



Shelby County Tennessee

Mark Luttrell, Jr., Mayor

Request for Proposal Shelby County Government Purchasing Department

160 N. Main, Suite 900
Memphis, TN 38103

Issued: August 26, 2015

Due: September 17, 2015 @ 4:00 p.m. (Central Daylight Saving Time)

RFP # 16-007-11

SEWER AND DRAIN REPAIR COURTHOUSE @ 140 ADAMS

Shelby County Government is soliciting proposals for the provision of Construction Services to repair the sewer and drain at the Courthouse building located at 140 Adams Ave, Memphis, Tennessee 38103. Information regarding this RFP is located on the County's website at www.shelbycountyttn.gov. At the top of the home page, click on the links "Department," "P" for the Purchasing Department and "Bids" to locate the name of the above-described RFP. Copies of the project manual and drawing are posted at this location and can be downloaded at no cost to prospective bidders

A **MANDATORY** pre-bid conference will be held on **Thursday, September 3, 2015, at 1:30 P.M., at the Support Services Building located at 584 Adams, Memphis, Tennessee 38103.**

The proposal, as submitted, should include all estimated cost related to the services requested in this RFP. If selected, you will contract with Shelby County Government pending completion of all requirements contained herein. Respondents requesting additional information or clarification are to contact, Tosha Davenport at tosha.davenport@shelbycountyttn.gov

Proposals must be received in the office of the Administrator of Purchasing **no later than 4:00 P.M. on Thursday, September 17, 2015.** Proposals should be addressed to:

**Tosha Davenport, Procurement Specialist
Shelby County Government
160 N. Main, Suite 900
Memphis, TN 38103**

The package containing one (1) original proposal copy, four (4) copies and one Digital CD must be sealed and marked with the Proposers name and **“SEWER AND DRAIN REPAIR COURTHOUSE @ 140 ADAMS”, RFP # 16-007-11,** noted on the outside.

Sincerely,

Tosha Davenport, Procurement Specialist
Purchasing Department Shelby County Government

CC: Ben Pearson, Allen & Hoshall
Diep Tran, Support Services

TABLE OF CONTENTS

- I. INTRODUCTION**
- II. MINIMUM PROPOSER REQUIREMENTS**
- III. CORRESPONDENCE**
- IV. PROPOSAL SUBMISSION DEADLINE**
- V. PROPOSAL TIMELINE**
- VI. PROPOSAL CONDITIONS**
 - A) CONTINGENCIES**
 - B) MODIFICATIONS**
 - C) PROPOSAL SUBMISSION**
 - D) INCURRED COSTS**
 - E) FINAL AUTHORITY**
 - F) PROPOSAL VALIDITY**
 - G) LOSB**
 - H) DRUG-FREE WORKPLACE AFFIDAVIT**
 - I) FORMS TO BE SUBMITTED**
- VII. GENERAL REQUIREMENTS**
- VIII. AWARD OF CONTRACT**
- IX. GRATUITY DISCLOSURE FORM**
- X. NOTICE TO BIDDERS**

Note: Please make sure you pay close attention to Sections: I-V, IX & XI. These sections will clearly outline what information is required to properly respond and prepare your RFP response.

I. INTRODUCTION

Shelby County Government (the “County”), is seeking proposals from interested and qualified firms to provide the provision of Construction Services to repair the sewer and drain at the Courthouse building located at 140 Adams Ave, Memphis, Tennessee 38103. This Request for Proposal (“RFP”) is being released to invite interested and qualified firms to prepare and submit proposals in accordance with instructions provided where the successful candidate will be selected and invited to enter into a contractual relationship with Shelby County for the Services outlined in this RFP.

II. MINIMUM PROPOSER REQUIREMENTS

All Proposers must:

1. Must submit a Bid Bond in the amount of 5% of their bid. This bond must be submitted with your bid.
2. Have or obtain prior to the execution of the final contract all appropriate licenses and certifications required in the State of Tennessee for the performance of the Services in accordance with the provisions of this RFP.
3. The successful contractor must be able to submit a performance/labor material bond separate bonds each in the amount of 100% of the amount of the contract.
4. Firms located within the boundaries of Shelby County are required to have a current Shelby County Business License or be considered exempt from the license requirement by the Shelby County Clerks Office.
5. Also see Item # I, page 24 for forms to be submitted with your bid.
6. Prime and LOSB contractors must **apply** and **qualify** for an Equal Opportunity Compliance (EOC) certification number through our EOC Administration prior to submitting your response.
7. Independent contractors (sole proprietors) must adhere to State of Tennessee Public Chapter No. 436, know as the “Tennessee Lawful Employment Act (effective date of 1/1/2012). Proof and documentation of employment eligibility must be included with the proposal.

Please Note: As a part of doing business with Shelby County, each individual, company, or organization is required to obtain an “Equal Opportunity Compliance” certification number prior to submitting your response.

You can access the online applications to receive the numbers indicated above at www.shelbycountyttn.gov. To obtain a vendor number and an EOC number, please follow the instructions below:

Vendor Number (Purchasing Department)

At the top of the home page, click on the links “Department”, “P” for the Purchasing Department and “Conducting Business with Shelby County”. The “Vendor Registration” link is at the bottom of the drop down box. Please download the application instructions and read thoroughly prior to accessing the application. (*Applications for a vendor number are accepted online only.*)

Equal Opportunity Compliance (EOC) Number (EOC Administration Office)

At the top of the home page, click on the links “Department”, “E” for the Equal Opportunity Compliance and “Contract Compliance Program”. The “Contract Compliance Packet” link is in the middle of the page. Please print the packet and mail or fax the completed packet to the EOC office. The mailing address is 160 N. Main Street, Suite 200, Memphis, TN 38103. The fax number is 901-222-1101.

Note: Because of the length of time it takes to apply and receive an EOC number, vendors who apply prior to the RFP due date, bid will be accepted pending EOC approval of their application.

If you have any questions regarding the application, you may contact Purchasing at (901)222-2250 or the EOC Administration at (901) 222-1100.

III. CORRESPONDENCE

All correspondence, proposals and questions concerning the RFP are to be submitted to:

**Tosha Davenport, Procurement Specialist
Shelby County Government
160 N. Main St. Suite 900
Memphis, TN 38103
(901) 222-2250**

Respondents requesting additional information or clarification are to contact Tosha Davenport in writing at tosha.davenport@shelbycountyttn.gov or at the address listed above. Questions should reference the section of the RFP to which the question pertains and all contact information for the person submitting the questions.

IN ORDER TO PREVENT AN UNFAIR ADVANTAGE TO ANY RESPONDENT, VERBAL QUESTIONS WILL NOT BE ANSWERED. The deadline for submitting questions will be Tuesday, September 08, 2015 at 12:00 p.m.

Individual vendor questions will be answered by e-mail as received before the cut-off date. All written questions submitted by the deadline indicated above will be answered and posted on the County’s website at www.shelbycountyttn.gov within forty eight (48) hours of the above cut-off date.

Please be aware that contact with any other personnel (other than the person clearly identified in this document) within Shelby County regarding this RFP may disqualify your company from further consideration.

These guidelines for communication; have been established to ensure a fair and equitable process for all respondents. Please be aware that contact with any other personnel (other than the person clearly identified in this document) within Shelby County or its benefit administrators regarding this RFP may disqualify your company from further consideration.

IV. PROPOSAL SUBMISSION DEADLINE

All proposals must be received at the address listed above no later than **4:00 PM on Friday, September 17, 2015.** Facsimile or electronically transmitted proposals will not be accepted since they do not contain original signatures. Postmarks will not be accepted in lieu of actual receipt. Late or incomplete proposals may not be opened and considered. Under no circumstances, regardless of weather conditions, transportation delays, or any other circumstance, will this deadline be extended.

V. PROPOSAL TIMELINE

Shelby County reserves the right to modify this timeline at any time. If the due date for proposals is changed, all prospective Proposers shall be notified.

Request for Proposals Released	Wednesday, August 26, 2015
Pre-Bid Conference	Thursday, September 03, 2015 at 1:30 p.m
Proposal Due Date	Friday, September 17, 2015 at 4:00 p.m.
Notification of Award	October/ November 2015

The County may reproduce any of the Proposers proposal and supporting documents for internal use or for any other purpose required by law.

VI. PROPOSAL CONDITIONS

A. Contingencies

This RFP does not commit the County to award a contract. The County reserves the right to accept or reject any or all proposals if the County determines it is in the best interest of the County to do so. The County will notify all Proposers, in writing, if the County rejects all proposals.

B. Modifications

The County reserves the right to issue addenda or amendments to this RFP.

C. Proposal Submission

To be considered, all proposals must be submitted in the manner set forth in this RFP. It is the Proposers responsibility to ensure that its proposals arrive on or before the specified time.

D. Incurred Costs

This RFP does not commit the County to pay any costs incurred in the preparation of a proposal in response to this RFP and Proposers agree that all costs incurred in developing this RFP are the Proposers responsibility.

E. Final Authority

The final authority to award a contract rests solely with the Shelby County Purchasing Department.

F. Proposal Validity.

Proposals submitted hereunder will be firm for one hundred twenty (120) calendar days from the due date unless otherwise qualified.

G. LOSB

**SHELBY COUNTY GOVERNMENT
LOCALLY OWNED SMALL BUSINESS (LOS B) PROGRAM
FOR CONSTRUCTION SERVICES**

SEWER AND DRAIN REPAIR COURTHOUSE @ 140 ADAMS

General

Shelby County Government is committed to a policy of non-discrimination pursuant to the Equal Protection provisions of the United States Constitution. It is further the policy of Shelby County that it's purchasing and contracting practices encourage the use of Locally-Owned Small Businesses (LOS B's) in all solicitations. In furtherance of these policy objectives, Shelby County seeks to afford all citizens equal opportunities to do business on county contracts and to ensure that all bidders, proposers, or Contractors doing business with Shelby County provide to LOS B's, maximum practicable opportunities, commensurate with availability, price and capabilities required, to participate on contracts which are paid for, in whole or in part, with monetary appropriations from Shelby County.

Shelby County seeks to prevent discrimination against any person or business in pursuit of these opportunities on the basis of race or gender. Shelby County will conduct its contracting and purchasing programs so as to discourage any discrimination and will actively seek to resolve all claims of discrimination brought against Shelby County or any Contractors involved in such contracting and purchasing programs.

Shelby County has determined that **20%** of the contract sum will be contracted with LOSB vendors. For assistance and information regarding LOSB participation, Bidders shall contact:

Ms. Carolyn Griffin
Office of Equal Opportunity Compliance
Board of Commissioners of Shelby County
160 North Main Street, Suite 200
Memphis, Tennessee 38103
Phone: 901-222-1100
Fax: 901-222-1101
E-mail: carolyn.griffin@shelbycountyttn.gov

Definitions

The definitions used in this document are as follows:

1. **“Bidder”** or **“Proposers”** means any person, firm, partnership, association, or joint venture seeking to be awarded a contract or subcontract to provide goods, commodities or services.
2. **“Certification”** or **“Certified”** means a Business that is certified by Shelby County Government under the LOSB program.
3. **“Commercially useful function”** means being responsible for the management and performance of a distinct element of the total work.
4. **“Contractor”** shall mean any person or business enterprise that submits a bid or proposal to provide labor, goods or services to Shelby County by contract for profit in the area of construction or construction-related activities; and, any person or firm who supplies or provides labor, goods or services to Shelby County by contract for profit.
5. **“Efforts to Achieve LOSB Participation”** means that the Contractor will solicit LOSB Participation with respect to the procurement and will consider all sub-bids and quotations received from LOSB’s. When a subcontract is not awarded to the LOSB, the Contractor must document the reason(s) the award was not made and substantiate that documentation in writing pursuant to the provisions of this Program.
6. **“Locally Owned Small Business (LOSBS)”** means a business whose home office is located in Shelby County, whose annual revenues do not exceed \$5,000,000 and who has been certified by Shelby County Office of Equal Opportunity Compliance.
7. **“Non-LOSBS”** means a business which is not certified as a LOSBS.
8. **“Unavailable”** means either that: (1) there is no LOSB providing goods or services requested; or, (2) no LOSB submitted a bid.

Requirements and Compliance

All firms or entities seeking to become Contractors as outlined herein are required to make good faith efforts to achieve LOSB participation when submitting a proposal or bidding on Shelby County procurements. Bidders and Proposers shall not discriminate on the basis of race or gender when soliciting bids in the performance of Shelby County’s procurements. Discrimination complaints brought to the attention of Shelby County Office of Equal

Opportunity Compliance (or its designee) will be reviewed and investigated to the extent necessary to determine the validity of such complaints and what actions, if any, should be taken by Shelby County.

Policies and Procedures

Shelby County may adopt policies and procedures as necessary to carry out and implement its powers and duties with regard to the LOSB Program. It is the goal of Shelby County to encourage participation by LOSB's and to adopt rules and regulations which achieve to the greatest extent possible a level of participation by LOSB's taking into account the total number of all Contractors and suppliers. Therefore, Shelby County will review each procurement request to determine the maximum potential for utilization of LOSB's. This review is based on the availability of qualified LOSB's providing goods or services as it relates to the scope of the bid or procurement process. The following procedures may be utilized during the procurement process.

1. Pre-Bid Activity

a. Bid Language

Shelby County may insert language into each bid specification describing the LOSB Program to assure that all prospective bidders are aware of the requirements to make efforts to utilize LOSB's.

b. Notification

Shelby County may provide written notification to Contractors and LOSB's regarding: pre-bid conferences; technical assistance to LOSB's; LOSB Program procedures and required documentation; and, provide a list of LOSB's who have expressed an interest in competing for the bid or in performing as a subcontractor.

2. Contractor's Responsibilities

a. Efforts to Achieve LOSB Participation

All entities seeking to become Contractors are required to make efforts to achieve maximum LOSB participation, as outlined in this LOSB Program, when submitting a response to a bid or negotiated proposal in response to a Shelby County procurement opportunity. Such Efforts should be documented on **LOSB Form "A"**.

b. Utilization

Contractors are required to utilize legitimate LOSB's in order to receive credit for the utilization of a LOSB. Contractors must document all LOSB's to be utilized, the percentage of utilization and the intended scope of work. Such information should be submitted on **LOSB Form "B"**. This documentation must be submitted with the bid or negotiated proposal document.

c. Commercially Useful Functions

All LOSB's identified on **LOSB Form "C"** or **LOSB Form "D"** shall perform a Commercially Useful Function.

d. Unavailability

If a potential Contractor's efforts to obtain LOSB participation are unsuccessful due to the unavailability of a LOSB, the Contractor will submit a statement of unavailability. **LOS Form "A."**

e. Pre-Work Conference

Any Contractor who is the successful bidder shall be required to attend a conference with Shelby County prior to beginning the work. The primary purpose of this conference is to review the project scope and review LOSB participation as outlined in **LOS Form "B"**. Shelby County will also review the Statement of Intent to Perform as a Subcontractor or Provide Supplies or Services as documented on **LOS Form "C"**.

f. Post-Award Change

Any Contractor who determines that a LOSB identified on **LOS Form "B"** cannot perform shall request approval from Shelby County to contract with an alternate subcontractor pursuant to this LOSB Program. Such request will be reviewed and approved only after adequate documentation for the proposed change is presented.

g. LOSB Certification

Each month the Contractor shall submit **LOS Form "D"** certifying all payments made to LOSB's.

3. LOSB Responsibilities

a. Commercially Useful Function

It is the responsibility of each LOSB providing subcontracted goods and/or services to submit **LOS Form "C"** certifying that it is performing the work and that it is a Commercially Useful Function.

Written Agreement

Shelby County policies and procedures on LOSB participation are designed to create contractual relationships between Contractors and LOSB's. Therefore, a Contractor may utilize the services of a LOSB in estimating and satisfying the scope of work, provided that a written contract/agreement is executed between the Contractor and the LOSB.

Certification

To ensure that the ownership and control over decision-making and day-to-day operations of a Certified LOSB is legitimate, Shelby County reserves the right to verify the ownership and control of each LOSB utilized.

Monitoring LOSB Utilization

Shelby County intends to monitor and enforce this LOSB Program. Shelby County reserves the right to conduct random audits of each of its Contractor's LOSB's. Shelby County reserves the right to reevaluate a LOSB's certification at any time.

Efforts to Achieve LOSB Participation

The Contractor shall consider all bids and/or quotations received from LOSB's. When a subcontract is not awarded by a Contractor to any of the competing LOSB's, the Contractor must document the reason(s) the award was not made to the LOSB's. It is the responsibility of the Contractor to prove that it employed Efforts to Achieve LOSB participation. Evidence supporting the Contractor's Efforts must be documented on **LOSB Form "A"**, which must include, but is not limited to, the following:

1. Contractor must submit proof that it solicited LOSB participation through reasonable and available means including, but not limited to:
 - a. Written notices to LOSB's who have the capability to perform the work of the contract or provide the service;
 - b. Direct mailing, electronic mailing, facsimile or telephone requests.
2. Contractor must submit proof that it provided interested LOSB's with adequate information about plans, requirements and specifications of the contract in a timely manner to assist them in responding to a solicitation.
3. Contractor must submit proof that it made Efforts to Achieve LOSB Participation including, but not limited to, proof that it made opportunities available to LOSB suppliers and identified opportunities commensurate with opportunities made available and identified to Non LOSB's. Such proof will include the names of businesses, contact person(s), addresses, telephone numbers, and, a description of the specifications for the work selected for subcontracting.
4. Contractor must submit proof that it allowed LOSB's the opportunity to review bid specifications, blue prints and all other bid related items at no charge. The Contractor must allow sufficient time for review prior to the bid deadline.
5. Contractor must submit proof that it made Efforts to Achieve LOSB Participation by not rejecting a LOSB as unqualified or unacceptable without sound reasons based on a thorough investigation of their capabilities. Contractor must submit proof of the basis for rejecting any LOSB deemed unqualified or unacceptable by the Contractor. The Contractor will not impose unrealistic conditions of performance on LOSB's seeking subcontracting opportunities.

The Contractor must fully cooperate with Shelby County in its post-contract award LOSB Program audit and compliance efforts.

Substitution of LOSB's after Contract Award

In order to make a substitution of a LOSB, a Contractor must make a request to Shelby County. This request must be submitted in writing to Shelby County. Shelby County reserves the right to approve any substitution of a LOSB. The Contractor has the responsibility to provide Shelby County with a reasonable basis for the substitution. If the Contractor desires to substitute the LOSB with a Non-LOSB, then the Contractor must comply with the Effort to Achieve LOSB Participation provisions set forth herein.

Noncompliance with LOSB Program

Any of the following reasons, individually or collectively, may result in suspension from bidding, prohibition from contracting, or cancellation of contracts:

1. The failure to perform according to contract provisions relating to this LOSB Program;
2. Violation of, circumvention of, or failure to comply with the LOSB Program; and/or,
3. Other reasons deemed appropriate by Shelby County.

Questions and Information

Questions regarding this LOSB Program and requests for information should be directed to:

Ms. Carolyn Griffin
Office of Equal Opportunity Compliance
Board of Commissioners of Shelby County
160 North Main Street, Suite 200
Memphis, Tennessee 38103
Phone: 901-222-1100
Fax: 901-222-1101
E-mail: carolyn.griffin@shelbycountyttn.gov

Construction

This LOSB Program is consistent with Shelby County Policies and Procedures. Wherever conflicts exist, the provision in the Shelby County Policies and Procedures will prevail.

LOSB Program Forms Description

- **LOS Form A -- Certification of Efforts**

Contractors are required to submit **LOS Form "A"** with proposals as evidence and documentation of efforts that have been made to contact LOSB's for participation as subcontractors, joint venture partners or suppliers of goods and services. Contractors are required to contact LOSB's and solicit quotes for goods and services. All responses to the Contractor's solicitation should be recorded and reported.

- **LOS Form B -- LOSB Utilization Plan**

A Contractor is required to submit **LOS Form "B"** with its Proposal in order to identify all LOSB's they propose to utilize in providing the goods and services included in the Proposal. Contractors may only include a proposed provider of goods or services on **LOS Form "B"**, if the entity is a legitimate LOSB. Additionally, if such entity will provide services, Contractors may only list LOSB's on **LOS Form "B"** if the entity will perform a Commercially Useful Function. The Successful Contractor will be required to finalize and submit **LOS Form "B"** prior to award of a contract. **LOS Form "B"** will

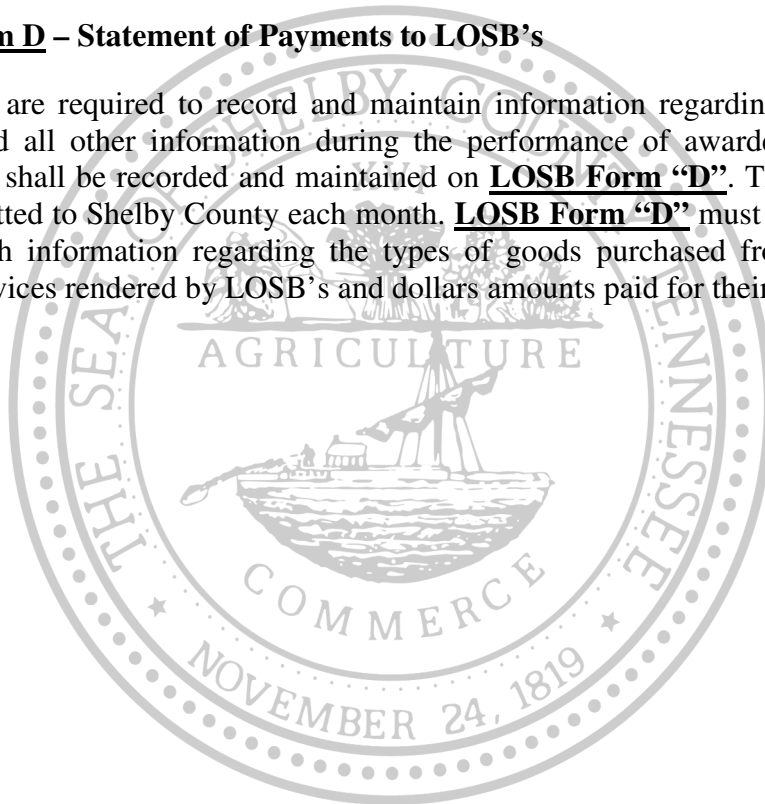
be incorporated into the contract and will become a contractual obligation of the Successful Contractor. **LOS Form “B”** shall not be changed or altered after award of a contract without approval from Shelby County. The Contractor is required to provide written notice describing the reasons for any proposed change to Shelby County and to obtain approval from Shelby County of any changes to **LOS Form “B”**.

- **LOS Form C** –Statement of Intent to Perform as a Subcontractor or Provide Supplies or Services

Contractors are required to have each subcontracted LOSB providing services complete **LOS Form “C”** certifying that it is performing the work and that it is a Commercially Useful Function.

- **LOS Form D** – Statement of Payments to LOSB’s

Contractors are required to record and maintain information regarding the utilization of LOSB’s and all other information during the performance of awarded contracts. This information shall be recorded and maintained on **LOS Form “D”**. The form is required to be submitted to Shelby County each month. **LOS Form “D”** must be completed in its entirety with information regarding the types of goods purchased from LOSB’s or the types of services rendered by LOSB’s and dollars amounts paid for their goods or services.



**Shelby County
 LOSB Program**

LOS B FORM A

CERTIFICATION OF EFFORTS TO ACHIEVE LOSB PARTICIPATION

(To Be Submitted with the Bid/Proposal)

Company Name: _____

Bid No.: _____

I certify that the following efforts where made to achieve LOSB participation:

		YES	NO
A	Provided written notices to LOSB's who have the capability to perform the work of the contract or provide the service		
B	Direct mailing, electronic mailing, facsimile or telephone requests		
C	Provided interested LOSB's with adequate information about plans, requirements and specifications of the contract in a timely manner to assist them in responding to a solicitation		
D	Allowed LOSB's the opportunity to review bid specifications, blue prints and all other bid/RFP related items at no charge, and allowed sufficient time for review prior to the bid deadline		
E	Acted in good faith with interested LOSB's, and did not reject LOSB's as unqualified or unacceptable without sound reasons based on a thorough investigation of their capabilities		
F	Did not impose unrealistic conditions of performance on LOSB's seeking subcontracting opportunities		

Additionally, I contacted the referenced LOSB's and requested a bid/proposal. The responses I received were as follows:

Name and Address of LOSB	Type of Work And Contract Items, Supplies or Services to be Performed	Response	Reason for Not Accepting Bid/Proposal

(If additional space is required this form maybe duplicated)

If applicable, please complete the following:

I hereby certify that LOSB's were "Unavailable" as defined in the LOSB Program to submit bids to provide goods and services for this RFP/Bid's purpose.

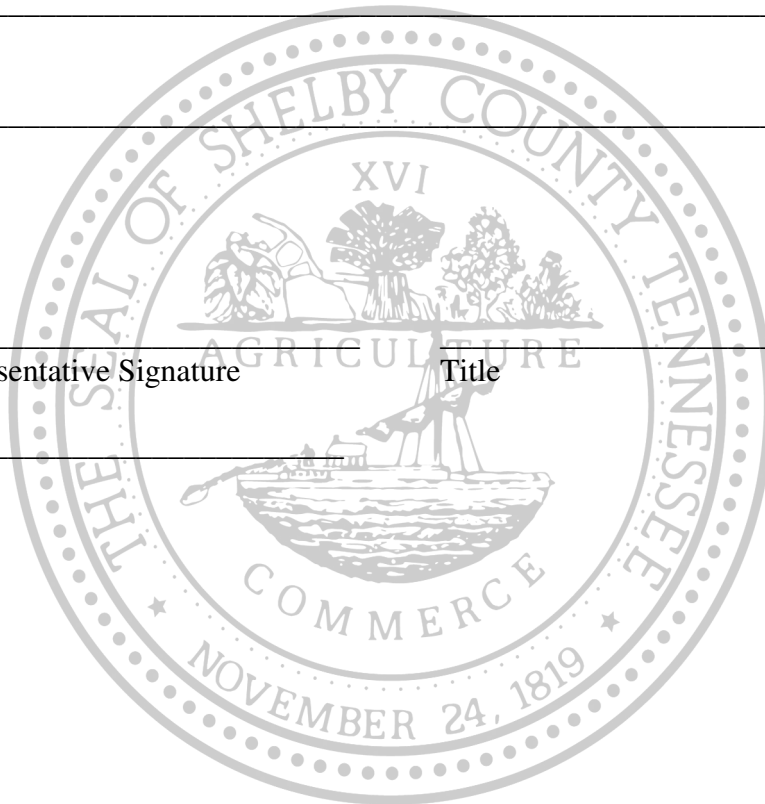
Reasons for the "Unavailability":

Submitted by:

Authorized Representative Signature

Title

Date



**Shelby County
 LOSB Program
 LOSB FORM B**

LOS B UTILIZATION PLAN
 (To Be Submitted with the Bid/Proposal)

Company: _____
Bid No.: _____

I, _____, do certify that on the following procurement opportunity,

(Contractor)

_____, the following LOSB's will be utilized as sub-contractors, suppliers,

(Opportunity)

or to provide professional services:

Name	Description of Work	Contract Value	LOS B Number

(If additional space is needed this form may be duplicated)

TOTAL CONTRACT VALUE: _____

TOTAL % OF LOSB PARTICIPATION: _____

The successful bidder/proposer is required to finalize and submit this form prior to award of a contract. Joint Venture Agreements, partnering agreements and all pertinent information must be presented prior to contract award. This information will be incorporated into the contract and will become a contractual obligation of the successful bidder/proposer. The finalized LOSB Form B shall not be changed or altered after award of a contract without approval from Shelby County. The successful bidder/proposer is required to provide written notice describing the reasons for the change to Shelby County to obtain approval of any changes to LOSB Form B.

