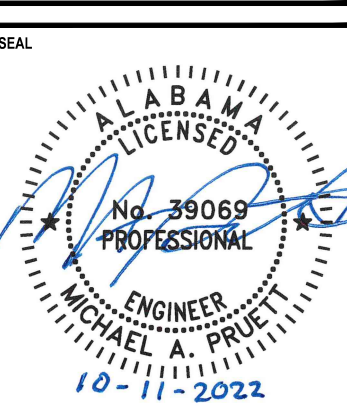
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 SCALE: 3/32"=1'-0"



2 ENLARGED NEW WORK PLAN
 SCALE: 1/4"=1'-0"

SHEET NOTES

- 1 RELOCATE EXISTING SERVICE SINK FAUCET, POINT-OF-USE WATER HEATER, AND ASSOCIATED INSULATED AND WEATHERPROOF ENCLOSURE. MOUNT PER MANUFACTURER'S RECOMMENDATIONS TO OWNER PROVIDED STRUCTURE.
- 2 3/4" DCW UP THROUGH SLAB. PROVIDE SHUTOFF-VALVE NEAR GRADE LEVEL.
- 3 4" VENT THROUGH ROOF. SECURE RISE TO OWNER PROVIDED STRUCTURE. SLEEVE AND SEAL WATERTIGHT THROUGH ROOF.
- 4 RELOCATE GREASE INTERCEPTOR. COORDINATE BURIAL DEPTH WITH SANITARY WASTE INVERT AND PROVIDE APPLICABLE CORRUGATED PIPE RISER KIT PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL PIPE, FITTINGS, ETC. FOR A FULLY FUNCTIONAL SYSTEM.



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 NEW WORK PLAN

SHEET:
P3.0