Submitted by:

 Authorized Representative Signature

 Title

 Date

**Shelby County
LOS B Program**

LOS B FORM C

**STATEMENT OF INTENT TO PERFORM AS A SUBCONTRACTOR OR
PROVIDE SUPPLIES OR SERVICES**

(To Be Submitted Prior to Contract Award)

Company Name: _____

Bid No.: _____

I, _____, intend to provide supplies or services in connection with the
(Subcontractor/Provider)
above **bid/proposal** request as a LOSB.

I am prepared to perform a “**Commercially Useful Function**” in connection with the above project.

The following are the work items to be performed:

at the following price: \$ _____.

If applicable, please complete the following:

I have or will enter into a formal agreement with _____ for the above-
(Company)
described scope of work, supplies or services conditioned upon the execution of a contract
with Shelby County.

I hereby certify that this statement is true and correct:

Business Information: Submitted by:

Business: _____
Authorized Representative (Print)

Address: _____
Title

Authorized Representative's Signature

Phone: _____
Date

Facsimile: _____

**Shelby County
LOSBS Program**

LOSBS FORM D

STATEMENT OF PAYMENTS TO LOSBS'S
(To Be Submitted Monthly and with Final Payment Request)

Company Name: _____
Name/Contract No.: _____
Payment Request Number: _____

Name of Firm	Description of work	Total Amount Due This Month	Total Dollars Paid To Date	% of Contract Completed	Start Date of Contract	End Date of Contract

(If additional space is needed this form may be duplicated)

I hereby certify that this statement is true and that above payments have been made.

Business Information:

Submitted by:

Business: _____

Address: _____

Authorized Representative (Print)

Phone: _____

Title

Authorized Representative's Signature

Facsimile: _____

Date

**LOCALLY OWNED SMALL BUSINESS PURCHASING PROGRAM
RULES AND REGULATIONS:**

(i) The Administrator of Purchasing in conjunction with the Administrator of EOC shall identify certain goods and services required by the County to be set aside for special purchasing procedures for locally owned small businesses.

(ii) Only certified locally owned small businesses will be allowed to submit competitive bids on the goods or services identified under paragraph (i) above.

(iii) The Administrator of Purchasing shall, in conjunction with the Administrator of EOC, annually review the Shelby County Capital Improvement Program to determine those projects with a construction cost of \$250,000 or more. Contracts amounting to at least ten (10%) of the construction costs of such project shall be awarded to locally owned small businesses as defined herein, except as set forth in sub-paragraph (vi) of this section, either as part of the conditions of the solicitation for general contractors bidding on these projects, or as separate bids issued by the County for subcontracts that may be assigned to general contractors.

(iv) After adhering to all other bidding and purchasing requirements of the County, not inconsistent with this part, if no bids are received from locally owned small businesses, then the County may solicit bids for the goods or services from all other sources.

(v) On all purchases and/or contracts entered into by the County, the Purchasing Administrator or his or her designee shall have the right to negotiate with any supplier of goods or services to the County for the inclusion of locally owned small business subcontractors and/or suppliers in the contract award.

(vi) Failure by a supplier or contractor to include locally owned small business sub-contractors or suppliers in its bid or contract may be grounds for rejection of said bid or contract unless the supplier or contractor can show documented evidence of good cause why none were included.

(vii) Any locally owned small business awarded a contract or purchase order under this section shall not sublet, subcontract or assign any work or services awarded to it without the prior written consent of the Mayor or the Purchasing Administrator.

(viii) As to those purchases below the requirement for a formal bid solicitation (currently, under \$15,000) and not included in the locally owned small business set aside, the Administrator of Purchasing shall determine if any locally owned small business offers that product or service. If so, at least one such eligible locally owned small business should be included in the vendors

contacted for an opportunity to bid, and the Administrator of Purchasing may, at his discretion, designate in a purchase order the purchase of such goods and services from the identified locally owned small business.

(ix) In those situations where a locally owned small business as defined herein, engages in open competitive bidding for County contracts, the Administrator of Purchasing shall provide for a preference for the locally owned small business where responsibility and quality are equal. Said preferences shall not exceed five percent (5%) of the lowest possible bidder meeting specifications. The preference shall be applied on a sliding scale in the following manner:

- a. A preference of up to five percent (5%) shall be allowed for contracts up to \$500,000.00;
- b. A preference of up to three and five-tenths percent (3.5%) shall be allowed for contracts up to \$750,000.00;
- c. A preference of two and one-half percent (2.5%) shall be allowed for contracts up to \$1,000,000.00;
- d. A preference of two percent (2%) shall be allowed for contracts that exceed \$1,000,000.00.

(x) For construction contracts over \$2,000,000.00, the Administrator of Purchasing shall provide for a preference of two percent (2%) to general contractors meeting the requirements of Section 1, Subparagraph B, if fifty percent (50%) or more of the total work comprising the bid has been or will be awarded to certified locally owned small businesses. The fifty percent subcontracting threshold must be met prior to contract execution.

(xi) The Administrator of Purchasing may divide a single bid package for any purchase of goods and services into two or more smaller bid packages in any case that the Administrator of Purchasing reasonably believes that the smaller bid packages will result in a greater number of bids by locally owned small businesses.

(xii) The Administrator of Purchasing, upon approval of the County Mayor, may establish special insurance and bonding requirements for certified locally owned small businesses so long as they are not in conflict with the laws of the State of Tennessee.

(xiii) The Administrator of Purchasing, with the approval of the County Mayor, shall adopt and promulgate, and may from time to time, amend rules and regulations not inconsistent with the provisions of this ordinance, governing the purchase of goods and services from locally owned small business concerns to effectuate and implement the Locally Owned Small Business

Purchasing Program within the intent of this ordinance.

(xiv) The Administrator of EOC shall, in conjunction with the Administrator of Purchasing, provide a written quarterly report to the Mayor and Board of Commissioners which shall include a summary of the purchases selected for this program, a listing of the contracts awarded to locally owned small businesses for the period, and the dollar amounts of each such contract, and the percentage which such contracts bear to the total amount of purchases for the period.



H. **DRUG-FREE WORKPLACE AFFIDAVIT**

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with _____ County government to provide construction services, here states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. § 50-9-113. Further affiant saith not.

Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared _____ with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this _____ day of _____ 20

Notary Public

My commission expires:

I. FORMS TO BE SUBMITTED

LOSB FORM A: MUST BE COMPLETED AND SUBMITTED IN YOUR BID ENVELOPE

LOSB FORM B: MUST BE COMPLETED, SUBMITTED WITH YOUR BID DOCUMENTING ALL LOSB'S TO BE UTILIZED, THE PERCENTAGE OF UTILIZATION AND THE INTENDED SCOPE OF THE WORK.

LOSB FORM C- MUST BE COMPLETED AND SUBMITTED BY EACH LOSB PROVIDING SUBCONTRACTED GOODS AND OR SERVICES CERTIFYING THAT THEY ARE PERFORMING THE WORK AND THAT IT IS A COMMERCIALY USEFUL FUNCTION.

LOSB FORM D-MUST BE COMPLETED AND SUBMITTED BY THE SUCCESSFUL CONTRACTOR EACH MONTH CERTIFYING ALL PAYMENTS MADE TO LOSB'S.

DRUG FREE WORKPLACE AFFIDAVIT-MUST IS COMPLETED AND SUBMITTED WITH YOUR BID.

BID BOND- ALL BIDS MUST BE ACCOMPANIED BY A BANK CERTIFIED CHECK OF BANK DRAFT, LETTER OF CREDIT ISSUED BY ANY NATIONAL BANK OR APPROVED BID BOND FOR NOT LESS THAN 5% (PERCENT) OF THE AMOUNT OF THE BID. ALL PROPOSAL GUARANTEES SHALL BE MADE OUT TO THE COUNTY OF SHELBY.

NOTE: LOSB FORM C AND D WILL BE SUBMITTED BY THE SUCCESSFUL CONTRACTOR.

FAILURE TO SUBMIT THE REQUIRED FORMS MAY RESULT IN YOUR BID BEING REJECTED AS BEING IN NON-COMPLIANCE WITH BID REQUIREMENTS.

VII. GENERAL REQUIREMENTS

A. Scope of Contract

The County wishes to engage in a contractual relationship with the lowest responsive Contractor selected through a low bid process.

B. Time Frame

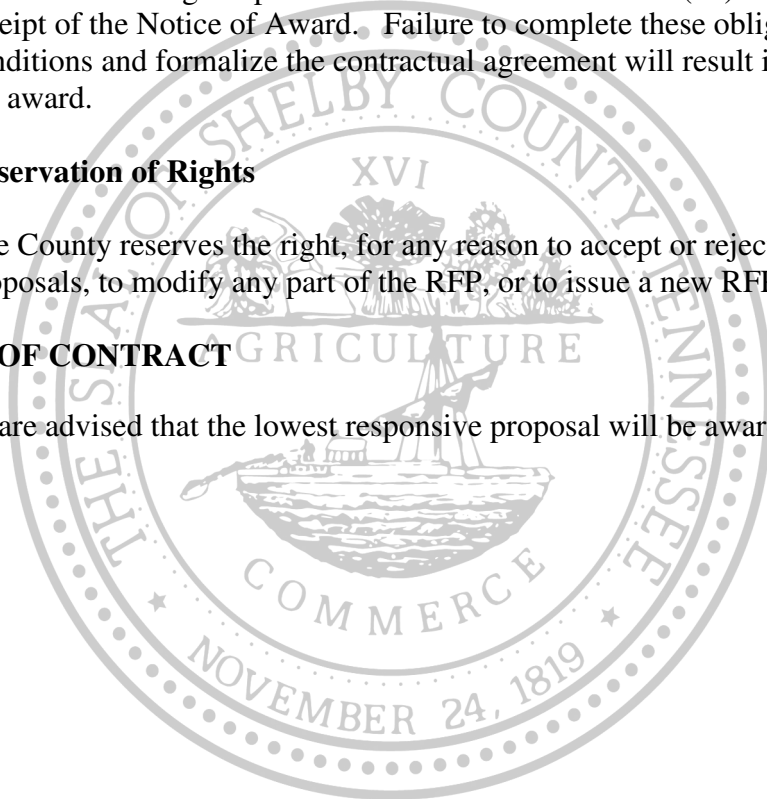
The successful Contractor will complete all obligations and conditions included in this RFP to be eligible provide these services within ten (10) business days of receipt of the Notice of Award. Failure to complete these obligations and conditions and formalize the contractual agreement will result in cancellation of the award.

C. Reservation of Rights

The County reserves the right, for any reason to accept or reject any one or more proposals, to modify any part of the RFP, or to issue a new RFP.

VIII. AWARD OF CONTRACT

Proposers are advised that the lowest responsive proposal will be awarded the contract.



IX. GRATUITY DISCLOSURE FORM

INSTRUCTIONS: This form is for all persons receiving any Shelby County Government contract, land use approval or financial grant money to report any gratuity that has been given, directly or indirectly, to any elected official, employee or appointee (including their spouses and immediate family members) who is involved in the decision regarding the contract, land use approval, or financial grant of money. Please note that the information listed on this statement is subject to being posted on the Shelby County Government’s website.

1. NAME

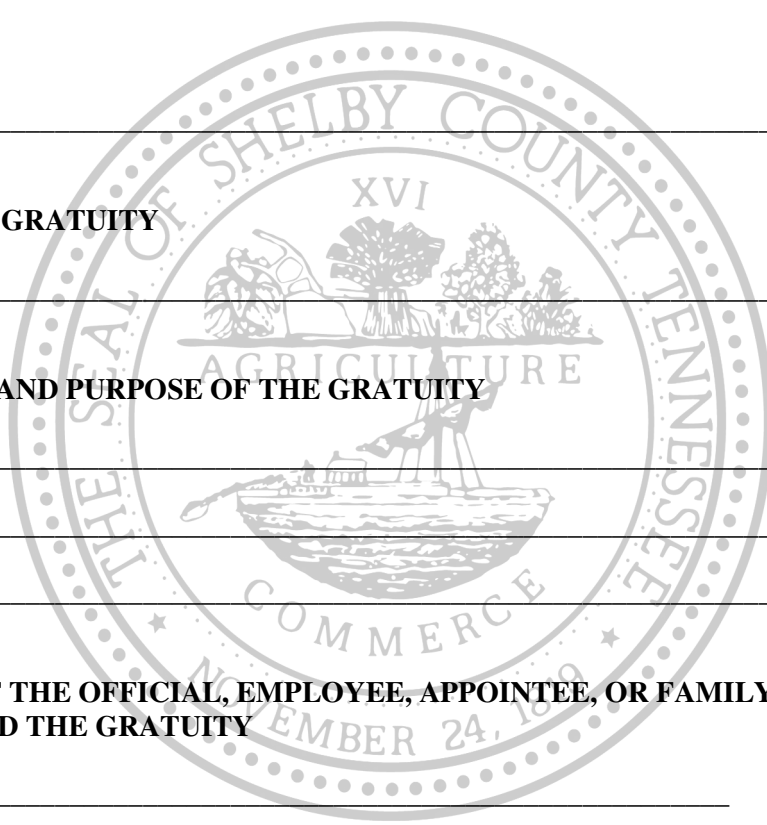
2. DATE OF GRATUITY

3. NATURE AND PURPOSE OF THE GRATUITY

4. NAME OF THE OFFICIAL, EMPLOYEE, APPOINTEE, OR FAMILY MEMBER WHO RECEIVED THE GRATUITY

5. NAME OF THE PERSON OR ENTITY THAT PROVIDED THE GRATUITY

6. ADDRESS OF THE PERSON OR ENTITY THAT PROVIDED THE GRATUITY



7. DESCRIPTION OF THE GRATUITY

8. COST OF THE GRATUITY (If cost is unknown and not reasonably discernible by the person giving the gratuity, then the person giving the gratuity shall report a good faith estimate of the cost of the gratuity.)

9. AFFIDAVIT

The information contained in this Gratuity Disclosure Form, and any supporting documentation or materials referenced herein or submitted herewith, is true and correct to the best of my knowledge, information and belief and affirm that I have not given, directly or indirectly, any gratuity to any elected official, employee or appointee (including spouse and immediate family members) that has not been disclosed and I affirm that I have not violated the provisions of the Shelby County Government Code of Ethics.

Signature

Date

Print Name

Sworn to and subscribed before me this _____ day of _____ in _____ County, Tennessee:

Signature of Notary

Affix Notary Seal Here

Notary Registration No.

X. NOTICE TO BIDDERS

1. **THIS IS NOT A PUBLIC BID OPENINGS:**

Sealed bids for the improvements described herein will be received at, **THE OFFICE OF THE SHELBY COUNTY ADMINISTRATOR OF PURCHASING, SUITE 900, SHELBY COUNTY ADMINISTRATION BUILDING, 160 NORTH MAIN, MEMPHIS, TENNESSEE 38103, until THURSDAY, SEPTEMBER 17, 2015 at 4:00 P.M.**

2. Description of Work:

- (a) The proposed work is officially known as: **SEWER AND DRAIN REPAIR COURTHOUSE @ 140 ADAMS.**

3. Pre-Bid Meeting:

All interested bidders may attend a **MANDATORY** pre-bid meeting to be held on **THURSDAY, September 03, 2015, at 1:30 P.M., at the Support Services Building, located at 584 Adams Memphis, Tennessee 38103.**

4. Instruction to Bidders:

- (a) Information regarding this RFP is located on the County's website at www.shelbycountyttn.gov. At the top of the home page, click on the links "Department," "P" for the Purchasing Department and "Bids" to locate the name of the above-described RFP. Copies of the project manual and drawing are posted at this location and can be downloaded at no cost to prospective bidders
- (b) All bids must be accompanied by a bank cashier's check or bank draft, letter of credit issued by any national bank or certificate of deposit therein, duly assigned, or certified check or approved bid bond for not less than (5) percent of the amount of the bid. All proposal guarantees shall be made out to the COUNTY OF SHELBY.
- (c) The successful bidder must be licensed by the Tennessee State Board of Licensing General Contractors before execution of the contract. Evidence of this license must be submitted to the purchasing department by submitting the RFP number, Contractor's name, license number, expiration date thereof, and license classification of the contractor(s) bidding for the prime contract and for the electrical, plumbing, heating, ventilation and air conditioning subcontracts in accordance with TCA 62-6-119. Lacking all of this information, the bid shall be rejected and the bid bond will be forfeited.

5. EOC Requirements

- (a) As a condition precedent to bidding, **Prime Contractors** and **LOSB Contractors** must have received a current “Equal Opportunity Compliance Eligibility Number” and Vendors Number prior to the submission of their bid which must be attached to each bid submission. To receive an E.O.C. Eligibility Number, specific information must be received by the E.O.C. Department at least 48 hours prior to the bid opening. To verify your E.O.C. Number or to receive information for obtaining a number, contact the E.O.C. Department, 222-1100. Information regarding a vendors number please contact Tosha Davenport, Shelby County Purchasing at 901-222-2250.
- (b) Use of Locally Owned Small Business (LOSB) participation on this County project is required.
- (c) Bidders are encouraged to contact County-Certified LOSB firms from our LOSB listing that can be obtained from our EOC department. Please call Carolyn Griffin at 901-222-1100 for a listing of current LOSB contractors. Bidders may also provide the names of firms they believe would qualify as LOSB firms, by notifying the E.O.C. Department and filing the required forms at least five (5) working days prior to the bid opening. Bidders choosing to utilize non-certified subcontractors may submit their bid with the understanding that they must provide certification documents to the E.O.C. department within five (5) days after the bid opening in order to be considered for contract award.
- (d) A Locally Owned Small Business is defined as a sole proprietorship, corporation, partnership, or joint venture located within Shelby County and at least 51% owned, operated and managed by a Shelby County resident and having an average annual sale of \$5,000,000.00 or less over the past three (3) years.

6. Rejection of Bids:

The COUNTY OF SHELBY reserves the right to reject any and all proposals and to waive technicalities in any proposal.

BY ORDER OF:

CLIFTON DAVIS

PURCHASING ADMINISTRATOR
SHELBY COUNTY GOVERNMENT

_____, 2015

TECHNICAL SECTIONS**TABLE OF CONTENTS**DIVISION 0 – INFORMATION

00003	TABLE OF CONTENTS	2
00004	LIST OF DRAWINGS	1

DIVISION 1 – GENERAL REQUIREMENTS

01201	SUPPLEMENTARY CONDITIONS	5
01300	SUBMITTAL	2
01500	CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS	2
01700	CONTRACT CLOSEOUT	3
01710	CLEANING	2
01720	PROJECT RECORD DOCUMENTS	1
01730	OPERATION AND MAINTENANCE DATA	2

DIVISION 2 – SITEWORK

02060	DEMOLITION	2
02732	SUMP MODIFICATIONS	2
02736	SOLIDS HANDLING SUBMERSIBLE PUMPS	14
02761	CLEANING AND TELEVISION INSPECTION OF SEWER LINES	2
02767	LINING SEWER PIPE	3

DIVISION 3 – CONCRETE

03302	CONCRETE	3
-------	----------	---

DIVISION 4 – MASONRY

04101	CEMENT MORTAR	1
04221	CONCRETE BRICK MASONRY	1

DIVISION 5 – METALS

05500	METAL FABRICATIONS	4
-------	--------------------	---

DIVISION 13 – SPECIAL CONSTRUCTION

13000	PLANT PIPEWORK	5
-------	----------------	---

DIVISION 16 – ELECTRICAL

16010	GENERAL PROVISIONS, ELECTRICAL	3
16050	BASIC MATERIALS AND METHODS, ELECTRICAL	7

DOCUMENT 00004

LIST OF DRAWINGS

The following is a list of Contract Drawings which this contract is to be based. These drawings are entitled SHELBY COUNTY COURTHOUSE SEWER AND DRAIN REPAIR and dated 8-15-2015 with revision dates (if any), as noted. They will be supplemented by additional shop and dimensional drawings of materials and equipment and other drawings where specified.

<u>Drawing Number</u>	<u>Sub-Title</u>	<u>Revision Date</u>
	COVER	
C1.1	BASEMENT AREA REPAIRS	
C1.2	HALF FLOOR PLAN	
C2.1	DETAILS	
E1.1	BASEMENT FLOOR PLAN – POWER - ELECTRIC	

END OF DOCUMENT

**SHELBY COUNTY GENERAL CONDITIONS OF THE
CONTRACT FOR CONSTRUCTION**

Rev. 5/24/99

constcnd.doc

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE I CONTRACT DOCUMENTS

1.1 Definitions

1.1.1 The Contract Documents

The Contract Documents consist of the Owner-Contractor Agreement, the conditions of the Contract (General, Supplementary and other conditions), the Drawings, the Specifications, and all Addenda issued prior to and all 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 written interpretation issued by the Architect pursuant to Subparagraph 2.2.8, or (4) a written order for a minor change in the Work issued by the Architect pursuant to Paragraph 12.3. The Contract Documents include Bidding Documents such as the Advertisement or invitation to Bid, the Instructions to Bidders, sample forms, the Contractor's Bid, or portions of Addenda relating to any of these, and other documents specifically enumerated in the Owner-Contractor Agreement.

1.1.2 The Contract

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Architect and the Contractor, but the Architect shall be entitled to performance of obligations intended for his benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect or any Subcontractor or sub-subcontractor.

1.1.3 The Work

The Work comprises the completed construction required by the contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 The Project

The Project is the total construction of which the Work performed under these Contract Documents may be the whole or a part.

1.2 Execution Correlation and Intent

1.2.1 The Contract Documents shall be signed in not less than four originals by the Owner and Contractor. If either Owner or Contractor or both do not sign the Conditions of the Contract, Drawings, Specifications, or any of the other Contract Documents, the Architect shall identify such Documents.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not specifically set forth in the Contract Documents will not be required unless it is consistent with work that is specifically set forth in the Contract Documents or is reasonably inferable from the Contract Documents as being necessary to produce the intended results. Words and abbreviations, which have well-known technical or trade meanings, are used in the Contract Documents in accordance with such recognized meanings.

1.2.4 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Sub-contractors or in establishing the extent of Work to be performed by any trade.

1.3 Ownership and Use of Documents

1.3.1 All Drawings, Specifications, and copies thereof furnished by the Architect are the property of the Owner. They are to be used only with respect to this Project and are not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Architect on request at the completion of the Work. Submission 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 common law copyright or other reserved rights. The Architect will furnish, free of charge, to

Initial _____

the Contractor sufficient sets of Contract Documents to execute the Work not to exceed ten (10). The Contractor may purchase additional sets by paying reproduction costs.

ARTICLE II ARCHITECT

2.1 Definition

2.1.1 The Architect is the person lawfully licensed to practice Architecture, or any entity lawfully practicing Architecting identified as such in the Owner-Contractor Agreement, and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect means the Architect or his authorized representative.

2.2 Administration of the Contract

2.2.1 The Architect will provide administration of the Contract as hereinafter described.

2.2.2 The Architect will be the Owner's representative during construction and until final payment is due. The Architect will advise and consult with the Owner. The Owner's instructions to the Contractor shall be forwarded through the Architect. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument signed by the Owner.

2.2.3 The Architect will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations as an Architect, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.

2.2.4 The Architect will not be responsible for and will not have control or charge of construction means, methods, techniques or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for or have control or charge over the acts or omissions of the Contractor,

Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

Initial _____

2.2.5 The Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Architect may perform his functions under the contract documents.

2.2.6 Based on the Architects observations and an evaluation of the Contractor's Applications for Payment, the Architect will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts as provided in Paragraph 9.4.

2.2.7 The Architect will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon so as to cause no delay the Project. Either party to the Contract may make written request to the Architect for such interpretations.

2.2.8 All interpretations and decisions of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

2.2.9 The Architects decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents. The Architect shall rule on all claims and disputes that relate to the interpretation of the Contract Documents.

2.2.10 The Architect will have authority to reject Work, which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.7.2 whether or not such Work is then fabricated, installed or completed. In the event the Architect determines that any Work deleted by the Contractor should have been performed by the Contractor under the Contract Documents, he shall issue a final determination that the Contractor shall proceed with the Work as directed by the Architect, and the Contractor shall proceed with the Work even if he is in disagreement with the decision of the Architect.

2.2.11 The Architect will review and approve or take other appropriate action under Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Architects approval of a

specific item shall not indicate approval of an assembly of which the item is a component.

Initial _____

2.2.12 The Architect will prepare Change Orders in accordance with Article 12 and will have the authority to order minor changes in the Work as provided in Subparagraph 12.3.

2.2.13 The Architect will conduct inspections to determine the dates of Substantial Completion and completion will receive and forward to the Owner for the Owner's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a Final Certificate for Payment upon compliance with the requirements of Paragraph 9.8.

ARTICLE III

OWNER

3.1 Definition

3.1.1 The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner, or his authorized representative.

3.2 Information and Services Required of the Owner

3.2.1 The Owner or Architect shall furnish all surveys describing the physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the site.

3.2.2 Except as provided in Subparagraph 4.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.3 Information or services under the Owner control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of Drawings and Specifications reasonably necessary for the execution of the Work.

3.2.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Work by Owner or by Separate Contractors, Payments and Completion and Insurance in Article 6, 9 and 11,

respectively.

Initial _____

3.3 Owner Right to Stop the Work

3.3.1 If the Contractor fails to correct defective Work as required by Paragraph 13.2 or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. Any such order to the Contractor shall be in writing.

3.4 Owner Right to Carry Out the Work

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy it may have, make good and correct such deficiencies with its own forces or with the forces of another contractor. In such case, an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect additional services made necessary by such default, neglect, or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

3.4.2 The Owner shall have access to the Project at all times.

ARTICLE IV
CONTRACTOR

4.1 Definition

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 Review of Contract Documents

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect any

error, inconsistency or omission he may discover.

Initial _____

4.3 Supervision and Construction Procedures

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents by either the activities or duties of the Architect in his administration of the Contract, or by inspection, tests, or approvals required or performed under Paragraph 7.7 by persons other than the Contractor.

4.4 Labor and Materials

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

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

4.4.3 When a material, equipment, or system is specified or approved in an addendum, by the name of one or more manufacturers, such material, equipment, or system shall form the basis of the contract. If Contractor desires to use another material, equipment, or system in lieu thereof, he shall request approval in writing and shall submit samples and data as required for the Architect's consideration. The Architect and Owner will be the final judge for the acceptance or the substitution. No Substitution shall be made without authority in writing from the Architect.

4.4.4 By making requests for substitutions based on Subparagraph 4.4.3 above, the Contractor:

Initial _____

- .1 represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that he will provide the same warranty for the substitute that is required by the Contract Documents for that specified.
- .3 certifies that the cost data presented is complete and includes all related costs and excludes the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently became apparent; and
- .4 will coordinate the installation of the accepted substitute, making such changes at no additional cost to Owner as may be required for the Work to be complete in all respects.

4.4.5 The General Contractor shall disclose the existence and extent of financial interests, whether direct or indirect, he has in subcontractors and material suppliers, which he may propose for this Project.

4.5 **Warranty**

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified, and all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and requirements including substitutions not properly approved and authorized, may be considered defective. If required by the Architect, the Contractor shall furnish satisfactory evidence. This warranty is not limited by the provisions of Paragraph 13.2.

4.6 **Taxes**

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor, which are legally enacted at the time bids, are received, whether or not yet effective.

Initial _____

4.7 Permits, Fees, and Notices

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution of the Contract.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

4.8 Allowances and Owner Furnished Equipment, Fixtures or Labor

4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection.

4.8.2 Unless otherwise provided in the Contract Documents:

- .1 these allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and applicable taxes;
- .2 the Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance;
- .3 whenever the cost is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses.

Initial _____

4.8.3 The Owner may directly furnish any or all of the equipment, fixtures, or labor required for the Project. In the

event the Owner elects to do so, the Contract Price for such equipment, fixtures, or labor will be reduced by the amount for equipment of labor being furnished by Owner. A Change Order reducing the Contract Price for that item of work shall be executed by Owner and Contractor to reflect a reduction in the Contract Price for that item, equipment, fixtures or work that the Owner is to furnish. The Contractor shall assume responsibility for and be fully responsible for the care, custody, and control of all Owner furnished equipment and/or fixtures once said equipment or fixtures arrive on the job site or in any approved off site storage facility.

4.9 Superintendent

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor and shall be confirmed in writing.

4.10 Documents and Samples at the Site

4.10.1 The Contractor shall maintain at the site for the Owner, one record copy of all Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record all changes made during construction and approved Shop Drawings, Product Data and Samples. These shall be available to the Architect and shall be delivered to him for the Owner upon completion of the Work.

4.11 Shop Drawings, Product Data, and Samples

4.11.1 Shop Drawings are drawings, diagrams, schedules, and other data specifically prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

Initial _____

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

4.11.4 The Contractor shall review, approve and submit, with

reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

4.11.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.

4.11.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architects approval of Shop Drawings, Product Data or Samples under Subparagraph 2.2.11, unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data, or Samples by the Architect approval thereof.

4.11.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, or Samples, to revisions other than those requested by the Architect on previous submittals.

4.11.8 No portion of the Work requiring submission of a Shop Drawing, Product Data, or Sample shall be commenced until the submittal has been approved by the Architect as provided in Subparagraph 2.2.11. All such portions of the Work shall be in accordance with approved submittals.

4.12 Use of Site

4.12.1 The Contractor shall confine operations at the site to areas permitted by law, ordinance, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.13 Cutting and Patching of Work

4.13.1 The Contractor shall be responsible for all cutting,

Initial _____

fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.13.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by

cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner. The Contractor shall not unreasonably withhold from the Owner his consent to cutting or otherwise altering the Work.

4.14 Cleaning Up

4.14.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work, he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery and surplus materials.

4.14.2 If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof will be charged to the Contractor.

4.15 Royalties, Patents, and Records

4.15.1 The Contractor shall pay all royalties and license fees. He shall defend all suits and claims for infringement of any patent rights and shall save Owner and Architect harmless from loss on account thereof.

4.15.2 The Contractor shall not discriminate against any subcontractor, employee, or applicant for employment on the grounds of race, color, national origin, or sex.

4.15.3 The Contractor and all subcontractors under the general contract shall maintain copies of every sub-payroll period for the life of the construction contract and for a period of three (3) years after final release and payment is made by the Owner to the Contractor.

4.15.4 Each Contractor request for payment, including final payment and each partial payment, if permitted by the contract, shall contain a certification by the Contractor that performance by the Contractor and his subcontractor for the period of work covered by the payment request has been in accordance with the contract clauses and requirements with respect to nondiscrimination.

4.15.5 Representatives of Shelby County, as designated by the Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the term of the construction contract and for a period of three (3) years after final release and final payment by the Owner for the purposes of verifying nondiscrimination in employment. Initial _____

4.15.6 The Contractor shall incorporate the same requirements set forth in Subparagraph 5.3.1 in all Subcontracts awarded by him with the further requirement that each Subcontract include identical requirements to be included in any lower tier Subcontracts together with the requirement to include it in any further subcontracts that might be made.

4.16 **Indemnification**

4.16.1 (a) By executing this Agreement, the Contractor assumes the entire responsibility and liability for any and all claims, damage or injury of any kind or nature (including death) to all persons, whether employees of the Contractor or otherwise, and to all property (including but not limited to the replacement cost and lose of use of property), caused by, resulting from, arising out of, or occurring in connection with the performance of the Work by the Contractor, its agents, servants, employees, or subcontractors or anyone directly or indirectly employed by any of them for whose acts any of them may be liable.

(b) If any claim is made against the Owner for any damage, injury, death, or loss, whether such claim is based upon the Contractor or its agents, servants, employees, or subcontractors alleged active or passive negligence or participation in the wrong, or upon any alleged active or passive negligence or participation in the wrong, or upon any alleged breach of any statutory duty or obligation on the part of the Contractor, its agents, servants, employees or subcontractors, or in any other instance for which the Contractor has assumed responsibility in this Agreement, the Contractor shall indemnify, defend, and hold harmless the Owner, its officers, directors, agents, servants and employees from and against any and all loss, expense, judgment, damage or injury (including attorney fees and expenses) that the Owner or its officers, directors, agents, servants or employees may sustain as the result of any such claim.

The Contractor shall assume on behalf of the Owner, its officers, directors, agents, servants and employees the defense of any action at law or in equity which may be brought against any of them upon any such claim, and shall pay on behalf of them the amount of any judgment with any costs or expenses incurred by any of them in connection with such claim.

Initial _____

4.16.2 **Labor Indemnity**

4.16.2.1 The Contractor shall indemnify, defend and hold harmless the Owner from any and all administrative and judicial actions (including reasonable attorney fees related to any such action) incurred by the Owner in connection with any labor related activity

arising from the performance of the Work of the Contractor. As used in this Agreement, "labor related activity" includes, but is not limited to strikes, walkouts, informational or organizational picketing, use of placards, distribution of handouts, leaflets or in the vicinity of any facility where the Owner conducts business. The Owner shall advise the contractor if any labor related activity occurs and the Contractor shall arrange for the legal representation necessary to protect the Owner, provided such representation is previously approved by the Owner.

4.16.3 Attorney Fees

4.16.3.1 In the event it becomes necessary for Owner to employ an attorney to enforce any provision of this Agreement, then the Contractor shall be liable for all attorney fees and litigation expense of Owner.

4.17 Progress Schedule

4.17.1 The Contractor shall, within five (5) days from receipt of the Notice to Proceed, prepare and submit for the Owner and Architect an estimated project schedule for the Work. The Progress Schedule shall be updated each month to reflect actual progress made and to forecast future progress of the Work. The Progress Schedule shall be related to the entire Project as provided by the contract Documents and shall provide for expeditious and practicable execution of the Work. The Owner reserves the right to reasonably reschedule the Work or the sequence of activities of the contractor for no additional compensation should it deem rescheduling to be in its best interest.

ARTICLE V **SUBCONTRACTORS**

5.1 Definition

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his

subcontractor.

Initial _____

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

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

5.2.1 Unless otherwise required by the Contract Documents or Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Owner and the Architect in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection. No work shall be commenced until approval of all such Subcontractors has been given in writing by the Owner. If required, the Contractor shall furnish evidence satisfactory to the Owner, showing each proposed Subcontractor is competent to execute the Work covered by the Subcontract.

5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Architect has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he has a reasonable objection.

5.2.3 If the Owner or the Architect has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Architect has no reasonable objection. Such substitution shall in no way affect the Contract Sum.

5.2.4 The Contractor shall make no substitution for any Subcontractor, person, or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

5.2.5 The Contractor shall submit a status report with regard to Subcontractors identified on Exhibit C, which forms a part of the Contract Documents, as to any change in the subcontractors identified thereon and the reasons for same, the dollars paid to the prior subcontractor and the amount of the new subcontract.

Initial _____

THIS REPORT SHALL BE SUBMITTED TO CONTRACTS ADMINISTRATION OF SHELBY COUNTY GOVERNMENT, 160 N. Main St., Suite 1109, Memphis, Tennessee, 38103.

5.3 Subcontractual Relations

5.3.1 By an appropriate 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 the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect. Said agreement shall preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by the Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to any Sub-subcontractors.

ARTICLE VI **WORK BY OWNER OR BY SEPARATE CONTRACTORS**

6.1 Owner Right to Perform Work and to Award Separate Contracts

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract.

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

6.2 Mutual Responsibility

6.2.1 The Contractor shall afford the Owner and separate contractor's reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends on proper execution or results in the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Architect any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acceptance of the Owner's or separate contractor's work as fit and proper to receive his Work.

6.2.3 Should the Contractor wrongfully cause damage to the work or property of the Owner or to other work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.2.5.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against Owner arises there from, the Contractor shall pay or satisfy it and shall reimburse the Owner for all Attorney's fees and Court costs which the Owner has incurred.

6.3 Owner Right to Clean Up

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.14, the Owner may clean up and charge the cost thereof to the contractors responsible therefore as the Owner shall determine to be just.

**ARTICLE VII
MISCELLANEOUS PROVISIONS**

7.1 GENERAL COMPLIANCE WITH LAWS

7.1.1 If required, the Contractor certifies that it is

Initial _____

qualified or will take steps necessary to qualify to do business in the State of Tennessee and that it will take such action as, from time to time, may be necessary to remain so qualified and it shall obtain, at its expense all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Agreement.

7.1.2 The Contractor is assumed to be familiar with and agrees that at all times it will observe and comply with all federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the work. The preceding shall include, but is not limited to, compliance with all Equal Employment Opportunity laws, the Fair Labor Standards Act, Occupational Safety, and Health Administration (OSHA) requirements, and the Americans with Disabilities Act (ADA).

7.1.3 This Contract will be interpreted in accordance with the laws of the State of Tennessee. By execution of this contract the Contractor agrees that all actions, whether sounding in contract or in tort, relating to the validity, construction, interpretation and enforcement of this contract will be instituted and litigated in the courts of the State of Tennessee, located in Shelby County, Tennessee, and in no other. In accordance herewith, the parties to this contract submit to the jurisdiction of the courts of the State of Tennessee located in Shelby County, Tennessee.

7.2 Successors and Assigns

7.2.1 This Agreement (including without limitation, all obligations imposed by the Contract Documents) shall be binding upon and shall inure to the benefit of the parties' successors, assigns, and legal representative. The Contract shall not be assigned or sublet in whole or in part by the Contractor without the written consent of the Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 Written Notice

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm, entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

Initial _____

7.4 Claims for Damages

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party, or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 Performance Bond and Labor and Material Payment Bond

7.5.1 The Contractor shall furnish and keep in force throughout the performance of the Work a separate performance bond and separate labor and material payment bond, each in the amount of the total of the Contract (as the same may be modified from time to time) conditioned upon the faithful performance of the Work by the Contractor and payment of all obligations arising in connection with the Work by the Contractor. Said bonds shall also guarantee to the Owner that the Work shall be free of all liens upon the property of the Owner. The bonds shall name the Owner as obligee and shall be with such Surety authorized to do business in the State of Tennessee and in such form and manner as approved by Owner. Said Bond shall be subject to final approval of the Shelby County Risk Management Department. Said bonds shall be furnished to the Owner prior to the commencement of the Work, or upon written request by Owner to Contractor after the Work has commenced.

7.6 Rights and Remedies

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

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

7.7 Tests

7.7.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Architect timely notice of its readiness so the Architect may observe such inspection, testing

Initial _____

or approval. The Contractor shall bear all costs of such inspections, tests, or approvals conducted by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspections or tests.

7.7.2 If the Architect determines that any Work requires special inspection, testing, or approval, which Subparagraph 7.7.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing, or approval, and the Contractor shall give notice as provided in Subparagraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Architect's additional services and/or correction of the defective Work made necessary by such a failure; otherwise, the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.7.3 Required certificates of inspection, testing, or approval shall be secured by the Contractor and promptly delivered by him to the Architect.

7.7.4 If the Architect is to observe the inspection, tests or approvals required by the Contract Documents, he will do so promptly where practicable, at the source of supply.

ARTICLE VIII

TIME

8.1 Definitions

8.1.1 Unless otherwise provided, the Contract time is the period of time allotted in the Contract Documents for Substantial Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

8.1.3 The date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect when construction is sufficiently complete, in accordance with the contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended.

Initial _____

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

8.2 Progress and Completion

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 Delays and Extensions of Time

8.3.1 The Contractor shall proceed with each and every part of this Agreement in a prompt and diligent manner. The Contractor, without additional compensation, shall perform the Work at such times, in such order and in such manner as the Owner may direct. The Contractor shall commence, continue, and complete its performance of the Project so as not to delay Owner or other separate contractors of the Owner or subcontractors' completion of the Work or any portions thereof, and so as to insure completion as directed by Owner. Any time specified for the completion of the Work, or portion thereof, is a material provision of this Agreement, and time is of the essence. The Contractor shall furnish sufficient forces to assure proper performance of its Work in strict compliance with all performance or progress schedules for the Project.

8.3.2 The Contractor shall, from time to time, on written demand of Owner, give adequate evidence to Owner to substantiate the planned performance and progress of the Work and the various parts thereof. The Contractor shall promptly increase its work force, accelerate its performance, work overtime, work Saturdays, Sundays and holidays, all without additional compensation, if in the opinion of the Owner, such work is necessary to maintain proper progress. The Contractor will fully cooperate and coordinate its work with any other separate contractors of Owner or subcontractors at the Project. The Contractor shall bear the costs of all damages done to other separate contractors of Owner or subcontractors and shall be responsible for any damages caused by or resulting from acts or omissions of the Contractor in failing to make proper progress. The liability of the Contractor shall not be deemed waived by any assent or acquiescence by Owner to the Contractor's late performance. Owner shall be entitled to terminate this Agreement due to late or threatened late performance, upon seven (7) days notice to proceed and Contractor's failure to do so.

Initial _____

8.3.3 In the event any subcontractor should damage the Contractor, the Contractor shall neither seek nor be entitled to any compensation from Owner, but will seek its damages directly from such subcontractor. Should the Contractor's performance, in whole or part, be disrupted, interfered with or delayed, or be suspended in the commencement, prosecution or completion, for reasons beyond the Contractor's control and without its fault or negligence, the Contractor shall be entitled to an extension of time in which to complete its Work; but only if it shall have notified the Owner, in writing, of the cause of delay within five (5) days of the occurrence of the event. The Contractor and Owner agree that the Contractor shall not be entitled to any money damages regardless of fault as a result of any delay, acceleration, disruption, interference, suspension, or other event affecting the Contractor or the Contractor's performance.

ARTICLE IX
PAYMENTS AND COMPLETION

9.1 **Contract Sum**

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

9.2 **Schedule of Values**

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to the various portions of the Work, prepared in such form, and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 **Applications for Payment**

9.3.1 At least ten days before the date of each progress payment established in the Owner-Contractor Agreement, the Contractor shall submit to the Architect an itemized Application for Payment, notarized if required, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect may require, and reflecting retain age, if any, as provided elsewhere in the Contract Documents. The Contractor shall indicate on each Application for Payment the dollar amount and percentage due Subcontractors.

Initial _____

Progress payments (monthly) will be made based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect as follows:

On or before the 10th day of each month, 95% of the proportion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work, up to the first day of that month, less the aggregate of previous payments in each case. Payments will be less such retainage as the Architect shall determine for all incomplete work and unsettled claims.

9.3.1.1 Until final payment, the Owner will pay 95% of the amount due the Contractor on account of progress payments. If the manner of completion of the Work and its progress are and remain satisfactory to the Owner, it may, in its sole discretion, for each Work category shown to be 50% or more complete in the Application for Payment, without reduction of previous retainage, on presentation by the Contractor with Consent of Surety for each application, certify any remaining progress payments for each Work category to be paid in full.

9.3.1.2 The full Contract retainage may be reinstated at any time in the sole discretion of the Owner.

9.3.2 Unless otherwise provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site.

9.3.3 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in the Article IX as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other persons performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

Initial _____

9.3.4 The Contractor shall submit a report with each Application for Payment, which sets forth all subcontractors performing work during that reporting period, the dollar amount paid to the subcontractor, etc. on the form provided by Shelby County Government.

9.4 Certificate for Payment

9.4.1 The Architect will, within seven (7) days after the receipt of the Contractor's Application for Payment, issue a Certificate for Payment to the Owner for such amount as the Architect determines is properly due.

9.4.2 The issuance of a Certificate of Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.3 and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified.

9.5 Progress Payments

9.5.1 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

9.6 Payments Withheld

9.6.1 The Architect may decline to certify payments and may withhold his Certificate in whole or in part, to the extent necessary to protect the Owner, if in his opinion he is unable to make representations to the Owner as provided in Subparagraph 9.4.2. The Architect may also decline to certify payment or,

Initial _____

because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 failure of the Contractor to make payments properly to Subcontractors or 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 another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time; or
- .7 persistent failures to carry out the Work in accordance with the Contract Documents.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made, without interest, for any amounts previously withheld.

9.7 Substantial Completion

9.7.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Subparagraph 8.1.3, the Contractor shall prepare for submission to the Architect a list of items to be completed or corrected. 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. When the Architect on the basis of an inspection determines that the Work or designated portion thereof is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall

Initial _____

commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

9.7.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents. Payment by the Owner upon application by the Contractor and certification by the Architect for Substantial Completion does not waive any claims the Owner may have against the Contractor.

9.8 Final Completion and Final Payment

9.8.1 Upon receipt of written 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 and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The Architect's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled.

9.8.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety to final payment and (3) if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of claims, encumbrances and/or alleged liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

Initial _____

9.8.3 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

ARTICLE X
PROTECTION OF PERSONS AND PROPERTY

10.1 **Safety Precautions and Programs**

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

10.2 **Safety of Persons and Property**

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

- .1 all employees on the Work and all other persons who may be affected thereby;
- .2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, including 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 give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities. Pavements, sidewalks, alleys, adjacent buildings not included in this Contract, which may be damaged, shall be repaired and/or replaced immediately and in a manner satisfactory to the Architect, Shelby County and/or other governing officials.

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

10.2.5 The Contractor shall promptly remedy all damage or loss (other than damage or loss insured under Paragraph 11.3) to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, Subcontractor, or any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts the Contractor may be liable or responsible. The foregoing obligations of the Contractor are in addition to his obligations under Paragraph 4.16.

10.2.6 The Contractor shall designate a responsible member of his 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 the Architect.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded to endanger its safety.

10.3 Emergencies

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article XII for Changes in the Work.

10.3.2 Whenever the Contractor has not taken sufficient precautions for the safety of the public or the protection of work to be performed under this Project, or adjacent structures or property which may be injured by processes of construction, demolition and/or site clearance on account of such neglect, and whenever an emergency shall arise and immediate action shall be considered necessary in order to protect public or private, persons or property interest, then the Architect and/or the Owner shall so instruct the Contractor.

10.3.3 If correction is not made in due time or if conditions such as lack of time prevent instructions to Contractor, then the Owner, without notice to the Contractor, may provide reasonable, suitable protection by causing such Work to be done and material to be furnished and placed as the Architect and Owner may consider necessary and adequate. The cost and expense of such work and

Initial _____

material so furnished shall be borne by the Contractor and, if the same shall not be paid on presentation of the bills thereof, such costs shall be deducted from any amounts due or to become due the Contractor. The performance of such emergency work under the direction of the Owner and/or Architect shall in no way relieve the Contractor of the responsibility for damages, which may occur during or after such performance.

10.3.4 None of the foregoing shall make the Owner and/or Architect responsible for foreseeing and protecting against emergency.

ARTICLE XI
INSURANCE

11.1 Contractor Liability Insurance

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

- .1 claims under workers compensation, disability benefits, and other similar employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- .4 claims for damages insured by personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;
- .5 claims for damages, other than the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- .6 claims for damages because of bodily injury or death of any person or property damage arising out

Initial _____

of the ownership, maintenance, or use of any motor vehicle.

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than any limits of liability specified in the Contract Documents, section III, paragraph 31, or required by law, whichever is greater.

11.1.3 The insurance required by Subparagraph 11.1.1 shall include contractual liability insurance applicable to the Contractors obligations under Paragraph 4.16.

11.1.4 All insurance policies maintained by the Contractor shall provide that insurance as applying to the Owner shall be primary and non-contributing irrespective of such insurance as the Owner may maintain in its own name and on its own behalf.

11.1.5 Certificates of Insurance acceptable to the Owner shall be filed with the Owner at the time of submittal of the Contract Documents to the Owner for execution. These certificates shall contain a provision that coverage's afforded under the policies will not be canceled until at least thirty(30) days prior written notice has been given to the Owner. The Contractor shall immediately notify Shelby County Government, Contract Administration, 160 N. Main Street, Suite 550, Memphis, Tennessee 38103 of cancellation or changes in any of the insurance coverage required. Upon request of the Owner, certified copies of any of the required insurance policies may be requested from the Contractor or Contractor's insurance company, agency, or broker.

11.2 Owners Liability Insurance

11.2.1 The Owner shall at its discretion, purchase liability insurance or maintain a self-insured liability program.

11.3 Property Insurance

11.3.1 The General Contractor shall be responsible for all risk insurance for physical loss or damage for the project during construction until the project is accepted by the Owner at which time the Owner will provide the property coverage.

11.3.2 The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require such Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.3.3 The Contractor or his insurance agent, broker or

insurance company shall furnish to Owner a copy of all policies with the Contactor within five days of request.

11.3.4 If the Owner requests in writing that insurance for risks other than those described in Subparagraphs 11.3 and 11.3.2 or 11.3.3 or other special hazards to be included in the property insurance policy, the Contractor shall, if possible, include such insurance, and the cost thereof shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order. Initial_____

ARTICLE XII
CHANGES IN THE WORK

12.1 **Change Orders**

12.1.1 A Change Order is a written order to the Contractor signed by the Owner issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time. The Contractor by execution of the Change Order waives any further claims or damages in any manner whatsoever for the changes set forth in the Change Order.

12.1.2 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:

Initial _____

- .1 by lump sum properly itemized on the form furnished by the Owner which shall show the actual verified cost of the work, plus ten percent overhead and five percent profit; if the work is performed by a Subcontractor, the General Contractor is allowed an additional five percent;
- .2 by unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 by cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 by the method provided in Subparagraph 11.1.4.

12.1.4 If none of the methods set forth in Clauses 12.1.3.1, 12.1.3.2, or 12.1.3.3 is agreed upon, the Contractor, provided he receive a written order signed by the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Architect on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit, which shall be defined as ten percent overhead and five percent profit with an additional five percent going to the General Contractor when the work is performed by a Subcontractor. In such case, and also under Clauses 12.1.3.3 and 12.1.3.4 above, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, cost shall be limited to the following: cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen compensation insurance; bond premiums, rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change. Pending final determination of cost to the Owner, payments on account shall be made on the Architect's Certificate for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.

Initial _____

12.2 Concealed Conditions

12.2.1 Should concealed conditions encountered in the performance of the Work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, Contractor, subject to approval by the Architect, shall be entitled to a time extension for only the period that the Contractor's performance is extended due to the unforeseen conditions.

12.3 Minor Changes in the Work

12.3.1 The Architect will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE XIII UNCOVERING AND CORRECTION OF WORK

13.1 Uncovering of Work

13.1.1 If any portion of the Work should be covered contrary to the request of the Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is found not in accordance with the Contract Documents, the Contractor shall pay such costs. If the Work to be uncovered by the Contractor should have been inspected by the Architect prior to being covered, and the Work is found to be in accordance with the Contract Documents, the cost of the uncovering and recovering of the Work shall be borne by the Architect.

13.2 Correction of Work

13.2.1 The Contractor shall promptly correct all Work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the Architect's additional services made necessary thereby.

13.2.2 If, within one year after the Date of Substantial Completion of the Work or designated portion thereof, within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. This obligation shall survive termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the Work, which are defective or non-conforming, unless removal is waived by the Owner.

13.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in Subparagraphs 4.5.1, 13.2.1, and 13.2.2, the Owner may correct it in accordance with Paragraph 3.4.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may, upon ten additional days' written notice, sell such Work at auction or a private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Architect's additional services made necessary thereby. If such proceeds of sale do not cover all costs, which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

Initial _____

13.2.7 Nothing contained in Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his 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 his obligations other than specifically to correct the Work.

13.3 Acceptance of Defective or Non-Conforming Work

13.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effective whether or not final payment has been made.

ARTICLE XIV TERMINATION OF THE CONTRACT

14.1 Termination for Default

14.1.1 Should the Contractor fail to perform in strict accordance with this Agreement, where or as Owner may so direct, or should the Contractor become insolvent, unable to or fail to pay its obligations as they mature or, in any other respect fail in the opinion of the Owner, to properly prosecute and perform any part of its work, fail to exert its best performance efforts, be involved in labor disputes, or be terminated under any other contract with Owner, then the Contractor may be deemed by Owner to have materially breached and to have defaulted in its obligations under this Agreement. In case of a breach and default, the Owner, at its discretion, may terminate this Agreement, or any part thereof, by giving five (5) days written notice thereof to the Contractor. In case of such termination, Owner may use any and all materials, equipment, tools or chattels furnished by or belonging to the Contractor either at or for the Project.

14.1.2 The Contractor, on termination, will be deemed to have offered to Owner an assignment of all of its subcontracts and purchase orders relating to this Project. Owner may, at its discretion, do whatever is necessary to assure performance of any

Initial _____

terminated work and to take such action, if necessary, in the Contractor's name. Owner may withhold from Contractor any monies due or to become due under this or any other contract between the Contractor and Owner, to offset the damages incurred or possibly incurred as a result of the breach and default by the Contractor. In case of a breach, or in the event Owner is required to retain the services of an attorney to enforce any provisions of this Agreement, then the Contractor and its surety company shall be liable to Owner for any and all additional costs, expenses, attorney's fees and other damages, both liquidated and unliquidated, which directly or indirectly result from the Contractor's breach, threatened breach, default or lack of performance of any term or condition of this Agreement.

14.1.3 If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the Architect's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Architect, upon application, in the manner provided in Paragraph 9.4, and this obligation for payment shall survive the termination of this Contract.

14.2 Termination for Convenience

14.2.1 Owner, by written notice, shall have the right to terminate and cancel this Agreement, without the Contractor being at fault, for any cause or for its own convenience, and require the Contractor to immediately stop work. In such event, Owner shall pay the Contractor for that Work actually performed and materials furnished in an amount proportionate to the Contract price. Owner shall not be liable to the Contractor for any other costs, including prospective profits on Work not performed.

ARTICLE XV RIGHT TO OCCUPY BY OWNER

15.1 Early Occupancy by Owner

15.1.1 The Owner has the right to occupy or use ahead of schedule all or any substantially completed or partially completed portion of the Work when such occupancy and use are in its best interest, notwithstanding the time of completion for all of the Work. If occupancy or use increases the cost of the Work (other than for corrections which are the responsibility of the Contractor) and/or as a result of the Owner exercising its rights

Initial _____

herein, the contractor shall be entitled to extra costs and extensions of time, or both. Claims for such extra costs and extensions of time, to be valid, shall be made in writing to the Owner within seven (7) calendar days of the notification of Owner to the Contractor of its intent to so occupy or use.

15.2 Corrections after Occupancy

15.2.1 After the Owner has taken occupancy of all or any substantially completed portion of the Work, the Contractor shall not disrupt the use and occupancy of the Owner to make corrections in the Work but shall, at the discretion of the Owner, make such corrections at the expense of the Contractor after normal working hours.

15.3 Heating, Ventilating, and Air-Conditioning Systems

15.3.1 The Owner may require the use and operation of any completed heating, ventilating, and air-conditioning equipment at the time it occupies or uses any substantially completed portion of the Work. In such event, the Owner may require the Contractor to operate such equipment and will pay the Contractor the cost of such utilities required for the use and occupancy of the Owner, but the Contractor shall be responsible for such equipment and for its careful and proper operation. At any time, the Owner may assume the care and maintenance of any portion of the Work, which it is occupying and using for the operation of any such equipment, but in each case, the Contractor shall not be relieved of its responsibility for the full completion of the Work and the protection of its tools, materials, and equipment.

ARTICLE XVI
REGULATIONS

16.1 Nondiscrimination in Employment

16.1.1 During the performance of this Contractual Agreement, the contracting party agrees as follows: The CONTRACTOR agrees that no person on the grounds of handicap, age, race, color, religion, sex, or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subject to discrimination in the performance of this contract, or in the employment practices of the CONTRACTOR. The CONTRACTOR shall upon request show proof of such non-discrimination, and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

16.2 [RESERVED]

16.3 Maintenance and Records

16.3.1 The Contractor and all Subcontractors under the General Contract shall maintain copies of every subcontract awarded and their own payrolls, for each weekly payroll period during the term of the Construction Contract and for a period of one (1) year after release and payment is made by Owner to the Contractor.

16.4 Owner's Right of Inspection

16.4.1 Representative of the Owner, as designated by the County Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the life of the Construction Contract for a period of one (1) year after final release and final payment by the Owner for the purpose of verifying nondiscrimination in employment.

ARTICLE XVII

**PROCEDURE FOR INSTALLATION OR
REMOVAL OF FIBERGLASS INSULATION**

The following procedures should be adhered to when disturbing, installing, or removing fiberglass insulation. These procedures are established to minimize employee exposure to the adverse health affects of fiberglass exposure.

The below procedures are the minimal requirements for handling

fiberglass in Shelby County Facilities. Mandates by code or law must be adhered to.

17.1 Installation, Removal, or Disturbance of Fiberglass Insulation

17.1.1 Install in well-ventilated areas and avoid breathing dust.

17.1.2 Wear loose, comfortable clothing and long-sleeved shirts to minimize skin contact.

17.1.3 Handle carefully to minimize airborne dust.

17.1.4 If high dust levels are anticipated during installation, such as with power tools, use appropriate NIOSH approved dust respirator.

17.1.5 All power cutting tools must be equipped with dust collectors.

Initial _____

17.2 Exposure

17.2.1 After use, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated. Utilize running water.

17.2.2 Wash work clothes separately, and then rinses the washer.

17.2.3 Eye exposure: Flush with flowing water for at least 15 minutes. If symptoms persist, seek immediate medical attention.

17.3 Work Site Environment

17.3.1 Insure area is free of obvious partials through proper cleanup procedures. Use of vacuum with proper filters, or wet cleanup is acceptable. (This includes office furniture, floors, and walls.)

17.3.2 Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Notify building manager or other appropriate person that it will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of the building. Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

17.3.3 Exposure to employees should be kept to a minimum.

17.3.4 Disturbance of ceiling tiles where fiberglass insulation exists requires the same procedures as if installation or removal was taking place.

BY THE SIGNING OF THIS DOCUMENT AND INITIALING EACH PAGE HEREOF, THE CONTRACTOR CERTIFIES THAT HE HAS READ AND UNDERSTANDS ALL OF THE ABOVE AND AGREES TO ABIDE BY THESE GENERAL CONSTRUCTION CONDITIONS.

CONTRACTOR

BY: _____

TITLE: _____

DATE: _____

constcnd.doc

**SHELBY COUNTY GENERAL CONDITIONS OF THE
CONTRACT FOR CONSTRUCTION**

Rev. 5/24/99

constcnd.doc

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE I CONTRACT DOCUMENTS

1.1 Definitions

1.1.1 The Contract Documents

The Contract Documents consist of the Owner-Contractor Agreement, the conditions of the Contract (General, Supplementary and other conditions), the Drawings, the Specifications, and all Addenda issued prior to and all 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 written interpretation issued by the Architect pursuant to Subparagraph 2.2.8, or (4) a written order for a minor change in the Work issued by the Architect pursuant to Paragraph 12.3. The Contract Documents include Bidding Documents such as the Advertisement or invitation to Bid, the Instructions to Bidders, sample forms, the Contractor's Bid, or portions of Addenda relating to any of these, and other documents specifically enumerated in the Owner-Contractor Agreement.

1.1.2 The Contract

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Architect and the Contractor, but the Architect shall be entitled to performance of obligations intended for his benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect or any Subcontractor or sub-subcontractor.

1.1.3 The Work

The Work comprises the completed construction required by the contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

Initial _____

1.1.4 The Project

The Project is the total construction of which the Work performed under these Contract Documents may be the whole or a part.

1.2 Execution Correlation and Intent

1.2.1 The Contract Documents shall be signed in not less than four originals by the Owner and Contractor. If either Owner or Contractor or both do not sign the Conditions of the Contract, Drawings, Specifications, or any of the other Contract Documents, the Architect shall identify such Documents.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not specifically set forth in the Contract Documents will not be required unless it is consistent with work that is specifically set forth in the Contract Documents or is reasonably inferable from the Contract Documents as being necessary to produce the intended results. Words and abbreviations, which have well-known technical or trade meanings, are used in the Contract Documents in accordance with such recognized meanings.

1.2.4 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Sub-contractors or in establishing the extent of Work to be performed by any trade.

1.3 Ownership and Use of Documents

1.3.1 All Drawings, Specifications, and copies thereof furnished by the Architect are the property of the Owner. They are to be used only with respect to this Project and are not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Architect on request at the completion of the Work. Submission 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 common law copyright or other reserved rights. The Architect will furnish, free of charge, to

Initial _____

the Contractor sufficient sets of Contract Documents to execute the Work not to exceed ten (10). The Contractor may purchase additional sets by paying reproduction costs.

ARTICLE II ARCHITECT

2.1 Definition

2.1.1 The Architect is the person lawfully licensed to practice Architecture, or any entity lawfully practicing Architecting identified as such in the Owner-Contractor Agreement, and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect means the Architect or his authorized representative.

2.2 Administration of the Contract

2.2.1 The Architect will provide administration of the Contract as hereinafter described.

2.2.2 The Architect will be the Owner's representative during construction and until final payment is due. The Architect will advise and consult with the Owner. The Owner's instructions to the Contractor shall be forwarded through the Architect. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument signed by the Owner.

2.2.3 The Architect will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations as an Architect, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.

2.2.4 The Architect will not be responsible for and will not have control or charge of construction means, methods, techniques or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

Initial _____

2.2.5 The Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Architect may perform his functions under the contract documents.

2.2.6 Based on the Architects observations and an evaluation of the Contractor's Applications for Payment, the Architect will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts as provided in Paragraph 9.4.

2.2.7 The Architect will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon so as to cause no delay the Project. Either party to the Contract may make written request to the Architect for such interpretations.

2.2.8 All interpretations and decisions of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

2.2.9 The Architects decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents. The Architect shall rule on all claims and disputes that relate to the interpretation of the Contract Documents.

2.2.10 The Architect will have authority to reject Work, which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.7.2 whether or not such Work is then fabricated, installed or completed. In the event the Architect determines that any Work deleted by the Contractor should have been performed by the Contractor under the Contract Documents, he shall issue a final determination that the Contractor shall proceed with the Work as directed by the Architect, and the Contractor shall proceed with the Work even if he is in disagreement with the decision of the Architect.

2.2.11 The Architect will review and approve or take other appropriate action under Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Architects approval of a specific item shall not indicate approval of an assembly of which the item is a component.

Initial _____

2.2.12 The Architect will prepare Change Orders in accordance with Article 12 and will have the authority to order minor changes in the Work as provided in Subparagraph 12.3.

2.2.13 The Architect will conduct inspections to determine the dates of Substantial Completion and completion will receive and forward to the Owner for the Owner's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a Final Certificate for Payment upon compliance with the requirements of Paragraph 9.8.

ARTICLE III

OWNER

3.1 Definition

3.1.1 The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner, or his authorized representative.

3.2 Information and Services Required of the Owner

3.2.1 The Owner or Architect shall furnish all surveys describing the physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the site.

3.2.2 Except as provided in Subparagraph 4.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.3 Information or services under the Owner control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of Drawings and Specifications reasonably necessary for the execution of the Work.

3.2.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Work by Owner or by Separate Contractors, Payments and Completion and Insurance in Article 6, 9 and 11, respectively.

Initial _____

3.3 Owner's Right to Stop the Work

3.3.1 If the Contractor fails to correct defective Work as required by Paragraph 13.2 or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. Any such order to the Contractor shall be in writing.

3.4 Owner's Right to Carry Out the Work

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy it may have, make good and correct such deficiencies with its own forces or with the forces of another contractor. In such case, an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect additional services made necessary by such default, neglect, or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

3.4.2 The Owner shall have access to the Project at all times.

ARTICLE IV **CONTRACTOR**

4.1 Definition

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 Review of Contract Documents

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect any error, inconsistency or omission he may discover.

4.3 Supervision and Construction Procedures

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents by either the activities or duties of the Architect in his administration of the Contract, or by inspection, tests, or approvals required or performed under Paragraph 7.7 by persons other than the Contractor.

4.4 Labor and Materials

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

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

4.4.3 When a material, equipment, or system is specified or approved in an addendum, by the name of one or more manufacturers, such material, equipment, or system shall form the basis of the contract. If Contractor desires to use another material, equipment, or system in lieu thereof, he shall request approval in writing and shall submit samples and data as required for the Architect's consideration. The Architect and Owner will be the final judge for the acceptance or the substitution. No Substitution shall be made without authority in writing from the Architect.

4.4.4 By making requests for substitutions based on Subparagraph 4.4.3 above, the Contractor:

Initial _____

- .1 represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that he will provide the same warranty for the substitute that is required by the Contract Documents for that specified.
- .3 certifies that the cost data presented is complete and includes all related costs and excludes the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently became apparent; and
- .4 will coordinate the installation of the accepted substitute, making such changes at no additional cost to Owner as may be required for the Work to be complete in all respects.

4.4.5 The General Contractor shall disclose the existence and extent of financial interests, whether direct or indirect, he has in subcontractors and material suppliers, which he may propose for this Project.

4.5 **Warranty**

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified, and all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and requirements including substitutions not properly approved and authorized, may be considered defective. If required by the Architect, the Contractor shall furnish satisfactory evidence. This warranty is not limited by the provisions of Paragraph 13.2.

4.6 **Taxes**

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor, which are legally enacted at the time bids, are received, whether or not yet effective.

Initial _____

4.7 Permits, Fees, and Notices

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution of the Contract.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

4.8 Allowances and Owner Furnished Equipment, Fixtures or Labor

4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection.

4.8.2 Unless otherwise provided in the Contract Documents:

- .1 these allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and applicable taxes;
- .2 the Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance;
- .3 whenever the cost is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses.

Initial _____

4.8.3 The Owner may directly furnish any or all of the equipment, fixtures, or labor required for the Project. In the event the Owner elects to do so, the Contract Price for such equipment, fixtures, or labor will be reduced by the amount for equipment of labor being furnished by Owner. A Change Order reducing the Contract Price for that item of work shall be executed by Owner and Contractor to reflect a reduction in the Contract Price for that item, equipment, fixtures or work that the Owner is to furnish. The Contractor shall assume responsibility for and be fully responsible for the care, custody, and control of all Owner furnished equipment and/or fixtures once said equipment or fixtures arrive on the job site or in any approved off site storage facility.

4.9 Superintendent

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor and shall be confirmed in writing.

4.10 Documents and Samples at the Site

4.10.1 The Contractor shall maintain at the site for the Owner, one record copy of all Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record all changes made during construction and approved Shop Drawings, Product Data and Samples. These shall be available to the Architect and shall be delivered to him for the Owner upon completion of the Work.

4.11 Shop Drawings, Product Data, and Samples

4.11.1 Shop Drawings are drawings, diagrams, schedules, and other data specifically prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

Initial _____

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

4.11.4 The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

4.11.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.

4.11.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architects approval of Shop Drawings, Product Data or Samples under Subparagraph 2.2.11, unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data, or Samples by the Architect approval thereof.

4.11.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, or Samples, to revisions other than those requested by the Architect on previous submittals.

4.11.8 No portion of the Work requiring submission of a Shop Drawing, Product Data, or Sample shall be commenced until the submittal has been approved by the Architect as provided in Subparagraph 2.2.11. All such portions of the Work shall be in accordance with approved submittals.

4.12 **Use of Site**

4.12.1 The Contractor shall confine operations at the site to areas permitted by law, ordinance, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.13 **Cutting and Patching of Work**

4.13.1 The Contractor shall be responsible for all cutting,

fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.13.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner. The Contractor shall not unreasonably withhold from the Owner his consent to cutting or otherwise altering the Work.

4.14 Cleaning Up

4.14.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work, he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery and surplus materials.

4.14.2 If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof will be charged to the Contractor.

4.15 Royalties, Patents, and Records

4.15.1 The Contractor shall pay all royalties and license fees. He shall defend all suits and claims for infringement of any patent rights and shall save Owner and Architect harmless from loss on account thereof.

4.15.2 The Contractor shall not discriminate against any subcontractor, employee, or applicant for employment on the grounds of race, color, national origin, or sex.

4.15.3 The Contractor and all subcontractors under the general contract shall maintain copies of every sub-payroll period for the life of the construction contract and for a period of three (3) years after final release and payment is made by the Owner to the Contractor.

4.15.4 Each Contractor request for payment, including final payment and each partial payment, if permitted by the contract, shall contain a certification by the Contractor that performance by the Contractor and his subcontractor for the period of work covered by the payment request has been in accordance with the contract clauses and requirements with respect to nondiscrimination.

4.15.5 Representatives of Shelby County, as designated by the Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the term of the construction contract and for a period of three (3) years after final release and final payment by the Owner for the purposes of verifying nondiscrimination in employment.

4.15.6 The Contractor shall incorporate the same requirements set forth in Subparagraph 5.3.1 in all Subcontracts awarded by him with the further requirement that each Subcontract include identical requirements to be included in any lower tier Subcontracts together with the requirement to include it in any further subcontracts that might be made.

4.16 Indemnification

4.16.1 (a) By executing this Agreement, the Contractor assumes the entire responsibility and liability for any and all claims, damage or injury of any kind or nature (including death) to all persons, whether employees of the Contractor or otherwise, and to all property (including but not limited to the replacement cost and loss of use of property), caused by, resulting from, arising out of, or occurring in connection with the performance of the Work by the Contractor, its agents, servants, employees, or subcontractors or anyone directly or indirectly employed by any of them for whose acts any of them may be liable.

(b) If any claim is made against the Owner for any damage, injury, death, or loss, whether such claim is based upon the Contractor's or its agents', servants', employees', or subcontractors' alleged active or passive negligence or participation in the wrong, or upon any alleged active or passive negligence or participation in the wrong, or upon any alleged breach of any statutory duty or obligation on the part of the Contractor, its agents, servants, employees or subcontractors, or in any other instance for which the Contractor has assumed responsibility in this Agreement, the Contractor shall indemnify, defend, and hold harmless the Owner, its officers, directors, agents, servants and employees from and against any and all loss, expense, judgment, damage or injury (including attorney's fees and expenses) that the Owner or its officers, directors, agents, servants or employees may sustain as the result of any such claim. The Contractor shall assume on behalf of the Owner, its officers, directors, agents, servants and employees the defense of any action at law or in equity which may be brought against any of them upon any such claim, and shall pay on behalf of them the amount of any judgment with any costs or expenses incurred by any of them in connection with such claim.

4.16.2 Labor Indemnity

4.16.2.1 The Contractor shall indemnify, defend and hold harmless the Owner from any and all administrative and judicial actions (including reasonable attorney's fees related to any such action) incurred by the Owner in connection with any labor related activity arising from the performance of the Work of the Contractor. As used in this Agreement, "labor related activity" includes, but is not limited to strikes, walkouts, informational or organizational picketing, use of placards, distribution of handouts, leaflets or in the vicinity of any facility where the Owner conducts business. The Owner shall advise the contractor if any labor related activity occurs and the Contractor shall arrange for the legal representation necessary to protect the Owner, provided such representation is previously approved by the Owner.

4.16.3 Attorney's Fees

4.16.3.1 In the event it becomes necessary for Owner to employ an attorney to enforce any provision of this Agreement, then the Contractor shall be liable for all attorney's fees and litigation expense of Owner.

4.17 Progress Schedule

4.17.1 The Contractor shall, within five (5) days from receipt of the Notice to Proceed, prepare and submit for the Owner and Architect an estimated project schedule for the Work. The Progress Schedule shall be updated each month to reflect actual progress made and to forecast future progress of the Work. The Progress Schedule shall be related to the entire Project as provided by the contract Documents and shall provide for expeditious and practicable execution of the Work. The Owner reserves the right to reasonably reschedule the Work or the sequence of activities of the contractor for no additional compensation should it deem rescheduling to be in its best interest.

ARTICLE V
SUBCONTRACTORS

5.1 Definition

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term

Subcontractor does not include any separate contractor or his subcontractor.

Initial _____

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

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

5.2.1 Unless otherwise required by the Contract Documents or Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Owner and the Architect in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection. No work shall be commenced until approval of all such Subcontractors has been given in writing by the Owner. If required, the Contractor shall furnish evidence satisfactory to the Owner, showing each proposed Subcontractor is competent to execute the Work covered by the Subcontract.

5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Architect has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he has a reasonable objection.

5.2.3 If the Owner or the Architect has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Architect has no reasonable objection. Such substitution shall in no way affect the Contract Sum.

5.2.4 The Contractor shall make no substitution for any Subcontractor, person, or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

5.2.5 The Contractor shall submit a status report with regard to Subcontractors identified on Exhibit C, which forms a part of the Contract Documents, as to any change in the subcontractors identified thereon and the reasons for same, the dollars paid to

the prior subcontractor and the amount of the new subcontract.

Initial _____

THIS REPORT SHALL BE SUBMITTED TO CONTRACTS ADMINISTRATION OF SHELBY COUNTY GOVERNMENT, 160 N. Main St., Suite 1109, Memphis, Tennessee, 38103.

5.3 Subcontractual Relations

5.3.1 By an appropriate 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 the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect. Said agreement shall preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by the Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to any Sub-subcontractors.

ARTICLE VI WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 Owner's Right to Perform Work and to Award Separate Contracts

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract.

6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the

Contractor who executes each separate Owner-Contractor Agreement.

Initial _____

6.2 Mutual Responsibility

6.2.1 The Contractor shall afford the Owner and separate contractor's reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends on proper execution or results in the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Architect any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acceptance of the Owner's or separate contractor's work as fit and proper to receive his Work.

6.2.3 Should the Contractor wrongfully cause damage to the work or property of the Owner or to other work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.2.5.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against Owner arises there from, the Contractor shall pay or satisfy it and shall reimburse the Owner for all Attorney's fees and Court costs which the Owner has incurred.

6.3 Owner's Right to Clean Up

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.14, the Owner may clean up and charge the cost thereof to the contractors responsible therefore as the Owner shall determine to be just.

**ARTICLE VII
MISCELLANEOUS PROVISIONS**

7.1 GENERAL COMPLIANCE WITH LAWS

7.1.1 If required, the Contractor certifies that it is

Initial _____

qualified or will take steps necessary to qualify to do business in the State of Tennessee and that it will take such action as, from time to time, may be necessary to remain so qualified and it shall obtain, at its expense all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Agreement.

7.1.2 The Contractor is assumed to be familiar with and agrees that at all times it will observe and comply with all federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the work. The preceding shall include, but is not limited to, compliance with all Equal Employment Opportunity laws, the Fair Labor Standards Act, Occupational Safety, and Health Administration (OSHA) requirements, and the Americans with Disabilities Act (ADA).

7.1.3 This Contract will be interpreted in accordance with the laws of the State of Tennessee. By execution of this contract the Contractor agrees that all actions, whether sounding in contract or in tort, relating to the validity, construction, interpretation and enforcement of this contract will be instituted and litigated in the courts of the State of Tennessee, located in Shelby County, Tennessee, and in no other. In accordance herewith, the parties to this contract submit to the jurisdiction of the courts of the State of Tennessee located in Shelby County, Tennessee.

7.2 Successors and Assigns

7.2.1 This Agreement (including without limitation, all obligations imposed by the Contract Documents) shall be binding upon and shall inure to the benefit of the parties' successors, assigns, and legal representative. The Contract shall not be assigned or sublet in whole or in part by the Contractor without the written consent of the Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 Written Notice

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm, entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 Claims for Damages

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party, or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 Performance Bond and Labor and Material Payment Bond

7.5.1 The Contractor shall furnish and keep in force throughout the performance of the Work a separate performance bond and separate labor and material payment bond, each in the amount of the total of the Contract (as the same may be modified from time to time) conditioned upon the faithful performance of the Work by the Contractor and payment of all obligations arising in connection with the Work by the Contractor. Said bonds shall also guarantee to the Owner that the Work shall be free of all liens upon the property of the Owner. The bonds shall name the Owner as obligee and shall be with such Surety authorized to do business in the State of Tennessee and in such form and manner as approved by Owner. Said Bond shall be subject to final approval of the Shelby County Risk Management Department. Said bonds shall be furnished to the Owner prior to the commencement of the Work, or upon written request by Owner to Contractor after the Work has commenced.

7.6 Rights and Remedies

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

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

7.7 Tests

7.7.1 If the Contract Documents, laws, ordinances, rules,

regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Architect timely notice of its readiness so the Architect may observe such inspection, testing

Initial _____

or approval. The Contractor shall bear all costs of such inspections, tests, or approvals conducted by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspections or tests.

7.7.2 If the Architect determines that any Work requires special inspection, testing, or approval, which Subparagraph 7.7.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing, or approval, and the Contractor shall give notice as provided in Subparagraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Architect's additional services and/or correction of the defective Work made necessary by such a failure; otherwise, the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.7.3 Required certificates of inspection, testing, or approval shall be secured by the Contractor and promptly delivered by him to the Architect.

7.7.4 If the Architect is to observe the inspection, tests or approvals required by the Contract Documents, he will do so promptly where practicable, at the source of supply.

ARTICLE VIII

TIME

8.1 Definitions

8.1.1 Unless otherwise provided, the Contract time is the period of time allotted in the Contract Documents for Substantial Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

8.1.3 The date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect

when construction is sufficiently complete, in accordance with the contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended.

Initial _____

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

8.2 Progress and Completion

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 Delays and Extensions of Time

8.3.1 The Contractor shall proceed with each and every part of this Agreement in a prompt and diligent manner. The Contractor, without additional compensation, shall perform the Work at such times, in such order and in such manner as the Owner may direct. The Contractor shall commence, continue, and complete its performance of the Project so as not to delay Owner or other separate contractors of the Owner or subcontractors' completion of the Work or any portions thereof, and so as to insure completion as directed by Owner. Any time specified for the completion of the Work, or portion thereof, is a material provision of this Agreement, and time is of the essence. The Contractor shall furnish sufficient forces to assure proper performance of its Work in strict compliance with all performance or progress schedules for the Project.

8.3.2 The Contractor shall, from time to time, on written demand of Owner, give adequate evidence to Owner to substantiate the planned performance and progress of the Work and the various parts thereof. The Contractor shall promptly increase its work force, accelerate its performance, work overtime, work Saturdays, Sundays and holidays, all without additional compensation, if in the opinion of the Owner, such work is necessary to maintain proper progress. The Contractor will fully cooperate and coordinate its work with any other separate contractors of Owner or subcontractors at the Project. The Contractor shall bear the costs of all damages done to other separate contractors of Owner or subcontractors and shall be responsible for any damages caused by or resulting from acts or omissions of the Contractor in failing to make proper progress. The liability of the Contractor shall not be deemed

waived by any assent or acquiescence by Owner to the Contractor's late performance. Owner shall be entitled to terminate this Agreement due to late or threatened late performance, upon seven (7) days notice to proceed and Contractor's failure to do so.

Initial _____

8.3.3 In the event any subcontractor should damage the Contractor, the Contractor shall neither seek nor be entitled to any compensation from Owner, but will seek its damages directly from such subcontractor. Should the Contractor's performance, in whole or part, be disrupted, interfered with or delayed, or be suspended in the commencement, prosecution or completion, for reasons beyond the Contractor's control and without its fault or negligence, the Contractor shall be entitled to an extension of time in which to complete its Work; but only if it shall have notified the Owner, in writing, of the cause of delay within five (5) days of the occurrence of the event. The Contractor and Owner agree that the Contractor shall not be entitled to any money damages regardless of fault as a result of any delay, acceleration, disruption, interference, suspension, or other event affecting the Contractor or the Contractor's performance.

ARTICLE IX PAYMENTS AND COMPLETION

9.1 Contract Sum

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

9.2 Schedule of Values

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to the various portions of the Work, prepared in such form, and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 Applications for Payment

9.3.1 At least ten days before the date of each progress payment established in the Owner-Contractor Agreement, the Contractor shall submit to the Architect an itemized Application for Payment, notarized if required, supported by such data substantiating the Contractor's right to payment as the Owner or the

Architect may require, and reflecting retain age, if any, as provided elsewhere in the Contract Documents. The Contractor shall indicate on each Application for Payment the dollar amount and percentage due Subcontractors.

Initial _____

Progress payments (monthly) will be made based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect as follows:

On or before the 10th day of each month, 95% of the proportion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work, up to the first day of that month, less the aggregate of previous payments in each case. Payments will be less such retainage as the Architect shall determine for all incomplete work and unsettled claims.

9.3.1.1 Until final payment, the Owner will pay 95% of the amount due the Contractor on account of progress payments. If the manner of completion of the Work and its progress are and remain satisfactory to the Owner, it may, in its sole discretion, for each Work category shown to be 50% or more complete in the Application for Payment, without reduction of previous retainage, on presentation by the Contractor with Consent of Surety for each application, certify any remaining progress payments for each Work category to be paid in full.

9.3.1.2 The full Contract retainage may be reinstated at any time in the sole discretion of the Owner.

9.3.2 Unless otherwise provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site.

9.3.3 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in the Article IX as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other persons

performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

9.3.4 The Contractor shall submit a report with each Application for Payment, which sets forth all subcontractors performing work during that reporting period, the dollar amount paid to the subcontractor, etc. on the form provided by Shelby County Government. Initial _____

9.4 Certificate for Payment

9.4.1 The Architect will, within seven (7) days after the receipt of the Contractor's Application for Payment, issue a Certificate for Payment to the Owner for such amount as the Architect determines is properly due.

9.4.2 The issuance of a Certificate of Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.3 and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified.

9.5 Progress Payments

9.5.1 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

9.6 Payments Withheld

9.6.1 The Architect may decline to certify payments and may

withhold his Certificate in whole or in part, to the extent necessary to protect the Owner, if in his opinion he is unable to make representations to the Owner as provided in Subparagraph 9.4.2. The Architect may also decline to certify payment or,

because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 failure of the Contractor to make payments properly to Subcontractors or 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 another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time; or
- .7 persistent failures to carry out the Work in accordance with the Contract Documents.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made, without interest, for any amounts previously withheld.

9.7 Substantial Completion

9.7.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Subparagraph 8.1.3, the Contractor shall prepare for submission to the Architect a list of items to be completed or corrected. 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. When the Architect on the basis of an inspection determines that the Work or designated portion thereof is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the

Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall

Initial _____
commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

9.7.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents. Payment by the Owner upon application by the Contractor and certification by the Architect for Substantial Completion does not waive any claims the Owner may have against the Contractor.

9.8 Final Completion and Final Payment

9.8.1 Upon receipt of written 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 and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The Architect's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled.

9.8.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety to final payment and (3) if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of claims, encumbrances and/or alleged liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to

indemnify him against such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

Initial _____

9.8.3 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

ARTICLE X
PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

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

10.2 Safety of Persons and Property

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

- .1 all employees on the Work and all other persons who may be affected thereby;
- .2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, including 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 give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable

safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities. Pavements, sidewalks, alleys, adjacent buildings not included in this Contract, which may be damaged, shall be repaired and/or replaced immediately and in a manner satisfactory to the Architect, Shelby County and/or other governing officials.

Initial _____

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

10.2.5 The Contractor shall promptly remedy all damage or loss (other than damage or loss insured under Paragraph 11.3) to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, Subcontractor, or any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts the Contractor may be liable or responsible. The foregoing obligations of the Contractor are in addition to his obligations under Paragraph 4.16.

10.2.6 The Contractor shall designate a responsible member of his 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 the Architect.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded to endanger its safety.

10.3 Emergencies

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article XII for Changes in the Work.

10.3.2 Whenever the Contractor has not taken sufficient precautions for the safety of the public or the protection of work to be performed under this Project, or adjacent structures or property which may be injured by processes of construction, demolition and/or site clearance on account of such neglect, and whenever an emergency shall arise and immediate action shall be considered necessary in order to protect public or private, persons or property interest, then the Architect and/or the Owner shall so instruct the Contractor.

10.3.3 If correction is not made in due time or if conditions such as lack of time prevent instructions to Contractor, then the Owner, without notice to the Contractor, may provide reasonable, suitable protection by causing such Work to be done and material to be furnished and placed as the Architect and Owner may consider necessary and adequate. The cost and expense of such work and

Initial _____

material so furnished shall be borne by the Contractor and, if the same shall not be paid on presentation of the bills thereof, such costs shall be deducted from any amounts due or to become due the Contractor. The performance of such emergency work under the direction of the Owner and/or Architect shall in no way relieve the Contractor of the responsibility for damages, which may occur during or after such performance.

10.3.4 None of the foregoing shall make the Owner and/or Architect responsible for foreseeing and protecting against emergency.

ARTICLE XI
INSURANCE

11.1 Contractor's Liability Insurance

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

- .1 claims under workers' compensation, disability benefits, and other similar employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- .4 claims for damages insured by personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;

.5 claims for damages, other than the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; and

.6 claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

Initial _____

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than any limits of liability specified in the Contract Documents, section III, paragraph 31, or required by law, whichever is greater.

11.1.3 The insurance required by Subparagraph 11.1.1 shall include contractual liability insurance applicable to the Contractors obligations under Paragraph 4.16.

11.1.4 All insurance policies maintained by the Contractor shall provide that insurance as applying to the Owner shall be primary and non-contributing irrespective of such insurance as the Owner may maintain in its own name and on its own behalf.

11.1.5 Certificates of Insurance acceptable to the Owner shall be filed with the Owner at the time of submittal of the Contract Documents to the Owner for execution. These certificates shall contain a provision that coverage's afforded under the policies will not be canceled until at least thirty-(30) days prior written notice has been given to the Owner. The Contractor shall immediately notify Shelby County Government, Contract Administration, 160 N. Main Street, Suite 550, Memphis, Tennessee 38103 of cancellation or changes in any of the insurance coverage required. Upon request of the Owner, certified copies of any of the required insurance policies may be requested from the Contractor or Contractor's insurance company, agency, or broker.

11.2 Owners Liability Insurance

11.2.1 The Owner shall at its discretion, purchase liability insurance or maintain a self-insured liability program.

11.3 Property Insurance

11.3.1 The General Contractor shall be responsible for all risk insurance for physical loss or damage for the project during construction until the project is accepted by the Owner at which time the Owner will provide the property coverage.

11.3.2 The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require such Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.3.3 The Contractor or his insurance agent, broker or insurance company shall furnish to Owner a copy of all policies with the Contactor within five days of request.

11.3.4 If the Owner requests in writing that insurance for risks other than those described in Subparagraphs 11.3 and 11.3.2 or 11.3.3 or other special hazards to be included in the property insurance policy, the Contractor shall, if possible, include such insurance, and the cost thereof shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order. Initial_____

ARTICLE XII
CHANGES IN THE WORK

12.1 **Change Orders**

12.1.1 A Change Order is a written order to the Contractor signed by the Owner issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time. The Contractor by execution of the Change Order waives any further claims or damages in any manner whatsoever for the changes set forth in the Change Order.

12.1.2 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:

Initial _____

- .1 by lump sum properly itemized on the form furnished by the Owner which shall show the actual verified cost of the work, plus ten percent overhead and five percent profit; if the work is performed by a Subcontractor, the General Contractor is allowed an additional five percent;
- .2 by unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 by cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 by the method provided in Subparagraph 11.1.4.

12.1.4 If none of the methods set forth in Clauses 12.1.3.1, 12.1.3.2, or 12.1.3.3 is agreed upon, the Contractor, provided he receive a written order signed by the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Architect on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit, which shall be defined as ten percent overhead and five percent profit with an additional five percent going to the General Contractor when the work is performed by a Subcontractor. In such case, and also under Clauses 12.1.3.3 and 12.1.3.4 above, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, cost shall be limited to the following: cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen compensation insurance; bond premiums, rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change. Pending final determination of cost to the Owner, payments on account shall be made on the Architect's Certificate for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.

Initial _____

12.2 Concealed Conditions

12.2.1 Should concealed conditions encountered in the performance of the Work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, Contractor, subject to approval by the Architect, shall be entitled to a time extension for only the period that the Contractor's performance is extended due to the unforeseen conditions.

12.3 Minor Changes in the Work

12.3.1 The Architect will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE XIII
UNCOVERING AND CORRECTION OF WORK

13.1 **Uncovering of Work**

13.1.1 If any portion of the Work should be covered contrary to the request of the Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is found not in accordance with the Contract Documents, the Contractor shall pay such costs. If the Work to be uncovered by the Contractor should have been inspected by the Architect prior to being covered, and the Work is found to be in accordance with the Contract Documents, the cost of the uncovering and recovering of the Work shall be borne by the Architect.

Initial _____

13.2 **Correction of Work**

13.2.1 The Contractor shall promptly correct all Work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the Architect's additional services made necessary thereby.

13.2.2 If, within one year after the Date of Substantial Completion of the Work or designated portion thereof, within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not

in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. This obligation shall survive termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the Work, which are defective or non-conforming, unless removal is waived by the Owner.

13.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in Subparagraphs 4.5.1, 13.2.1, and 13.2.2, the Owner may correct it in accordance with Paragraph 3.4.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may, upon ten additional days' written notice, sell such Work at auction or a private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Architect's additional services made necessary thereby. If such proceeds of sale do not cover all costs, which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

Initial _____

13.2.7 Nothing contained in Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his 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 his obligations other than specifically to correct the Work.

13.3 Acceptance of Defective or Non-Conforming Work

13.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effective whether or not final payment has been made.

ARTICLE XIV
TERMINATION OF THE CONTRACT

14.1 **Termination for Default**

14.1.1 Should the Contractor fail to perform in strict accordance with this Agreement, where or as Owner may so direct, or should the Contractor become insolvent, unable to or fail to pay its obligations as they mature or, in any other respect fail in the opinion of the Owner, to properly prosecute and perform any part of its work, fail to exert its best performance efforts, be involved in labor disputes, or be terminated under any other contract with Owner, then the Contractor may be deemed by Owner to have materially breached and to have defaulted in its obligations under this Agreement. In case of a breach and default, the Owner, at its discretion, may terminate this Agreement, or any part thereof, by giving five (5) days written notice thereof to the Contractor. In case of such termination, Owner may use any and all materials, equipment, tools or chattels furnished by or belonging to the Contractor either at or for the Project.

14.1.2 The Contractor, on termination, will be deemed to have offered to Owner an assignment of all of its subcontracts and purchase orders relating to this Project. Owner may, at its discretion, do whatever is necessary to assure performance of any

Initial _____

terminated work and to take such action, if necessary, in the Contractor's name. Owner may withhold from Contractor any monies due or to become due under this or any other contract between the Contractor and Owner, to offset the damages incurred or possibly incurred as a result of the breach and default by the Contractor. In case of a breach, or in the event Owner is required to retain the services of an attorney to enforce any provisions of this Agreement, then the Contractor and its surety company shall be liable to Owner for any and all additional costs, expenses, attorney's fees and other damages, both liquidated and unliquidated, which directly or indirectly result from the Contractor's breach, threatened breach, default or lack of performance of any term or condition of this Agreement.

14.1.3 If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the

Architect additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Architect, upon application, in the manner provided in Paragraph 9.4, and this obligation for payment shall survive the termination of this Contract.

14.2 Termination for Convenience

14.2.1 Owner, by written notice, shall have the right to terminate and cancel this Agreement, without the Contractor being at fault, for any cause or for its own convenience, and require the Contractor to immediately stop work. In such event, Owner shall pay the Contractor for that Work actually performed and materials furnished in an amount proportionate to the Contract price. Owner shall not be liable to the Contractor for any other costs, including prospective profits on Work not performed.

ARTICLE XV RIGHT TO OCCUPY BY OWNER

15.1 Early Occupancy by Owner

15.1.1 The Owner has the right to occupy or use ahead of schedule all or any substantially completed or partially completed portion of the Work when such occupancy and use are in its best interest, notwithstanding the time of completion for all of the Work. If occupancy or use increases the cost of the Work (other than for corrections which are the responsibility of the Contractor) and/or as a result of the Owner exercising its rights

Initial _____

herein, the contractor shall be entitled to extra costs and extensions of time, or both. Claims for such extra costs and extensions of time, to be valid, shall be made in writing to the Owner within seven (7) calendar days of the notification of Owner to the Contractor of its intent to so occupy or use.

15.2 Corrections after Occupancy

15.2.1 After the Owner has taken occupancy of all or any substantially completed portion of the Work, the Contractor shall not disrupt the use and occupancy of the Owner to make corrections in the Work but shall, at the discretion of the Owner, make such corrections at the expense of the Contractor after normal working hours.

15.3 Heating, Ventilating, and Air-Conditioning Systems

15.3.1 The Owner may require the use and operation of any completed heating, ventilating, and air-conditioning equipment at the time it occupies or uses any substantially completed portion of the Work. In such event, the Owner may require the Contractor to operate such equipment and will pay the Contractor the cost of such utilities required for the use and occupancy of the Owner, but the Contractor shall be responsible for such equipment and for its careful and proper operation. At any time, the Owner may assume the care and maintenance of any portion of the Work, which it is occupying and using for the operation of any such equipment, but in each case, the Contractor shall not be relieved of its responsibility for the full completion of the Work and the protection of its tools, materials, and equipment.

**ARTICLE XVI
REGULATIONS**

16.1 Nondiscrimination in Employment

16.1.1 During the performance of this Contractual Agreement, the contracting party agrees as follows: The CONTRACTOR agrees that no person on the grounds of handicap, age, race, color, religion, sex, or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subject to discrimination in the performance of this contract, or in the employment practices of the CONTRACTOR. The CONTRACTOR shall upon request show proof of such non-discrimination, and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

16.2 [RESERVED]

Initial _____

16.3 Maintenance and Records

16.3.1 The Contractor and all Subcontractors under the General Contract shall maintain copies of every subcontract awarded and their own payrolls, for each weekly payroll period during the term of the Construction Contract and for a period of one (1) year after release and payment is made by Owner to the Contractor.

16.4 Owner's Right of Inspection

16.4.1 Representative of the Owner, as designated by the County Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the life of the Construction Contract for a period of one (1) year after final release and final payment

by the Owner for the purpose of verifying nondiscrimination in employment.

**ARTICLE XVII
PROCEDURE FOR INSTALLATION OR
REMOVAL OF FIBERGLASS INSULATION**

The following procedures should be adhered to when disturbing, installing, or removing fiberglass insulation. These procedures are established to minimize employee exposure to the adverse health affects of fiberglass exposure.

The below procedures are the minimal requirements for handling fiberglass in Shelby County Facilities. Mandates by code or law must be adhered to.

17.1 Installation, Removal, or Disturbance of Fiberglass Insulation

17.1.1 Install in well-ventilated areas and avoid breathing dust.

17.1.2 Wear loose, comfortable clothing and long-sleeved shirts to minimize skin contact.

17.1.3 Handle carefully to minimize airborne dust.

17.1.4 If high dust levels are anticipated during installation, such as with power tools, use appropriate NIOSH approved dust respirator.

17.1.5 All power cutting tools must be equipped with dust collectors.

Initial _____

17.2 Exposure

17.2.1 After use, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated. Utilize running water.

17.2.2 Wash work clothes separately, and then rinses the washer.

17.2.3 Eye exposure: Flush with flowing water for at least 15 minutes. If symptoms persist, seek immediate medical attention.

17.3 Work Site Environment

17.3.1 Insure area is free of obvious partials through proper cleanup procedures. Use of vacuum with proper filters, or wet cleanup is acceptable. (This includes office furniture, floors, and walls.)

17.3.2 Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Notify building manager or other appropriate person that it will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of the building. Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

17.3.3 Exposure to employees should be kept to a minimum.

17.3.4 Disturbance of ceiling tiles where fiberglass insulation exists requires the same procedures as if installation or removal was taking place.

BY THE SIGNING OF THIS DOCUMENT AND INITIALING EACH PAGE HEREOF, THE CONTRACTOR CERTIFIES THAT HE HAS READ AND UNDERSTANDS ALL OF THE ABOVE AND AGREES TO ABIDE BY THESE GENERAL CONSTRUCTION CONDITIONS.

CONTRACTOR

BY: _____

TITLE: _____

DATE: _____

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

(Here insert full name and address or legal title of Contractor>

as Principal, hereinafter called the Principal, and

(Here insert full name and address or legal title of Surety>

a corporation duly organized under the laws of the State of
as Surety, hereinafter called the Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called the Obligee, in the sum of

Dollars (\$ _____),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

(Here insert full name, address and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this

day of

19

(Principal)

(Seal)

(Witness)

(Title)
(Surety)

(Seal)

(Witness)

(Title)

THIS IS A DRAFT ONLY!! ORIGINAL DOCUMENTS IN EXECUTED FORM ARE REQUIRED PRIOR TO COUNTY SIGNATURE. IT IS A MANDATORY REQUIREMENT THAT ALL DOCUMENTS WHICH ARE REQUIRED TO BE ATTACHED TO THIS AGREEMENT BE ATTACHED BEFORE SUBMITTAL TO SHELBY COUNTY FOR SIGNATURE. IF NOT, THE AGREEMENT WILL BE RETURNED FOR COMPLETION.

COUNTY/CONTRACTOR AGREEMENT

OWNER: SHELBY COUNTY GOVERNMENT
160 N. MAIN ST.
MEMPHIS, TN 38103

CONTRACTOR:

**ARCHITECT\
ENGINEER:**

THIS CONTRACT made and entered into this _____ day of _____, 20__, by and between SHELBY COUNTY GOVERNMENT, through its governing body and authorized representative, party of the first part, hereinafter referred to as "COUNTY," and _____, party of the second part, hereinafter referred to as "CONTRACTOR."

WITNESSETH

WHEREAS, the COUNTY issued Sealed Bid No. _____ for _____, hereinafter in this Contract referred to as "PROJECT".

WHEREAS, the said CONTRACTOR submitted a bid/proposal in accordance with bid specifications, a copy of which is attached hereto as Exhibit "A" and incorporated herein by reference, which bid was accepted by COUNTY.

NOW, THEREFORE, CONTRACTOR agrees and undertakes to **(describe work to be done)** in accordance with the Bid Specifications which are on file in the Shelby County Purchasing Department and which are incorporated herein by reference, and at the price quoted for said PROJECT by CONTRACTOR. Further, the parties agree that they will be governed by the Shelby County General Conditions of the Contract for work to be performed. The Contractor acknowledges that it has read and is familiar with the contents of said General Conditions, agrees to be bound thereby and has executed a copy of same at the place indicated thereon. A copy of said General Conditions is attached hereto as Exhibit "B" and incorporated fully herein by reference.

SECTION 1. CONTRACTOR'S RESPONSIBILITIES

1. CONTRACTOR shall perform all necessary work required by the contract documents for the satisfactory completion in full of the PROJECT.
2. CONTRACTOR shall coordinate all work with COUNTY through _____. Work shall be scheduled on a regular basis in as timely and orderly a manner as possible.
3. The CONTRACTOR shall give a Performance Bond and Labor and Material Bond, each equal to 100% of the amount of the Contract, with surety to be approved by the COUNTY, conditioned upon the full and faithful performance of all the terms and conditions of the Contract with special reference to paying in full in lawful money of the United States, all just and valid claims for material and labor entered into for the said work covered by this Contract. That further, this Contract shall not take effect until these Bonds have been executed and approved by the County.
4. The CONTRACTOR further agrees to provide insurance coverage of the type and in the amounts as required in section III, Specific Provision, paragraph 31.
5. The COUNTY shall pay the CONTRACTOR for the performance of the Contract _____ (\$)Dollars, subject to additions and deductions as provided in the contract documents.

6. The CONTRACTOR shall execute the entire work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others, within _____ (__) calendar days from the actual start date as specified in the written "Notice to Proceed."
7. All work by CONTRACTOR is to be performed in a manner satisfactory to COUNTY, and in accordance with the established customs, practices and procedures of COUNTY. CONTRACTOR is to periodically request sufficient conferences to insure that the work is being done by CONTRACTOR in a satisfactory manner in accordance with the wishes of COUNTY.

SECTION II. METHOD OF PAYMENT

1. CONTRACTOR shall provide an Application for Payment to be received by the Architect/Engineer not later than the 25th day of each month. COUNTY shall make payment to the CONTRACTOR not later than the 20th day of the following month. If an Application for Payment is received by the Architect/Engineer after the application date fixed above, payment shall be made by COUNTY not later than forty-five (45) days after receipt of the Application for Payment. If the CONTRACTOR submits an incorrect Application for Payment, payment date will be extended thirty (30) days from the date of correction.
2. Application for payment shall indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment.
3. Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
 - a. Take that portion of the contract sum properly allocable to completed work as determined by multiplying the percentage completion of each portion of the work by the total Contract Sum less retainage of five (5%) percent;
 - b. Add 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 COUNTY, suitably stored off the site at a location agreed upon in writing), less retainage of five (5%) percent;

- c. Subtract the aggregate of previous payments made by the COUNTY; and
 - d. Subtract amounts, if any, for which the Architect/Engineer has withheld or nullified a Certificate of Payment as provided in the General Conditions to Construction Contracts.
4. When all work embraced in this Contract has been fully and completely performed on the part of the CONTRACTOR, and accepted by the COUNTY, there shall be a statement by CONTRACTOR of the work done according to the terms herein, and the balance appearing to be due the CONTRACTOR out of funds applicable for payment for this work, excepting there from any sum that may be lawfully retained under the provisions of this Contract, Specifications, and General Conditions to Construction Contracts and all such funds as may be due the COUNTY.
 5. The COUNTY shall have the right, at its option, to discharge the CONTRACTOR for any breach of any provision of this Contract, and such discharge shall not affect the right of the COUNTY against sureties on the Bonds provided.
 6. It is further mutually agreed between the parties hereto that if at any time after the execution of this Contract and the Surety Bonds attached hereto for its faithful performance, the COUNTY shall deem the surety or sureties upon such bond inadequate to cover the performance of the work, the CONTRACTOR shall, at its expense, within five (5) days after the receipt of notice from the COUNTY so to do, furnish as additional bond or bonds, in satisfactory amount to the COUNTY. In such event, no further payment to the CONTRACTOR shall be deemed due under this Contract until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the COUNTY.
 7. CONTRACTOR further agrees to provide COUNTY an amount equal to _____ (\$) Dollars per day for liquidated damages for each consecutive calendar day required for the completion of the contract beyond the time stipulated. **(NOTE: If this paragraph is inapplicable, then N/A [not applicable] should be inserted in the applicable space.)**
 8. Other contract provisions, including but not limited to

insurance provisions may be required to enter into a contract with Shelby County Government.

SECTION III. SPECIFIC PROVISIONS

The parties further agree as follows:

1. CONTROL

All Services by the CONTRACTOR will be performed in a manner satisfactory to the COUNTY, and in accordance with the generally accepted business practices and procedures of the COUNTY.

2. CONTRACTOR'S PERSONNEL

The CONTRACTOR certifies that it presently has adequate qualified personnel to perform all Services required under this Contract. All work performed during the Term of this Contract will be supervised by the CONTRACTOR. The CONTRACTOR further certifies that all of its employees assigned to serve the COUNTY have such knowledge and experience as required to perform the duties assigned to them. Any employee of the CONTRACTOR who, in the opinion of the COUNTY, is incompetent, or whose conduct becomes detrimental to the work, shall immediately be removed from association with the Services under this Contract.

3. INDEPENDENT STATUS

a. Nothing in this Contract shall be deemed to represent that the CONTRACTOR, or any of the Contractor's employees or agents, are the agents, representatives, or employees of the COUNTY. The CONTRACTOR will be an independent CONTRACTOR over the details and means for performing the Services under this Contract. Anything in this Contract which may appear to give the COUNTY the right to direct the CONTRACTOR as to the details of the performance of the Services under this Contract or to exercise a measure of control over the CONTRACTOR is solely for purposes of compliance with local, state and federal regulations and means that the CONTRACTOR will follow the desires of the COUNTY only as to the intended results of the scope of this Contract.

- b. It is further expressly agreed and understood by CONTRACTOR that neither it nor its employees or agents are entitled to any benefits which normally accrue to employees of the COUNTY; that CONTRACTOR has been retained by the COUNTY to perform the Services specified herein (not hired) and that the remuneration specified herein is considered fees for the Services performed (not wages) and that invoices submitted to the COUNTY by CONTRACTOR for the Services performed shall be on the Contractor's letterhead.

4. REPORTS

CONTRACTOR shall prepare and submit quarterly reports of its activities, funded under this Contract, to the originating department and the Contract Administration Department of the COUNTY. The reports shall include an itemization of the use of County's funds, inclusive of specific Services delivered. Any such reports provided to the COUNTY shall be prepared with the understanding that the COUNTY may make such reports available to the public. The quarterly reports and all books of account and financial records that are specific to the work performed in accordance with this Contract may be subject to audit by the Director of the Division of Administration and Finance of the COUNTY. The COUNTY shall have the right to withhold future disbursement of funds under this Contract and any future Contracts until this provision has been met.

5. TERMINATION OR ABANDONMENT

- a. It shall be cause for the immediate termination of this Contract if, after its execution, the COUNTY determines that:
 - i) Either the CONTRACTOR or any of its principals, partners or corporate officers, if a corporation, including the corporation itself, has plead nolo contendere, or has plead or been found guilty of a criminal violation, whether state or federal, involving, but not limited to, governmental sales or purchases, including but not limited to the rigging of bids, price fixing, or any other collusive and illegal activity pertaining to bidding and governmental contracting; or
 - ii) CONTRACTOR has subcontracted, assigned, delegated, transferred its rights, obligations or interests

under this Contract without the County's consent or approval; or

iii) CONTRACTOR has filed bankruptcy, become insolvent or made an assignment for the benefit of creditors, or a receiver, or similar officer has been appointed to take charge of all or part of CONTRACTOR assets.

b. The COUNTY may terminate the Contract upon five (5) days written notice by the COUNTY or its authorized agent to the CONTRACTOR for Contractor's failure to provide the Services specified under this Contract.

c. This Contract may be terminated by either party by giving thirty (30) days written notice to the other, before the effective date of termination (the "Termination Date"). In the event of such termination, the CONTRACTOR shall be paid for all Services rendered prior to the Termination Date, provided the CONTRACTOR shall have delivered to COUNTY such statements, accounts, reports and other materials as required under this Contract; however, CONTRACTOR shall not be compensated for any anticipatory profits that have not been earned as of the date of the Termination Date. All Services completed by CONTRACTOR prior to the Termination Date shall be documented and tangible work documents shall be transferred to and become the sole property of the COUNTY prior to payment for the Services rendered.

d. Notwithstanding the above or any section herein to the contrary, CONTRACTOR shall not be relieved of liability to the COUNTY for damages sustained by the COUNTY by virtue of any breach of the Contract by CONTRACTOR and the COUNTY may withhold any payments to CONTRACTOR for the purpose of setoff until such time as the exact amount of damages due the COUNTY from CONTRACTOR is determined.

6. COMPENSATION FOR CORRECTIONS

No compensation shall be due or payable to CONTRACTOR pursuant to this Contract for any Contractor's Services performed by the CONTRACTOR in connection with effecting of corrections to the design of the Services, when such corrections are required as a direct result of negligence by the CONTRACTOR to properly fulfill any of his obligations as set forth in this Contract.

7. SUBCONTRACTING, ASSIGNMENT OR TRANSFER

- a. Any subcontracting, assignment, delegation or transfer of all or part of the rights, responsibilities, or interest of either party to this Contract is prohibited unless by written consent of the other party. No subcontracting, assignment, delegation or transfer shall relieve the CONTRACTOR from performance of the Services under this Contract. The COUNTY shall not be responsible for the fulfillment of the Contractor's obligations to its transferors or subcontractors.
- b. Upon the request of the other party, the subcontracting, assigning, delegating or transferring party shall provide all documents evidencing the subcontract, assignment, delegation or transfer.

8. CONFLICT OF INTEREST

The CONTRACTOR covenants that it has no public or private interest, and will not acquire directly or indirectly any interest, which would conflict in any manner with the performance of the Services. The CONTRACTOR warrants that no part of the total Contract Fee shall be paid directly or indirectly to any officer or employee of the COUNTY as wages, compensation, or gifts in exchange for acting as officer, agent, employee, subcontractor or consultant to the CONTRACTOR in connection with any work contemplated or performed relative to this Contract.

9. CONTINGENT FEES

The CONTRACTOR warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the CONTRACTOR, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONTRACTOR any fee, commission, percentage, brokerage fee, gift, or any other consideration contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the COUNTY will have the right to recover the full amount of such fee, commission, percentage, brokerage fee, gift, or other consideration.

10. EMPLOYMENT OF COUNTY WORKERS

The CONTRACTOR will not engage, on a full, part-time, or any other basis during the Term of the Contract, any professional or technical personnel who are or have been at any time during

the Term of the Contract in the employ of the COUNTY.

11. ACCESS TO RECORDS

During all phases of the work and Services to be provided hereunder, CONTRACTOR agrees to permit duly authorized agents and employees of the COUNTY to enter Contractor's offices for the purpose of inspections, reviews, and audits during normal working hours. Reviews may also be accomplished at meetings that are arranged at mutually agreeable times and places. The CONTRACTOR will maintain all books, documents, papers, accounting records, and other evidence pertaining to the Fee paid under this Contract and make such materials available at their offices at all reasonable times during the Term of this Contract and for three (3) years from the date of payment under this Contract for inspection by the COUNTY or by any other governmental entity or agency participating in the funding of this Contract, or any authorized agents thereof. Copies of said records shall be furnished to the COUNTY upon request.

12. ARBITRATION

Any dispute concerning a question of fact in connection with the work not disposed of by agreement between the CONTRACTOR and the COUNTY will be referred to the Shelby County Contract Administrator or its duly authorized representative, whose decision regarding same will be final.

13. RESPONSIBILITIES FOR CLAIMS AND LIABILITIES

a. CONTRACTOR shall indemnify, defend, save and hold harmless the COUNTY, and its elected officials, officers, employees, agents, assigns, and instrumentalities from and against any and all claims, liability, losses or damages—including but not limited to Title VII and 42 USC 1983 prohibited acts—arising out of or resulting from any conduct; whether actions or omissions; whether intentional, unintentional, or negligent; whether legal or illegal; or otherwise that occur in connection with or in breach of this Contract or in the performance of the Services hereunder, whether performed by the CONTRACTOR its subcontractors, agents, employees or assigns. This indemnification shall survive the termination or conclusion of this Contract.

b. CONTRACTOR expressly understands and agrees that any insurance protection required by this Contract or

otherwise provided by the CONTRACTOR shall in no way limit the responsibility to indemnify, defend, save and hold harmless the COUNTY or its elected officials, officers, employees, agents, assigns, and instrumentalities as herein provided.

- c. The COUNTY has no obligation to provide legal counsel or defense to CONTRACTOR or its subcontractors in the event that a suit, claim or action of any character is brought by any person not a party to this agreement against CONTRACTOR as a result of or relating to performance of the Services under this Contract.
- d. Except as expressly provided herein, the COUNTY has no obligation for the payment of any judgment or the settlement of any claims against CONTRACTOR as a result of or relating to performance of the Services under this Contract.
- e. CONTRACTOR shall immediately notify the COUNTY of any claim or suit made or filed against CONTRACTOR or its subcontractors regarding any matter resulting from or relating to Contractor's performance of the Services under this Contract and will cooperate, assist and consult with the COUNTY in the defense or investigation thereof.

14. GENERAL COMPLIANCE WITH LAWS

- a. The CONTRACTOR certifies that it is qualified or will take steps necessary to qualify to do business in the State of Tennessee and that it will take such action as, from time to time, may be necessary to remain so qualified and it shall obtain, at its expense all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of the Services under this Contract.
- b. The CONTRACTOR is assumed to be familiar with and agrees that at all times it will observe and comply with all federal, state, and local laws, ordinances, and regulations in any manner affecting the performance of the Services. The preceding shall include, but is not limited to, compliance with all Equal Employment Opportunity laws, the Fair Labor Standards Act, Occupational Safety and Health Administration (OSHA) requirements, and the Americans with Disabilities Act (ADA).

c. This Contract will be interpreted in accordance with the laws of the State of Tennessee. By execution of this Contract, the CONTRACTOR agrees that all actions, whether sounding in contract or in tort, relating to the validity, construction, interpretation and enforcement of this Contract will be instituted and litigated in the courts of the State of Tennessee, located in Shelby County, Tennessee, and in no other. In accordance herewith, the parties to this Contract submit to the jurisdiction of the courts of the State of Tennessee located in Shelby County, Tennessee.

15. NON-DISCRIMINATION

The CONTRACTOR hereby agrees, warrants, and assures compliance with the provisions of Title VI and VII of the Civil Rights Act of 1964 and all other federal statutory laws which provide in whole or in part that no person shall be excluded from participation or be denied benefits of or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the CONTRACTOR on the grounds of handicap and/or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee State Constitutional or statutory law. The CONTRACTOR shall upon request show proof of such non-discrimination and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

16. ENTIRE AGREEMENT

This Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations or agreements, whether oral or written.

17. AMENDMENT

This Contract may be modified or amended only by written instrument signed by both parties.

18. SEVERABILITY

If any provision of this Contract is held to be unlawful, invalid or unenforceable under any present or future laws, such provision shall be fully severable; and this Contract shall then be construed and enforced as if such unlawful, invalid or unenforceable provision had not been a part hereof. The remaining provisions of this Contract shall remain in full

force and effect and shall not be affected by such unlawful, invalid or unenforceable provision or by its severance here from. Furthermore, in lieu of such unlawful, invalid, or unenforceable provision, there shall be added automatically as a part of this Contract a legal, valid and enforceable provision as similar in terms to such unlawful, invalid or unenforceable provision as possible.

19. NO WAIVER OF CONTRACTUAL RIGHT

No waiver of any term, condition, default, or breach of this Contract, or of any document executed pursuant hereto, shall be effective unless in writing and executed by the party making such waiver; and no such waiver shall operate as a waiver of either (a) such term, condition, default, or breach on any other occasion or (b) any other term, condition, default, or breach of this Contract or of such document. No delay or failure to enforce any provision in this Contract or in any document executed pursuant hereto shall operate as a waiver of such provision or any other provision herein or in any document related hereto. The enforcement by any party of any right or remedy it may have under this Contract or applicable law shall not be deemed an election of remedies or otherwise prevent such party from enforcement of one or more other remedies at any time.

20. MATTER TO BE DISREGARDED

This title of the several sections, subsections, and paragraphs set forth in this Contract are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of the provisions of this Contract.

21. SUBJECT TO FUNDING

This Contract is subject to annual appropriations of funds by the Shelby County Government. In the event sufficient funds for this Contract are not appropriated by Shelby County Government for any of its fiscal period during the Term hereof, then this Contract will be terminated. In the event of such termination, the CONTRACTOR shall be entitled to receive just and equitable compensation for any satisfactory work performed as of the Termination Date.

22. TRAVEL EXPENSES (If Applicable)

All travel expenses payable under this Contract shall be in

accordance with the County Travel Policy and Procedures. This includes advance written travel authorization, submission of travel claims, documentation requirements, and reimbursement rates. No travel advances will be made by the County.

23. PERFORMANCE AND LABOR AND MATERIALS BONDS

CONTRACTOR will provide COUNTY within ten (10) days from inception date of this Contract a Performance and Labor and Materials Bond each in the amount of 100% of the Contract price for each year that this contract is in effect. Said Bonds may be pro-rated for the initial year in the event that this period of time is less than a full twelve (12) month period.

24. NON-LIABILITY FOR CONTRACTOR EMPLOYEE TAXES

Neither CONTRACTOR nor its personnel are County's employees, and COUNTY shall not take any action or provide Contractor's personnel with any benefits and shall have no liability for the following:

- a. Withholding FICA (Social Security) from Contractor's payments;
- b. Making state or federal unemployment insurance contributions on behalf of CONTRACTOR or its personnel;
- c. Withholding state and federal income tax from payment to CONTRACTOR;
- d. Making disability insurance contributions on behalf of CONTRACTOR;
- e. Obtaining workers' compensation insurance on behalf of CONTRACTOR or Contractor's personnel.

25. INCORPORATION OF OTHER DOCUMENTS

- a. CONTRACTOR shall provide Services pursuant to this Contract in accordance with the terms and conditions set forth within the Shelby County Request for Proposals/Bids as well as the Response of CONTRACTOR thereto, all of which are maintained on file within the Shelby County Purchasing Department and incorporated herein by reference.
- b. It is understood and agreed between the parties that in

the event of a variance between the terms and conditions of this Contract and any amendment thereto and the terms and conditions contained either within the Request for Proposals/Bids or the Response thereto, the terms and conditions of this Contract as well as any amendment shall take precedence and control the relationship and understanding of the parties.

26. CONTRACTING WITH LOCALLY OWNED SMALL BUSINESSES

The CONTRACTOR shall take affirmative action to assure that Locally Owned Small Businesses that have been certified by the COUNTY are utilized when possible as sources of supplies and equipment, construction and services.

27. RIGHT TO REQUEST REMOVAL OF Contractor's EMPLOYEES

The COUNTY may interview the personnel CONTRACTOR assigns to County's work. COUNTY shall have the right, at any time, to request removal of any employee(s) of CONTRACTOR, whom COUNTY deems to be unsatisfactory for any reason. Upon such request, CONTRACTOR shall use all reasonable efforts to promptly replace such employee(s) with substitute employee(s) having appropriate skills and training.

28. INCORPORATION OF WHEREAS CLAUSES

The foregoing whereas clauses are hereby incorporated into this Contract and made a part hereof.

29. DISCLOSURE OF REPORTS, DATA OR OTHER INFORMATION

Notwithstanding anything to the contrary contained herein or within any other document supplied to COUNTY by CONTRACTOR, CONTRACTOR understands and acknowledges that COUNTY is a governmental entity subject to the laws of the State of Tennessee and that any reports, data or other information supplied to COUNTY by CONTRACTOR due to Services performed pursuant to this Contract is subject to being disclosed as a public record in accordance with the laws of the State of Tennessee.

30. ORGANIZATION STATUS AND AUTHORITY

a. CONTRACTOR represents and warrants that it is a corporation, limited liability company, partnership, or other entity duly organized, validly existing and in good standing under the laws of the state of Tennessee; it has

the power and authority to own its properties and assets and is duly qualified to carry on its business in every jurisdiction wherein such qualification is necessary.

- b. The execution, delivery and performance of this Contract by the CONTRACTOR has been duly authorized by all requisite action and will not violate any provision of law, any order of any court or other agency of government, the organizational documents of CONTRACTOR, any provision of any indenture, agreement or other instrument to which CONTRACTOR is a party, or by which Contractor's respective properties or assets are bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the creation or imposition of any lien , charge or encumbrance of any nature whatsoever upon any of the properties or assets.

31. INSURANCE REQUIREMENTS

- a. The CONTRACTOR shall purchase and maintain, in a company or companies licensed to do business in the State of Tennessee, such insurance as will protect the County from claims which may arise out of or result from the Contractor's operations under the Contract, whether such operations are performed by himself or by any subcontractors or by anyone directly or indirectly employed by any of them, or by anyone for whose acts the CONTRACTOR or subcontractor may be liable.
- b. The insurance required shall be written for not less than any limits of liability specified or required by law, whichever is greater. Shelby County Government, its elected officials, appointees and employees will be named as additional insured. All policies will provide for thirty (30) days written notice to COUNTY of cancellation or material change in coverage provided. The Contractor shall immediately notify Shelby county Government, Contract Administration, 160 N. Main Street, Suite 550, Memphis, Tennessee of cancellation or changes in any of the insurance coverage required. The CONTRACTOR will maintain throughout the life of this Contract insurance, through insurers rated A- or better by A.M. Best, in the following minimum requirements:

- i) Commercial General Liability Insurance-
 \$1,000,000.00 limit per occurrence for bodily
 injury and property damage/\$1,000,000.00 personal
 and advertising injury/\$2,000,000.00 General
 Aggregate/\$2,000,000.00 Products-Completed
 Operations Aggregate. Shelby County Government, its
 elected officials, appointees, employees,
 volunteers, and members of boards, agencies, and
 commissions will be listed as additional insured
 regarding operations under this program. The
 insurance shall include coverage for the following:
 - a) Premises/Operations
 - b) Products/Completed Operations
 - c) Personal Injury
 - d) XCU coverage, where applicable
 - e) Contractual Liability
 - f) Independent Contractors
 - g) Broad Form Property Damage
 - h) When contract is awarded, the Contractor will
 be required to provide the County with a copy
 of the additional insured endorsement.

- ii) Business Automobile Liability Insurance -
 \$1,000,000.00 each accident for bodily injury and
 property damage. Coverage is to be provided on all:
 - a) Owned/Leased Autos
 - b) Non-owned Autos
 - c) Hired Autos

- iii) Workers Compensation and Employer's liability
 Insurance - All owners, sole proprietors, partners,
 and officers will elect to be covered by workers
 compensation coverage, regardless of requirement by
 Tennessee state status. Policy is to be
 specifically endorsed to include these individuals
 for coverage. Coverage is to include:
 - a. Employers Liability Coverage for \$1,000,000 per
 accident;
 - b. Employers Liability Disease each employee
 \$1,000,000; and
 - c. Employers Liability Disease Policy Limit
 \$1,000,000

Note: The Contractor's workers compensation policy will include the following endorsement: WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT: (form WC 00 03 13) A completed copy of this form will be included in documents provided to Shelby County Government by Provider's insurance company.

- iv) Builders Risk Insurance or Installation Floater (as applicable) for project. - All risk coverage in the amount of replacement cost of the structure/equipment, which is to be built or installed.
- c. CONTRACTOR shall provide County with a current copy of the Certificate of Insurance at the time of contracting and shall maintain said insurance during the entire Contract period as well as provide renewal copies on each anniversary date. The certificate holder is to read:

Shelby County Government
Purchasing Department
160 N. Main, Suite 550
Memphis, TN 38103

- d. Self insured retentions or deductibles of \$25,000 or over per loss or claims must be reviewed and agreed to by Shelby County Government prior to commencement of work under this program.

All policies will provide for 30 day written notice to Shelby County of cancellation of coverage provided. Ten (10) days notice applicable to non-payment of premium. If insurer is not required by the policy terms and conditions to provide written notice of cancellation to Shelby County, the Contractor//Contractor will provide immediate notice to Shelby County.

32. NOTICE

Any notices required or permitted to be given under the provisions of this Contract shall be effective only if in writing and delivered either in person to the County's authorized agent or by First Class or U.S. Mail to the addresses set forth in the Contract, or to such other person or address as either party may designate in writing and deliver as herein provided.

33. HIPAA (If applicable)

CONTRACTOR warrants to the COUNTY and State that it is familiar with the requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and its accompanying regulations, and will comply with all applicable HIPAA requirements in the course of this Contract. CONTRACTOR warrants that it will cooperate with the COUNTY and State in the course of performance of the Contract so that all parties will be in compliance with HIPAA, including cooperation and coordination with COUNTY and State privacy officials and other compliance officers required by HIPAA and its regulations. CONTRACTOR will sign any documents that are reasonably necessary to keep the State and the COUNTY in compliance with HIPAA, including, but not limited to, business associate agreements.

It is agreed that the following documents are made a part of and incorporated fully into this construction Contract:

1. Performance Bond
2. Labor and Material Bond
3. Insurance Certificate
4. Bid Specifications (SB #_____, _____)
5. Contractor's Bid/Proposal (Exhibit "A")
6. General Conditions to Contract (Exhibit "B")
7. List of subcontractors who will be performing work on project with attached required information per Exhibit "C"

NOTE: THE ABOVE DOCUMENTS MUST BE ATTACHED BEFORE EXECUTION OF THIS AGREEMENT BY SHELBY COUNTY.

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five(5) or more employees contracting with _____ County government to provide construction services states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the “Company”), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A.~ 50-9-113. Further affiant saith not.

Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared _____ with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this ___ day of _____ 20__

Notary Public
My commission expires:

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A311

Labor and Material Payment Bond

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT

KNOW ALL MEN BY THESE PRESENTS: that

(Here insert full name and address or legal title or contractor)

as Principal, hereinafter called Principal, and,

(Here insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the

amount of

(Here insert a sum equal to at least one-half of the contract price)

Dollars (\$

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated

19

entered into a contract with Owner for

(Here insert full name, address and description of project)

in accordance with Drawings and Specifications prepared by

(Here insert full name and address or legal title of Architect)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

LABOR AND MATERIAL PAYMENT BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimants work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial

Signed and sealed this

(W(nc~s)
(Vvilnss)

day of

accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

	19
<i>(Principal)</i>	
<i>(Tillt)</i>	
<i>(Surt'ly)</i>	(Seal)

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A311

Performance Bond



KNOW ALL MEN BY THESE PRESENTS: that

(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and,

(Here insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called Owner, in the amount of

Dollars (\$ _____),

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____
(Here insert full name, address and description of project)

19 _____ entered into a contract with Owner for

in accordance with Drawings and Specifications prepared by

(Here insert full name and address or legal title of Architect)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

PERFORMANCE BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of

defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this

day of

20

**SHELBY COUNTY GENERAL CONDITIONS OF THE
CONTRACT FOR CONSTRUCTION**

Rev. 5/24/99

constcnd.doc

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE I CONTRACT DOCUMENTS

1.1 Definitions

1.1.1 The Contract Documents

The Contract Documents consist of the Owner-Contractor Agreement, the conditions of the Contract (General, Supplementary and other conditions), the Drawings, the Specifications, and all Addenda issued prior to and all 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 written interpretation issued by the Engineer pursuant to Subparagraph 2.2.8, or (4) a written order for a minor change in the Work issued by the Engineer pursuant to Paragraph 12.3. The Contract Documents include Bidding Documents such as the Advertisement or Invitation to Bid, the Instructions to Bidders, sample forms, the Contractor Bid, or portions of Addenda relating to any of these, and other documents specifically enumerated in the Owner-Contractor Agreement.

1.1.2 The Contract

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Engineer and the Contractor, but the Engineer shall be entitled to performance of obligations intended for his benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Engineer or any Subcontractor or sub-subcontractor.

1.1.3 The Work

The Work comprises the completed construction required by the contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 The Project

The Project is the total construction of which the Work performed under these Contract Documents may be the whole or a part.

1.2 Execution Correlation and Intent

1.2.1 The Contract Documents shall be signed in not less than four originals by the Owner and Contractor. If either Owner or Contractor or both do not sign the Conditions of the Contract, Drawings, Specifications, or any of the other Contract Documents, the Engineer shall identify such Documents.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not specifically set forth in the Contract Documents will not be required unless it is consistent with work that is specifically set forth in the Contract Documents or is reasonably inferable from the Contract Documents as being necessary to produce the intended results. Words and abbreviations, which have well-known technical or trade meanings, are used in the Contract Documents in accordance with such recognized meanings.

1.2.4 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Sub-contractors or in establishing the extent of Work to be performed by any trade.

1.3 Ownership and Use of Documents

1.3.1 All Drawings, Specifications, and copies thereof furnished by the Engineer are the property of the Owner. They are to be used only with respect to this Project and are not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Engineer on request at the completion of the Work. Submission 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 Engineer common law copyright or other reserved rights. The Engineer will furnish, free of charge, to the Contractor sufficient sets of Contract Documents to execute the Work not to exceed Five (5). The Contractor may purchase additional sets by paying reproduction costs.

Initial _____

ARTICLE II ENGINEER

2.1 Definition

2.1.1 The Engineer is the person lawfully licensed to practice Engineering, or any entity lawfully practicing Engineering identified as such in the Owner-Contractor Agreement, and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Engineer means the Engineer or his authorized representative.

2.2 Administration of the Contract

2.2.1 The Engineer will provide administration of the Contract as hereinafter described.

2.2.2 The Engineer will be the Owner representative during construction and until final payment is due. The Engineer will advise and consult with the Owner. The Owner instructions to the Contract shall be forwarded through the Engineer. The Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument signed by the Owner.

2.2.3 The Engineer will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations as an Engineer, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.

2.2.4 The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Engineer will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other

persons performing any of the Work.

Initial _____

2.2.5 The Engineer shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Engineer may perform his functions under the contract documents.

2.2.6 Based on the Engineers observations and an evaluation of the Contractor Applications for Payment, the Engineer will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts as provided in Paragraph 9.4.

2.2.7 The Engineer will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon so as to cause no delay the Project. Either party to the Contract may make written request to the Engineer for such interpretations.

2.2.8 All interpretations and decisions of the Engineer shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

2.2.9 The Engineers decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents. The Engineer shall rule on all claims and disputes that relate to the interpretation of the Contract Documents.

2.2.10 The Engineer will have authority to reject Work, which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.7.2 whether or not such Work is then fabricated, installed or completed. In the event the Engineer determines that any Work deleted by the Contractor should have been performed by the Contractor under the Contract Documents, he shall issue a final determination that the Contractor shall proceed with the Work as directed by the Engineer, and the Contractor shall proceed with the Work even if he is in disagreement with the decision of the Engineer.

2.2.11 The Engineer will review and approve or take other appropriate action under Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Engineers approval of a specific item shall not indicate approval of an assembly of which

the item is a component.

Initial _____

2.2.12 The Engineer will prepare Change Orders in accordance with Article 12 and will have the authority to order minor changes in the Work as provided in Subparagraph 12.3.

2.2.13 The Engineer will conduct inspections to determine the dates of Substantial Completion and completion will receive and forward to the Owner for the Owner review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a Final Certificate for Payment upon compliance with the requirements of Paragraph 9.8.

ARTICLE III **OWNER**

3.1 Definition

3.1.1 The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner, or his authorized representative.

3.2 Information and Services Required of the Owner

3.2.1 The Owner or Engineer shall furnish all surveys describing the physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the site.

3.2.2 Except as provided in Subparagraph 4.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.3 Information or services under the Owner control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of Drawings and Specifications reasonably necessary for the execution of the Work.

3.2.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Work by Owner or by Separate Contractors, Payments and Completion and Insurance in Article 6, 9 and 11, respectively.

3.3 Owner Right to Stop the Work

3.3.1 If the Contractor fails to correct defective Work as required by Paragraph 13.2 or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. Any such order to the Contractor shall be in writing.

3.4 Owner Right to Carry Out the Work

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy it may have, make good and correct such deficiencies with its own forces or with the forces of another contractor. In such case, an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Engineer additional services made necessary by such default, neglect, or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

3.4.2 The Owner shall have access to the Project at all times.

ARTICLE IV
CONTRACTOR

4.1 Definition

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 Review of Contract Documents

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Engineer any error, inconsistency or omission he may discover.

4.3 Supervision and Construction Procedures

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents by either the activities or duties of the Engineer in his administration of the Contract, or by inspection, tests, or approvals required or performed under Paragraph 7.7 by persons other than the Contractor.

4.4 Labor and Materials

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

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

4.4.3 When a material, equipment, or system is specified or approved in an addendum, by the name of one or more manufacturers, such material, equipment, or system shall form the basis of the contract. If Contractor desires to use another material, equipment, or system in lieu thereof, he shall request approval in writing and shall submit samples and data as required for the Engineer consideration. The Engineer and Owner will be the final judge for the acceptance or the substitution. No Substitution shall be made without authority in writing from the Engineer.

4.4.4 By making requests for substitutions based on Subparagraph 4.4.3 above, the Contractor:

Initial _____

- .1 represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that he will provide the same warranty for the substitute that is required by the Contract Documents for that specified.
- .3 certifies that the cost data presented is complete and includes all related costs and excludes the Engineer redesign costs, and waives all claims for additional costs related to the substitution which subsequently became apparent; and
- .4 will coordinate the installation of the accepted substitute, making such changes at no additional cost to Owner as may be required for the Work to be complete in all respects.

4.4.5 The General Contractor shall disclose the existence and extent of financial interests, whether direct or indirect, he has in subcontractors and material suppliers, which he may propose for this Project.

4.5 Warranty

4.5.1 The Contractor warrants to the Owner and the Engineer that all materials and equipment furnished under this Contract will be new unless otherwise specified, and all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and requirements including substitutions not properly approved and authorized, may be considered defective. If required by the Engineer, the Contractor shall furnish satisfactory evidence. This warranty is not limited by the provisions of Paragraph 13.2.

4.6 Taxes

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor, which are legally enacted at the time bids, are received, whether or not yet effective.

Initial _____

4.7 Permits, Fees, and Notices

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution of the Contract.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

4.8 **Allowances and Owner Furnished Equipment, Fixtures or Labor**

4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection.

4.8.2 Unless otherwise provided in the Contract Documents:

- .1 these allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and applicable taxes;
- .2 the Contractor costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance;
- .3 whenever the cost is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses.

Initial _____

4.8.3 The Owner may directly furnish any or all of the equipment, fixtures, or labor required for the Project. In the event the Owner elects to do so, the Contract Price for such

equipment, fixtures, or labor will be reduced by the amount for equipment of labor being furnished by Owner. A Change Order reducing the Contract Price for that item of work shall be executed by Owner and Contractor to reflect a reduction in the Contract Price for that item, equipment, fixtures or work that the Owner is to furnish. The Contractor shall assume responsibility for and be fully responsible for the care, custody, and control of all Owner furnished equipment and/or fixtures once said equipment or fixtures arrive on the job site or in any approved off site storage facility.

4.9 Superintendent

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor and shall be confirmed in writing.

4.10 Documents and Samples at the Site

4.10.1 The Contractor shall maintain at the site for the Owner, one record copy of all Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record all changes made during construction and approved Shop Drawings, Product Data and Samples. These shall be available to the Engineer and shall be delivered to him for the Owner upon completion of the Work.

4.11 Shop Drawings, Product Data, and Samples

4.11.1 Shop Drawings are drawings, diagrams, schedules, and other data specifically prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

Initial _____

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

4.11.4 The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in

the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

4.11.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.

4.11.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Engineers approval of Shop Drawings, Product Data or Samples under Subparagraph 2.2.11, unless the Contractor has specifically informed the Engineer in writing of such deviation at the time of submission and the Engineer has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data, or Samples by the Engineer approval thereof.

4.11.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, or Samples, to revisions other than those requested by the Engineer on previous submittals.

4.11.8 No portion of the Work requiring submission of a Shop Drawing, Product Data, or Sample shall be commenced until the submittal has been approved by the Engineer as provided in Subparagraph 2.2.11. All such portions of the Work shall be in accordance with approved submittals.

4.12 Use of Site

4.12.1 The Contractor shall confine operations at the site to areas permitted by law, ordinance, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.13 Cutting and Patching of Work

4.13.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

Initial _____

4.13.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the

Owner or any separate contractor except with the written consent of the Owner. The Contractor shall not unreasonably withhold from the Owner his consent to cutting or otherwise altering the Work.

4.14 Cleaning Up

4.14.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work, he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery and surplus materials.

4.14.2 If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof will be charged to the Contractor.

4.15 Royalties, Patents, and Records

4.15.1 The Contractor shall pay all royalties and license fees. He shall defend all suits and claims for infringement of any patent rights and shall save Owner and Engineer harmless from loss on account thereof.

4.15.2 The Contractor shall not discriminate against any subcontractor, employee, or applicant for employment on the grounds of race, color, national origin, or sex.

4.15.3 The Contractor and all subcontractors under the general contract shall maintain copies of every sub-payroll period for the life of the construction contract and for a period of three (3) years after final release and payment is made by the Owner to the Contractor.

4.15.4 Each Contractor request for payment, including final payment and each partial payment, if permitted by the contract, shall contain a certification by the Contractor that performance by the Contractor and his subcontractor for the period of work covered by the payment request has been in accordance with the contract clauses and requirements with respect to nondiscrimination.

Initial _____

4.15.5 Representatives of Shelby County, as designated by the Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the term of the construction contract and for a period of three (3) years after final release and final payment by the Owner for the purposes of verifying nondiscrimination in employment.

4.15.6 The Contractor shall incorporate the same requirements set forth in Subparagraph 5.3.1 in all Subcontracts awarded by him with the further requirement that each Subcontract include identical requirements to be included in any lower tier Subcontracts together with the requirement to include it in any further subcontracts that might be made.

4.16 Indemnification

4.16.1 (a) By executing this Agreement, the Contractor assumes the entire responsibility and liability for any and all claims, damage or injury of any kind or nature (including death) to all persons, whether employees of the Contractor or otherwise, and to all property (including but not limited to the replacement cost and lose of use of property), caused by, resulting from, arising out of, or occurring in connection with the performance of the Work by the Contractor, its agents, servants, employees, or subcontractors or anyone directly or indirectly employed by any of them for whose acts any of them may be liable.

(b) If any claim is made against the Owner for any damage, injury, death, or loss, whether such claim is based upon the Contractor or its agents, servants, employees, or subcontractors alleged active or passive negligence or participation in the wrong, or upon any alleged active or passive negligence or participation in the wrong, or upon any alleged breach of any statutory duty or obligation on the part of the Contractor, its agents, servants, employees or subcontractors, or in any other instance for which the Contractor has assumed responsibility in this Agreement, the Contractor shall indemnify, defend, and hold harmless the Owner, its officers, directors, agents, servants and employees from and against any and all loss, expense, judgment, damage or injury (including attorney fees and expenses) that the Owner or its officers, directors, agents, servants or employees may sustain as the result of any such claim.

The Contractor shall assume on behalf of the Owner, its officers, directors, agents, servants and employees the defense of any action at law or in equity which may be brought against any of them upon any such claim, and shall pay on behalf of them the amount of any judgment with any costs or expenses incurred by any of them in connection with such claim.

Initial _____

4.16.2 Labor Indemnity

4.16.2.1 The Contractor shall indemnify, defend and hold harmless the Owner from any and all administrative and judicial actions (including reasonable attorney fees related to any such action) incurred by the Owner in connection with any labor related activity arising from the performance of the Work of the Contractor. As used

in this Agreement, "labor related activity" includes, but is not limited to strikes, walkouts, informational or organizational picketing, use of placards, distribution of handouts, leaflets or in the vicinity of any facility where the Owner conducts business. The Owner shall advise the contractor if any labor related activity occurs and the Contractor shall arrange for the legal representation necessary to protect the Owner, provided such representation is previously approved by the Owner.

4.16.3 Attorney Fees

4.16.3.1 In the event it becomes necessary for Owner to employ an attorney to enforce any provision of this Agreement, then the Contractor shall be liable for all attorney fees and litigation expense of Owner.

4.17 Progress Schedule

4.17.1 The Contractor shall, within five (5) days from receipt of the Notice to Proceed, prepare and submit for the Owner and Engineer an estimated project schedule for the Work. The Progress Schedule shall be updated each month to reflect actual progress made and to forecast future progress of the Work. The Progress Schedule shall be related to the entire Project as provided by the contract Documents and shall provide for expeditious and practicable execution of the Work. The Owner reserves the right to reasonably reschedule the Work or the sequence of activities of the contractor for no additional compensation should it deem rescheduling to be in its best interest.

ARTICLE V **SUBCONTRACTORS**

5.1 Definition

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractor.

Initial _____

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

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

5.2.1 Unless otherwise required by the Contract Documents or Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Owner and the Engineer in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Engineer will promptly reply to the Contractor in writing stating whether or not the Owner or the Engineer, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Engineer to reply promptly shall constitute notice of no reasonable objection. No work shall be commenced until approval of all such Subcontractors has been given in writing by the Owner. If required, the Contractor shall furnish evidence satisfactory to the Owner, showing each proposed Subcontractor is competent to execute the Work covered by the Subcontract.

5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Engineer has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he has a reasonable objection.

5.2.3 If the Owner or the Engineer has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Engineer has no reasonable objection. Such substitution shall in no way affect the Contract Sum.

5.2.4 The Contractor shall make no substitution for any Subcontractor, person, or entity previously selected if the Owner or Engineer makes reasonable objection to such substitution.

5.2.5 The Contractor shall submit a status report with regard to Subcontractors identified on Exhibit C, which forms a part of the Contract Documents, as to any change in the subcontractors identified thereon and the reasons for same, the dollars paid to the prior subcontractor and the amount of the new subcontract.

Initial _____

THIS REPORT SHALL BE SUBMITTED TO CONTRACTS ADMINISTRATION OF SHELBY COUNTY GOVERNMENT, 160 N. Main St., Suite 1109, Memphis, Tennessee, 38103.

5.3 Subcontractual Relations

5.3.1 By an appropriate 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 the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Engineer. Said agreement shall preserve and protect the rights of the Owner and the Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by the Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to any Sub-subcontractors.

ARTICLE VI
WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 Owner Right to Perform Work and to Award Separate Contracts

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract.

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

Initial _____

6.2 Mutual Responsibility

6.2.1 The Contractor shall afford the Owner and separate contractor's reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends on proper

execution or results in the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Engineer any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acceptance of the Owner's or separate contractor's work as fit and proper to receive his Work.

6.2.3 Should the Contractor wrongfully cause damage to the work or property of the Owner or to other work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.2.5.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against Owner arises there from, the Contractor shall pay or satisfy it and shall reimburse the Owner for all Attorney's fees and Court costs which the Owner has incurred.

6.3 Owner Right to Clean Up

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.14, the Owner may clean up and charge the cost thereof to the contractors responsible therefore as the Owner shall determine to be just.

ARTICLE VII **MISCELLANEOUS PROVISIONS**

7.1 GENERAL COMPLIANCE WITH LAWS

7.1.1 If required, the Contractor certifies that it is

Initial _____

qualified or will take steps necessary to qualify to do business in the State of Tennessee and that it will take such action as, from time to time, may be necessary to remain so qualified and it shall obtain, at its expense all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Agreement.

7.1.2 The Contractor is assumed to be familiar with and agrees that at all times it will observe and comply with all federal,

state, and local laws, ordinances, and regulations in any manner affecting the conduct of the work. The preceding shall include, but is not limited to, compliance with all Equal Employment Opportunity laws, the Fair Labor Standards Act, Occupational Safety, and Health Administration (OSHA) requirements, and the Americans with Disabilities Act (ADA).

7.1.3 This Contract will be interpreted in accordance with the laws of the State of Tennessee. By execution of this contract the Contractor agrees that all actions, whether sounding in contract or in tort, relating to the validity, construction, interpretation and enforcement of this contract will be instituted and litigated in the courts of the State of Tennessee, located in Shelby County, Tennessee, and in no other. In accordance herewith, the parties to this contract submit to the jurisdiction of the courts of the State of Tennessee located in Shelby County, Tennessee.

7.2 Successors and Assigns

7.2.1 This Agreement (including without limitation, all obligations imposed by the Contract Documents) shall be binding upon and shall inure to the benefit of the parties' successors, assigns, and legal representative. The Contract shall not be assigned or sublet in whole or in part by the Contractor without the written consent of the Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 Written Notice

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm, entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

Initial _____

7.4 Claims for Damages

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party, or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 Performance Bond and Labor and Material Payment Bond

7.5.1 The Contractor shall furnish and keep in force throughout the performance of the Work a separate performance bond and separate labor and material payment bond, each in the amount of the total of the Contract (as the same may be modified from time to time) conditioned upon the faithful performance of the Work by the Contractor and payment of all obligations arising in connection with the Work by the Contractor. Said bonds shall also guarantee to the Owner that the Work shall be free of all liens upon the property of the Owner. The bonds shall name the Owner as obligee and shall be with such Surety authorized to do business in the State of Tennessee and in such form and manner as approved by Owner. Said Bond shall be subject to final approval of the Shelby County Risk Management Department. Said bonds shall be furnished to the Owner prior to the commencement of the Work, or upon written request by Owner to Contractor after the Work has commenced.

7.6 Rights and Remedies

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.6.2 No action or failure to act by the Owner, Engineer, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach there under, except as may be specifically agreed in writing.

7.7 Tests

7.7.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Engineer timely notice of its readiness so the Engineer may observe such inspection, testing

Initial _____

or approval. The Contractor shall bear all costs of such inspections, tests, or approvals conducted by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspections or tests.

7.7.2 If the Engineer determines that any Work requires special inspection, testing, or approval, which Subparagraph 7.7.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing,

or approval, and the Contractor shall give notice as provided in Subparagraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Engineer's additional services and/or correction of the defective Work made necessary by such a failure; otherwise, the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.7.3 Required certificates of inspection, testing, or approval shall be secured by the Contractor and promptly delivered by him to the Engineer.

7.7.4 If the Engineer is to observe the inspection, tests or approvals required by the Contract Documents, he will do so promptly where practicable, at the source of supply.

ARTICLE VIII **TIME**

8.1 **Definitions**

8.1.1 Unless otherwise provided, the Contract time is the period of time allotted in the Contract Documents for Substantial Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

8.1.3 The date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Engineer when construction is sufficiently complete, in accordance with the contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended.

Initial _____

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

8.2 **Progress and Completion**

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the

work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 Delays and Extensions of Time

8.3.1 The Contractor shall proceed with each and every part of this Agreement in a prompt and diligent manner. The Contractor, without additional compensation, shall perform the Work at such times, in such order and in such manner as the Owner may direct. The Contractor shall commence, continue, and complete its performance of the Project so as not to delay Owner or other separate contractors of the Owner or subcontractors' completion of the Work or any portions thereof, and so as to insure completion as directed by Owner. Any time specified for the completion of the Work, or portion thereof, is a material provision of this Agreement, and time is of the essence. The Contractor shall furnish sufficient forces to assure proper performance of its Work in strict compliance with all performance or progress schedules for the Project.

8.3.2 The Contractor shall, from time to time, on written demand of Owner, give adequate evidence to Owner to substantiate the planned performance and progress of the Work and the various parts thereof. The Contractor shall promptly increase its work force, accelerate its performance, work overtime, work Saturdays, Sundays and holidays, all without additional compensation, if in the opinion of the Owner, such work is necessary to maintain proper progress. The Contractor will fully cooperate and coordinate its work with any other separate contractors of Owner or subcontractors at the Project. The Contractor shall bear the costs of all damages done to other separate contractors of Owner or subcontractors and shall be responsible for any damages caused by or resulting from acts or omissions of the Contractor in failing to make proper progress. The liability of the Contractor shall not be deemed waived by any assent or acquiescence by Owner to the Contractor's late performance. Owner shall be entitled to terminate this Agreement due to late or threatened late performance, upon seven (7) days notice to proceed and Contractor's failure to do so.

Initial _____

8.3.3 In the event any subcontractor should damage the Contractor, the Contractor shall neither seek nor be entitled to any compensation from Owner, but will seek its damages directly from such subcontractor. Should the Contractor's performance, in whole or part, be disrupted, interfered with or delayed, or be suspended in the commencement, prosecution or completion, for reasons beyond the Contractor's control and without its fault or negligence, the Contractor shall be entitled to an extension of time in which to complete its Work; but only if it shall have notified the Owner, in writing, of the cause of delay within five

(5) days of the occurrence of the event. The Contractor and Owner agree that the Contractor shall not be entitled to any money damages regardless of fault as a result of any delay, acceleration, disruption, interference, suspension, or other event affecting the Contractor or the Contractor's performance.

ARTICLE IX
PAYMENTS AND COMPLETION

9.1 Contract Sum

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

9.2 Schedule of Values

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Engineer a schedule of values allocated to the various portions of the Work, prepared in such form, and supported by such data to substantiate its accuracy as the Engineer may require. This schedule, unless objected to by the Engineer, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 Applications for Payment

9.3.1 At least ten days before the date of each progress payment established in the Owner-Contractor Agreement, the Contractor shall submit to the Engineer an itemized Application for Payment, notarized if required, supported by such data substantiating the Contractor's right to payment as the Owner or the Engineer may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents. The Contractor shall indicate on each Application for Payment the dollar amount and percentage due Subcontractors.

Initial _____

Progress payments (monthly) will be made based upon Applications for Payment submitted to the Engineer by the Contractor and Certificates for Payment issued by the Engineer as follows:

On or before the 10th day of each month, 95% of the proportion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work, up to the first day of that month, less the aggregate of previous payments in each case. Payments will be less such retainage as the Engineer shall determine for all incomplete work and unsettled claims.

9.3.1.1 Until final payment, the Owner will pay 95% of the amount due the Contractor on account of progress payments. If the manner of completion of the Work and its progress are and remain satisfactory to the Owner, it may, in its sole discretion, for each Work category shown to be 50% or more complete in the Application for Payment, without reduction of previous retainage, on presentation by the Contractor with Consent of Surety for each application, certify any remaining progress payments for each Work category to be paid in full.

9.3.1.2 The full Contract retainage may be reinstated at any time in the sole discretion of the Owner.

9.3.2 Unless otherwise provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site.

9.3.3 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in the Article IX as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other persons performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

9.3.4 The Contractor shall submit a report with each Application for Payment, which sets forth all subcontractors performing work during that reporting period, the dollar amount paid to the subcontractor, etc. on the form provided by Shelby County Government. Initial _____

9.4 Certificate for Payment

9.4.1 The Engineer will, within seven (7) days after the

receipt of the Contractor's Application for Payment, issue a Certificate for Payment to the Owner for such amount as the Engineer determines is properly due.

9.4.2 The issuance of a Certificate of Payment will constitute a representation by the Engineer to the Owner, based on his observations at the site as provided in Subparagraph 2.2.3 and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified.

9.5 Progress Payments

9.5.1 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

9.6 Payments Withheld

9.6.1 The Engineer may decline to certify payments and may withhold his Certificate in whole or in part, to the extent necessary to protect the Owner, if in his opinion he is unable to make representations to the Owner as provided in Subparagraph 9.4.2. The Engineer may also decline to certify payment or,

Initial _____

because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;

- .3 failure of the Contractor to make payments properly to Subcontractors or 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 another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time; or
- .7 persistent failures to carry out the Work in accordance with the Contract Documents.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made, without interest, for any amounts previously withheld.

9.7 Substantial Completion

9.7.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Subparagraph 8.1.3, the Contractor shall prepare for submission to the Engineer a list of items to be completed or corrected. 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. When the Engineer on the basis of an inspection determines that the Work or designated portion thereof is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall

Initial _____

commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

9.7.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Engineer, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents. Payment by the Owner upon application by the Contractor and certification by

the Engineer for Substantial Completion does not waive any claims the Owner may have against the Contractor.

9.8 Final Completion and Final Payment

9.8.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer will promptly make such inspection and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The Engineer's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled.

9.8.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Engineer (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety to final payment and (3) if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of claims, encumbrances and/or alleged liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

Initial _____

9.8.3 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

ARTICLE X PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

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

10.2 **Safety of Persons and Property**

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

- .1 all employees on the Work and all other persons who may be affected thereby;
- .2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, including 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 give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities. Pavements, sidewalks, alleys, adjacent buildings not included in this Contract, which may be damaged, shall be repaired and/or replaced immediately and in a manner satisfactory to the Engineer, Shelby County and/or other governing officials.

Initial _____

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

10.2.5 The Contractor shall promptly remedy all damage or loss (other than damage or loss insured under Paragraph 11.3) to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in

whole or in part by the Contractor, Subcontractor, or any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts the Contractor may be liable or responsible. The foregoing obligations of the Contractor are in addition to his obligations under Paragraph 4.16.

10.2.6 The Contractor shall designate a responsible member of his 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 the Engineer.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded to endanger its safety.

10.3 Emergencies

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article XII for Changes in the Work.

10.3.2 Whenever the Contractor has not taken sufficient precautions for the safety of the public or the protection of work to be performed under this Project, or adjacent structures or property which may be injured by processes of construction, demolition and/or site clearance on account of such neglect, and whenever an emergency shall arise and immediate action shall be considered necessary in order to protect public or private, persons or property interest, then the Engineer and/or the Owner shall so instruct the Contractor.

10.3.3 If correction is not made in due time or if conditions such as lack of time prevent instructions to Contractor, then the Owner, without notice to the Contractor, may provide reasonable, suitable protection by causing such Work to be done and material to be furnished and placed as the Engineer and Owner may consider necessary and adequate. The cost and expense of such work and

Initial _____

material so furnished shall be borne by the Contractor and, if the same shall not be paid on presentation of the bills thereof, such costs shall be deducted from any amounts due or to become due the Contractor. The performance of such emergency work under the direction of the Owner and/or Engineer shall in no way relieve the Contractor of the responsibility for damages, which may occur during or after such performance.

10.3.4 None of the foregoing shall make the Owner and/or

Engineer responsible for foreseeing and protecting against emergency.

ARTICLE XI
INSURANCE

11.1 Contractor Liability Insurance

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

- .1 claims under workers compensation, disability benefits, and other similar employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- .4 claims for damages insured by personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;
- .5 claims for damages, other than the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- .6 claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

Initial _____

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than any limits of liability specified in the Contract Documents, section III, paragraph 31, or required by law, whichever is greater.

11.1.3 The insurance required by Subparagraph 11.1.1 shall include contractual liability insurance applicable to the

Contractors obligations under Paragraph 4.16.

11.1.4 All insurance policies maintained by the Contractor shall provide that insurance as applying to the Owner shall be primary and non-contributing irrespective of such insurance as the Owner may maintain in its own name and on its own behalf.

11.1.5 Certificates of Insurance acceptable to the Owner shall be filed with the Owner at the time of submittal of the Contract Documents to the Owner for execution. These certificates shall contain a provision that coverage's afforded under the policies will not be canceled until at least thirty(30) days prior written notice has been given to the Owner. The Contractor shall immediately notify Shelby County Government, Contract Administration, 160 N. Main Street, Suite 550, Memphis, Tennessee 38103 of cancellation or changes in any of the insurance coverage required. Upon request of the Owner, certified copies of any of the required insurance policies may be requested from the Contractor or Contractor's insurance company, agency, or broker.

11.2 Owners Liability Insurance

11.2.1 The Owner shall at its discretion, purchase liability insurance or maintain a self-insured liability program.

11.3 Property Insurance

11.3.1 The General Contractor shall be responsible for all risk[] insurance for physical loss or damage for the project during construction until the project is accepted by the Owner at which time the Owner will provide the property coverage.

11.3.2 The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require such Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.3.3 The Contractor or his insurance agent, broker or insurance company shall furnish to Owner a copy of all policies with the Contactor within five days of request.

11.3.4 If the Owner requests in writing that insurance for risks other than those described in Subparagraphs 11.3 and 11.3.2 or 11.3.3 or other special hazards to be included in the property insurance policy, the Contractor shall, if possible, include such insurance, and the cost thereof shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor

by appropriate Change Order. Initial_____

ARTICLE XII
CHANGES IN THE WORK

12.1 Change Orders

12.1.1 A Change Order is a written order to the Contractor signed by the Owner issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time. The Contractor by execution of the Change Order waives any further claims or damages in any manner whatsoever for the changes set forth in the Change Order.

12.1.2 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:

Initial _____

- .1 by lump sum properly itemized on the form furnished by the Owner which shall show the actual verified cost of the work, plus ten percent overhead and five percent profit; if the work is performed by a Subcontractor, the General Contractor is allowed an additional five percent;
- .2 by unit prices stated in the Contract Documents or subsequently agreed upon;

- .3 by cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 by the method provided in Subparagraph 11.1.4.

12.1.4 If none of the methods set forth in Clauses 12.1.3.1, 12.1.3.2, or 12.1.3.3 is agreed upon, the Contractor, provided he receive a written order signed by the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Engineer on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit, which shall be defined as ten percent overhead and five percent profit with an additional five percent going to the General Contractor when the work is performed by a Subcontractor. In such case, and also under Clauses 12.1.3.3 and 12.1.3.4 above, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, cost shall be limited to the following: cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen compensation insurance; bond premiums, rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change. Pending final determination of cost to the Owner, payments on account shall be made on the Engineer's Certificate for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.

Initial _____

12.2 **Concealed Conditions**

12.2.1 Should concealed conditions encountered in the performance of the Work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work

of the character provided for in this Contract, be encountered, Contractor, subject to approval by the Engineer, shall be entitled to a time extension for only the period that the Contractor's performance is extended due to the unforeseen conditions.

12.3 Minor Changes in the Work

12.3.1 The Engineer will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE XIII UNCOVERING AND CORRECTION OF WORK

13.1 Uncovering of Work

13.1.1 If any portion of the Work should be covered contrary to the request of the Engineer or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Engineer, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the Engineer has not specifically requested to observe prior to being covered, the Engineer may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is found not in accordance with the Contract Documents, the Contractor shall pay such costs. If the Work to be uncovered by the Contractor should have been inspected by the Engineer prior to being covered, and the Work is found to be in accordance with the Contract Documents, the cost of the uncovering and recovering of the Work shall be borne by the Engineer.

Initial _____

13.2 Correction of Work

13.2.1 The Contractor shall promptly correct all Work rejected by the Engineer as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the Engineer's additional services made necessary thereby.

13.2.2 If, within one year after the Date of Substantial Completion of the Work or designated portion thereof, within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. This obligation shall survive termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the Work, which are defective or non-conforming, unless removal is waived by the Owner.

13.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in Subparagraphs 4.5.1, 13.2.1, and 13.2.2, the Owner may correct it in accordance with Paragraph 3.4.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the Engineer, the Owner may remove it and store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may, upon ten additional days' written notice, sell such Work at auction or a private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Engineer's additional services made necessary thereby. If such proceeds of sale do not cover all costs, which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

13.2.7 Nothing contained in Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his

Initial _____

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 his obligations other than specifically to correct the Work.

13.3 Acceptance of Defective or Non-Conforming Work

13.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effective whether or not final payment has been made.

ARTICLE XIV **TERMINATION OF THE CONTRACT**

14.1 Termination for Default

14.1.1 Should the Contractor fail to perform in strict accordance with this Agreement, where or as Owner may so direct, or should the Contractor become insolvent, unable to or fail to pay its obligations as they mature or, in any other respect fail in the opinion of the Owner, to properly prosecute and perform any part of its work, fail to exert its best performance efforts, be involved in labor disputes, or be terminated under any other contract with Owner, then the Contractor may be deemed by Owner to have materially breached and to have defaulted in its obligations under this Agreement. In case of a breach and default, the Owner, at its discretion, may terminate this Agreement, or any part thereof, by giving five (5) days written notice thereof to the Contractor. In case of such termination, Owner may use any and all materials, equipment, tools or chattels furnished by or belonging to the Contractor either at or for the Project.

14.1.2 The Contractor, on termination, will be deemed to have offered to Owner an assignment of all of its subcontracts and purchase orders relating to this Project. Owner may, at its discretion, do whatever is necessary to assure performance of any

Initial _____

terminated work and to take such action, if necessary, in the Contractor's name. Owner may withhold from Contractor any monies due or to become due under this or any other contract between the Contractor and Owner, to offset the damages incurred or possibly incurred as a result of the breach and default by the Contractor. In case of a breach, or in the event Owner is required to retain the services of an attorney to enforce any provisions of this Agreement, then the Contractor and its surety company shall be liable to Owner for any and all additional costs, expenses,

attorney's fees and other damages, both liquidated and unliquidated, which directly or indirectly result from the Contractor's breach, threatened breach, default or lack of performance of any term or condition of this Agreement.

14.1.3 If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the Engineer's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Engineer, upon application, in the manner provided in Paragraph 9.4, and this obligation for payment shall survive the termination of this Contract.

14.2 Termination for Convenience

14.2.1 Owner, by written notice, shall have the right to terminate and cancel this Agreement, without the Contractor being at fault, for any cause or for its own convenience, and require the Contractor to immediately stop work. In such event, Owner shall pay the Contractor for that Work actually performed and materials furnished in an amount proportionate to the Contract price. Owner shall not be liable to the Contractor for any other costs, including prospective profits on Work not performed.

ARTICLE XV RIGHT TO OCCUPY BY OWNER

15.1 Early Occupancy by Owner

15.1.1 The Owner has the right to occupy or use ahead of schedule all or any substantially completed or partially completed portion of the Work when such occupancy and use are in its best interest, notwithstanding the time of completion for all of the Work. If occupancy or use increases the cost of the Work (other than for corrections which are the responsibility of the Contractor) and/or as a result of the Owner exercising its rights

Initial _____

herein, the contractor shall be entitled to extra costs and extensions of time, or both. Claims for such extra costs and extensions of time, to be valid, shall be made in writing to the Owner within seven (7) calendar days of the notification of Owner to the Contractor of its intent to so occupy or use.

15.2 Corrections after Occupancy

15.2.1 After the Owner has taken occupancy of all or any

substantially completed portion of the Work, the Contractor shall not disrupt the use and occupancy of the Owner to make corrections in the Work but shall, at the discretion of the Owner, make such corrections at the expense of the Contractor after normal working hours.

15.3 Heating, Ventilating, and Air-Conditioning Systems

15.3.1 The Owner may require the use and operation of any completed heating, ventilating, and air-conditioning equipment at the time it occupies or uses any substantially completed portion of the Work. In such event, the Owner may require the Contractor to operate such equipment and will pay the Contractor the cost of such utilities required for the use and occupancy of the Owner, but the Contractor shall be responsible for such equipment and for its careful and proper operation. At any time, the Owner may assume the care and maintenance of any portion of the Work, which it is occupying and using for the operation of any such equipment, but in each case, the Contractor shall not be relieved of its responsibility for the full completion of the Work and the protection of its tools, materials, and equipment.

ARTICLE XVI
REGULATIONS

16.1 Nondiscrimination in Employment

16.1.1 During the performance of this Contractual Agreement, the contracting party agrees as follows: The CONTRACTOR agrees that no person on the grounds of handicap, age, race, color, religion, sex, or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subject to discrimination in the performance of this contract, or in the employment practices of the CONTRACTOR. The CONTRACTOR shall upon request show proof of such non-discrimination, and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

16.2 [RESERVED]

Initial _____

16.3 Maintenance and Records

16.3.1 The Contractor and all Subcontractors under the General Contract shall maintain copies of every subcontract awarded and their own payrolls, for each weekly payroll period during the term of the Construction Contract and for a period of one (1) year after release and payment is made by Owner to the Contractor.

16.4 Owner's Right of Inspection

16.4.1 Representative of the Owner, as designated by the County Mayor, shall have the right to inspect the Contractor's facilities and payroll records during the life of the Construction Contract for a period of one (1) year after final release and final payment by the Owner for the purpose of verifying nondiscrimination in employment.

ARTICLE XVII

**PROCEDURE FOR INSTALLATION OR
REMOVAL OF FIBERGLASS INSULATION**

The following procedures should be adhered to when disturbing, installing, or removing fiberglass insulation. These procedures are established to minimize employee exposure to the adverse health affects of fiberglass exposure.

The below procedures are the minimal requirements for handling fiberglass in Shelby County Facilities. Mandates by code or law must be adhered to.

17.1 Installation, Removal, or Disturbance of Fiberglass Insulation

17.1.1 Install in well-ventilated areas and avoid breathing dust.

17.1.2 Wear loose, comfortable clothing and long-sleeved shirts

to minimize skin contact.

17.1.3 Handle carefully to minimize airborne dust.

17.1.4 If high dust levels are anticipated during installation, such as with power tools, use appropriate NIOSH approved dust respirator.

17.1.5 All power cutting tools must be equipped with dust collectors.

Initial _____

17.2 Exposure

17.2.1 After use, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated. Utilize running water.

17.2.2 Wash work clothes separately, and then rinses the washer.

17.2.3 Eye exposure: Flush with flowing water for at least 15 minutes. If symptoms persist, seek immediate medical attention.

17.3 Work Site Environment

17.3.1 Insure area is free of obvious partials through proper cleanup procedures. Use of vacuum with proper filters, or wet cleanup is acceptable. (This includes office furniture, floors, and walls.)

17.3.2 Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Notify building manager or other appropriate person that it will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of the building. Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

17.3.3 Exposure to employees should be kept to a minimum.

17.3.4 Disturbance of ceiling tiles where fiberglass insulation exists requires the same procedures as if installation or removal was taking place.

BY THE SIGNING OF THIS DOCUMENT AND INITIALING EACH PAGE HEREOF, THE CONTRACTOR CERTIFIES THAT HE HAS READ AND UNDERSTANDS ALL OF THE ABOVE AND AGREES TO ABIDE BY THESE GENERAL CONSTRUCTION CONDITIONS.

CONTRACTOR

BY: _____

TITLE: _____

DATE: _____

constcnd.doc

TECHNICAL SPECIFICATIONS

BID FORM

In compliance with your Invitation for Bids for:
**RFP # 16-007-11, Sewer and Drain Repair,
Courthouse @ 140 Adams**

Project Location: 140 Adams Avenue
Memphis, Shelby County, Tennessee

The undersigned bidder: (Check one)

- A corporation organized and existing under Tennessee laws:
- A partnership consisting of _____;
- An individual trading as _____;

of the city of _____ having examined the attached Contract Documents and being fully advised as to the extent and character of the work to be performed, and the equipment to be furnished, proposes to furnish and pay for all labor, tools, material, utility fees, federal, state and local taxes and equipment necessary for implementation of the contract requirements.

The bid amounts shall incorporate an allowance for unidentified work as a contingency. Contingency funds may only be applied toward work that is not identified by the contract documents and is approved by the Owner. Any unused funds will be deducted from the contract by deductive change order at contract close-out.

The undersigned further proposes to perform all work and furnish and pay for all equipment in accordance with the Project Manual and Contract stipulations thereof, with the limit specified, for the following lump sum price if any or all are awarded by the Owner:

BID

ITEM NO.	DESCRIPTION	LUMP SUM BID
----------	-------------	--------------

1.	Sump Construction, Xylem Flygt pump with 20 year motor warranty including pump control panel, Piping and Accessories including, but not limited to: demolition work; concrete work; pumps; valves and piping; pump control panel; spare pump; electrical work; and other standard and necessary items of construction work for the LUMP SUM PRICE of:	\$ _____
----	---	----------

2.	Manhole Construction included, but not limited to: demolition work; excavation; concrete work; manhole construction; special backfill material; cast iron manhole ring with gasketed bolt-down cover; and other standard and necessary items of construction work for the LUMP SUM PRICE of:	\$ _____
----	--	----------

BID**ITEM NO.****DESCRIPTION****LUMP SUM BID**

3. Cured-in-Place Pipe (CIPP) lining of sump drain line including, but not limited to: cleaning and CCTV inspection and documentation of the drain line; installation and curing of CIPP liner; post installation CCTV inspection and documentation; and other standard and necessary items of construction work for the LUMP SUM PRICE of: \$ _____

4. Repair leak in the potable water piping, north side, including, but not limited to: shut-down and repair of leaking piping using only metal pipe, fittings and accessories; furnishing all materials and labor required for system shut-down, repairs, flushing, clean-up, and satisfactory return to normal operation and other standard and necessary items for work for the LUMP SUM PRICE of: \$ _____

5. Repair of drain pipe in telephone room, north side; including, but not limited to: removing existing rubber pipe connector and replacing it with an open-flex coupling as specified; and other standard and necessary items of construction for the LUMP SUM PRICE of: \$ _____

6. Pipe Couplings in Room B-03, including, but not limited to: remove Existing rubber pipe connectors and replace them with open-flex couplings as specified; and other standard and necessary items of construction for the LUMP SUM PRICE of: \$ _____

7. Pipe Couplings near Room B-43, including but not limited to: remove Existing rubber pipe connectors and replace them with open-flux Couplings as specified; and other standard and necessary items of Construction for the LUMP SUM PRICE of: \$ _____

8. Pipe Coupling near (east of) freight elevator; including but not Limited to: remove existing rubber pipe connectors and replace them with open-flux couplings as specified; and other standard and necessary items of Construction for the LUMP SUM PRICE of: \$ _____

BID PRICE for items 1 through 8 inclusive, in words:

_____ Dollars and
_____ cents(\$_____).

9. Allowance: Add 10 percent of the BID PRICE above as an allowance for unidentified work as a contingency. Contingency funds may only be applied toward work that is not identified by the contract documents and is approved by the Owner. Any unused funds will be deducted from the contract by deductive change order at contract closeout

\$_____

TOTAL BID PRICE, in words, items 1 thru 9 inclusive:

_____ Dollars and
_____ cents(\$_____).

The Bidder agrees that if he is awarded this Contract, he will commence construction within 14 calendar days after receipt of signed contract and will be substantially complete with all work in 180 days from the date that a Notice To Proceed is issued and liquidated damages are applied for each day after the 180 days.

The Bidder agrees that all request for extensions of time shall be in writing and that only such extensions of time as are granted by the Owner in writing shall be considered in computing that total Contract time. Owner furnished equipment will be available to the Contractor when the notice to proceed is issued.

Should the Contractor neglect, refuse, or fail to complete the work to be done under the Contract within the time herein specified, after all extension of time granted by the Owner have been added, then in that event the Owner shall have and is hereby given the right to deduct and retain out of such monies which may then be due, or which may become due and payable to the Contractor for the work to be done under this Contract, an agreed upon sum equal to Three Hundred Dollars (\$300.00) per calendar day for each and every day that the work is delayed in its completion beyond the specified milestone and substantial completion time. The said \$300.00 per day shall be held by the Owner under a mutual understanding between the Contractor, Contractor's Surety and the Owner. If necessary the Owner shall collect any monies directly from the Contractor or the Contractor's Surety.

Enclosed herewith is a (Certified Check) (Cashier's Check) or a solvent bank (Bidder's Bond) in the amount of _____ DOLLARS (\$ _____), Made payable to the Owner as a guarantee of good faith and which the undersigned hereby agrees shall be retained as liquidated damages by the Owner should the Contractor fail to furnish a Performance Bond written by good solvent in a surety company doing business in the State of Tennessee and acceptable to the Owner. The Performance Bond shall be in a amount equal to the gross amount of said Contract, and the Performance Bond shall be made and contract shall be signed within 1 week after date of Notice To Proceed from the Owner of award of Contract, and the check shall be returned to the undersigned upon the signing of the Contract and delivery of the required number of copies of approved Performance Bond to the Owner.

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids and it is understood that this bid may not be withdrawn for a period of 120 days after the scheduled time for receipt of bids.

The undersigned declares that _____ is the only person, firm or corporation interested in this proposal, and that no other person, firm, or corporation than the one herein named has any interest herein or in the Contract proposed to be taken; that it is made without any connection with any person, firm or corporation making proposal for the same work, and that it is in all respects fair as to the work bid upon and without collusion or fraud; also that no officer or employee of Shelby County Government who is exclude by law from participating therein, is directly or indirectly interested herein, or in furnishing of the supplies or doing the work to which it relates, or in furnishing surety, or in any portion of the profits thereof.

Receipt of the following addenda is hereby acknowledged: _____.
(Insert numbers of all addenda received; if no addenda received, insert "None").

Bidder _____
Signature _____ Printed Name _____

Business Address

Full name and residence of all persons interested in the foregoing as principle are:

(Name) _____ (Address)

(Name) _____ (Address)

(Name of President if a Corporation) _____ (Name of Secretary if a Corporation)

END OF SECTION

DOCUMENT 01201

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the General and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect. In the event of a conflict, Shelby County Government Documents and decisions shall govern.

1. Salvaged Materials and Equipment

- A. The Owner may select certain removed existing materials and equipment and retain them for future use. BEFORE removing any existing materials and equipment, determine from the Owner which of these materials and equipment (if any) he desires to retain. Remove all Owner-selected materials and equipment without unnecessary damage thereto, and safely store them at locations designated by the Owner and obtain the Owner's signed receipt therefore.

2. Continuity of Services and Existing Operations

- A. Arrange all work to interfere as little as possible with the normal existing operations. Do not interrupt any existing utility or other service or existing operation at any time without Owner's prior approval. After each interruption has been made, make all necessary connections and alterations, and restore services and avoid interferences with normal existing operations as quickly as possible.
- B. At no additional cost to Owner, provide all necessary temporary connections and temporary facilities to accomplish the required continuity of services and existing operations.

3. Continuance of Utility Services

- A. The Contractor shall hereby be aware that all utility services to Shelby County Court House customers in and near the work sites of this project must be kept in service at all times. These utility services include, but are not limited to, sewer, storm drainage, electric, and water. It is imperative that all work near existing utilities be carefully planned and organized in minute detail, all well in advance of the scheduled work.
- B. It may be necessary that some of the work be scheduled during late night or weekend low flow periods and it may be necessary that the Contractor's work days longer than the normal 8 hour day, none of which shall be considered as extra work, however, any deviation from the Contract Documents shall be approved in writing by the Shelby County Government.
- C. It is imperative that any work done around existing equipment, pipelines, structures, etc. be done in such a manner as not to cause an emergency interruption of service. Provide all shoring, bracing, temporary pipe supports, pumping equipment and other necessary equipment to insure the continuance of Shelby County Court House routine operation.

4. Narrative Description of Work to be Done and Suggested Construction Sequence

- A. General: This article is included for the general information of the Bidder. The word "SUGGESTED" is used throughout this article with regard to construction sequences, procedures, and/or techniques. When the word "SUGGESTED" is used, the construction sequence, procedures and/or technique referred to is NOT binding to the Contractor, however the work to be accomplished is part of this Contract. There is no intent, either specifically stated or implied, to instruct the Bidder in the methods and means of the performance of the work. If the Bidder follows the "SUGGESTED" sequence, procedure or technique, he does so on his own authority and accepts full responsibility for the work. The intent of this Article

is to convey to the bidder the following:

1. The purpose of the work.
2. The reasoning used by the Engineer in the preparation of the design.
3. The desired result of the work.
4. Possible construction problems that may not be readily apparent.

The following paragraphs list some, but not all, of the steps that may be followed in accomplishing the work:

- B. New sewage pump, controls, electrical and accessories, Bid Item No. 1: The purpose of the work is to prevent another flooding of the low basement area of the courthouse due to a stoppage in the drain line, excess flow due to a rain event, a combination of these and/or other events. Be aware this is an active system and provisions shall be included to deal with water from all sources entering the existing "sump".

SUGGESTED CONSTRUCTION SEQUENCE

1. With the approval of the Owner's personnel, demolish the concrete top of the existing sump.
 2. Remove and dispose of the existing steel drum currently in the sump.
 3. Clean the sump to remove debris and inspect the sump bottom.
 4. Remove the elbow on the existing discharge pipe.
 5. Provide temporary pump in sump to handle incoming water flow.
 6. Install new submersible pump including pump support fitting, discharge piping and valve(s), control panel, electrical work and all other items of work by standard methods and means.
 7. Construct a new concrete top for existing sump including embedded hatch cover.
 8. Install bacflow check valve as indicated by standard methods and means.
 9. Repair leak in under-floor drain pipe located west of the sump by standard means and methods.
 10. Provide conduit and conductors as required to transmit alarms from the pump control panel to the Shelby County Courthouse building monitoring system.
 11. Obtain start up service for the pumping system and place in service.
- C. New manhole, Bid Item No. 2: The purpose of the work is to provide access to the under-floor sump drain to facilitate the installation of a cured in place (CIPP) liner for the pipeline and for future maintenance.
1. Use closed circuit television (CCTV) equipment and other devices as required to locate the north-south drain pipe and the exact location for the new manhole. Provide enclosure for dust/debris control and a positive ventilation system for the exhaust of any internal combination engine.
 2. Saw cut the existing basement concrete floor to a depth of at least 2 inches, remove and dispose of the concrete and excavate for the new manhole as indicated and as required while protecting and supporting the existing pipeline(s).
 3. Cast a new concrete manhole bottom as indicated.
 4. Construct the walls of the new manhole and a new concrete top with embedded manhole ring as indicated and as required by standard methods and means.
 5. Cut out top of drain pipe to provide access.
 6. Backfill around new manhole and replace concrete floor as indicated and as required by standard methods and means.
- D. Reconstruct sump drain line by installing a cured-in-place pipe (CIPP) lining, Bid Item No. 3: The purpose of the work is to reconstruct a very old under-floor drain pipe to provide a smooth interior pipe surface with less potential for clogging and to extend the service life of the pipe line.
1. Make arrangements to handle the water flow normally conveyed by this drain line by standard methods and means which may include weekend and/or after hours work.

2. Thoroughly clean the existing pipeline by hydrojetting, rodding or both and/or other means as required to prepare the existing pipe for the liner.
 3. Use CCTV to show and document the cleaned interior condition of the pipeline, all by standard methods and means.
 4. Install and cure liner as specified and as required by the liner manufacturer's written instructions, all by standard methods and means.
 5. Provide a documented final CCTV inspection of the lined drain pipe by standard methods and means.
 6. Provide a documented final CCTV inspection of the City sewer Washington Street from the manhole at Third Street and Washington Street to the sump drain line connection to show the City sewer is clear of any and all debris and obstructions.
5. Coordination
- A. To expedite the work, the Contractor shall coordinate the work of all Subcontractors and other general Contractors working on site, and shall cooperate with each to insure the proper installation and locations of all items of work, as required for the proper installation and anchoring of their work.
6. Manufacturers Supervision
- A. Furnish the services of authorized qualified manufacturers' representatives as required to supervise the installation, testing, initial starting, adjusting, and initial operation of each equipment item included in this Contract.
7. Manufacturer's Instruction, Service, and Parts Manual
- A. Before final payment will be made, the Contractor shall furnish to the Engineer for Owner's use five complete bound sets of manufacturers instruction, service, and parts manuals for each equipment item furnished under this contract. This shall include descriptive literature, installation and operating instructions, maintenance recommendations, lubrication requirements, parts lists, and other pertinent data. Provide an electronic copy of all data and a hard copy of all data for each manual in a separate hard back three ring loose-leaf binder.
 - B. Each Subcontractor shall deliver all necessary data on his equipment to the Contractor, who shall insert the data in the binder as specified above.
8. Capacities, Ratings, Sizes, and Other Requirements Not Specified
- A. For all items of material and/or equipment, the capacities, ratings, sizes, and other requirements thereof not specified shall be as indicated, specified or required.
 - B. Where capacities, ratings, sizes, and other requirements for materials and/or equipment may be neither specified nor indicated, refer each such case to the Engineer/Architect before ordering the materials and/or equipment involved or proceeding with the work involved, and the Engineer's/Architect's decision shall govern.
9. Operating Instructions
- A. Carefully instruct the Owner's representatives in the proper operation and maintenance of all equipment furnished under this contract as specified hereinafter and during the adjustment and testing period, and as required to thoroughly familiarize the Owner's representatives with the operation of the equipment.

10. Electrical Characteristics and Sizes of Electrically Operated Equipment

- A. Each motor and each other electrically operated item furnished under this contract shall be suitable for proper operation on the electrical supply to which it is to be connected, as indicated specified or required.
- B. All electrically operated equipment shall operate on 60 hz alternating current supply. Prior to delivery to the job site, it shall be the joint responsibility of the Contractor under the applicable section and the equipment supplier to determine the characteristics of the electrical supply indicated to each individual electrically operated item, and to furnish each electrically operated item accordingly.
 - 1. Where electrical characteristics are specified hereinafter, verify them with the electrical requirements. In case of discrepancy between the specifications and the electrical requirements, the Electrical requirements shall govern.
 - 2. Where electrical characteristics can not be determined from the electrical requirements, whether they are specified or not, refer each such case to the Engineer/Architect, and THE ENGINEER'S/ARCHITECT'S DECISION SHALL GOVERN.

11. Wiring Diagrams

- A. Furnish with each item of electrically operated equipment a wiring diagram showing all necessary electrical connections required to operate the equipment properly, and in accordance with drawing and specification requirements.
- B. Furnish also a composite wiring diagram showing all necessary interlock wiring and related wiring between the various items of electrically operated equipment and their controls, as required to operate interlocked equipment as specified in other sections of these specifications and as indicated.
- C. After approval of wiring diagrams, wire all electrically operated equipment in strict accordance with the approved diagrams, and generally as indicated.

12. Cleaning Up

- A. The construction site(s) in general, and streets near the construction areas shall be maintained and kept clean and free from rubbish, unused materials, and equipment during the construction period. From time to time, remove all dirt, rubbish and surplus materials of all descriptions, including equipment not in use, and maintain the site in a neat and orderly condition, all as approved. Materials or equipment known to belong to others shall not be removed from the site without duly notifying the Owner thereof. Dirt, mud and other debris shall be broomed and cleaned from streets to keep roadways clear.

13. Guarantees Exceeding One Year

- A. Wherever guarantee periods of more than one year may be specified for certain items, the longer-than one year guarantee periods specified shall govern. In each such case, all requirements of the contract documents shall apply, except that the guarantee period shall be as specified for each item involved.

14. Equipment and Materials Storage and Protection

- A. Equipment Which Will Be Installed Indoors: At all times prior to its installation within permanent plant buildings and structures which are sufficiently enclosed to provide adequate weather protection, store this equipment in dry weather tight warehouses or other shelters which will completely protect this equipment from damage by weather and other causes. Obtain Engineer's/Architect's prior approval of proposed storage facilities; plastic wrapping or covering alone will not be considered adequate protection.

1. This includes but shall not be limited to: motors; all electrical items, switchgear and panelboards.
- B. Payment For Stored Materials and Equipment: No payment will be made for on-site or off-site stored materials and equipment which is not stored as specified above.

END OF DOCUMENT

SECTION 01300

SUBMITTAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Shop drawings.
- E. Product data.
- F. Samples, if requested.
- G. Manufacturers' instructions.
- H. Manufacturers' certificates.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer accepted form. Indicate on the transmittal form the specification section where item is specified. The transmittal form may also be sequentially numbered.
- B. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittal to expedite the Project, and deliver to Engineer at 1661 International Drive, Suite 100, Memphis, TN 38120. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Engineer review stamps.
- H. Revise and resubmit submittal as required, identify all changes made since previous submittal.
 - 1. Distribute copies of reviewed submittal to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 15 days after date established in Notice to Proceed for Engineer review.
- B. Revise and resubmit as required.

- C. Submit a horizontal bar chart with separate line for each major section of Work or operation, identifying first work day of each week.
- D. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- E. Indicate submittal dates required for shop drawings, product data and product delivery dates.

1.4 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus three copies which will be retained by Engineer.
- B. After review, reproduce and distribute in accordance with Article on Procedures above.
- C. No corrections or changes indicated on Shop Drawings shall be considered as an extra work order.

1.5 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires, plus three copies which will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute in accordance with Article on Procedures above.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.7 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers certificate to Engineer for review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section describes construction facilities and temporary controls required for the Work.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Provisions, Special Conditions, and all provisions of the Contract Documents.
 - 2. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations, such equipment normally furnished by the individual trades in execution of their own portions of the Work are not part of this Section.
 - 3. Permanent installation and hookup of the various utility lines are described in other Sections.

1.2 REQUIREMENTS

- A. Provide construction facilities and temporary controls needed for the Work including, but not necessarily limited to:
 - 1. Temporary utilities such as heat, water, electricity, and telephone;
 - 2. Sanitary facilities;
 - 3. Enclosures such as tarpaulins, barricades, and canopies;

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

PART 2 PRODUCTS

2.1 UTILITIES

- A. Water: Provide necessary temporary piping and water supply and, upon completion of the Work, remove such temporary facilities.
- B. Electricity:
 - 1. Provide necessary temporary wiring and, upon completion of the Work, remove such temporary facility.
 - 2. Provide are distribution boxes so located tha the individual trades may furnish and use 100 ft. maximum length extension cords to obtain power and lighting at points where needed for work, inspection, and safety.
- C. Heating: Provide, maintain and pay for heat necessary for proper conduct of operations needed in the Work.

2.2 ENCLOSURES

- A. Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

- B. Provide temporary dust tight partitions as required to isolate the construction work area from other existing areas, and remove the temporary partitions upon completion of work under this contract. However, if so approved by Owner, temporary partitions may be removed upon completion of construction operations which create dust or other conditions which Owner considers detrimental to existing operations and existing equipment. Partitions shall have at least 2 by 6 inch wood framing and 2 by 4 inch studs on 24 inch maximum centers, Visqueen or other suitable dust tight sheathing secured to studs and framing, and self-closing doors as required to admit personnel and equipment. Partitions shall extend from floor up to ceiling or to a temporary ceiling. No partitions are required where existing walls are on the periphery of construction work areas.
- C. Provide temporary airtight enclosure with a forced ventilation or other approved method to positively ventilate the exhaust fumes from any internal combustion engine operating inside the courthouse building.

2.3 EQUIPMENT AND MATERIALS STORAGE AND PROTECTION

- A. Equipment Which Will Be Installed Indoors: At all times prior to its installation within permanent plant buildings and structures which are sufficiently enclosed to provide adequate weather protection, store this equipment in dry weathertight warehouses or other shelters which will completely protect this equipment from damage by weather and other causes. Obtain Engineer's prior approval of proposed storage facilities; plastic wrapping or covering alone will not be considered adequate protection.
- B. Payment for Stored Materials and Equipment: No payment will be made for on-site or off-site stored materials and equipment which is not stored as specified above.
- C. At Contractor's expense, provide temporary weathertight storage for materials which may be damaged by storage exposed to weather.

PART 3 EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Engineer.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Warranties.
- G. Spare parts and maintenance materials.

1.2 RELATED SECTIONS

- A. Section 01500 - Construction Facilities and Temporary Controls: Progress cleaning.
- B. Section 01730 - Operation and Maintenance Data.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Provide a written Punch List showing all yet-to-be-completed items and obtain a Certificate of Substantial Completion.
- C. Provide submittals to Owner that are required by governing or other authorities.
- D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum work areas.
- C. Clean equipment and fixtures to a sanitary condition.
- D. Clean debris from drainage systems.
- E. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract Drawings.
- F. Submit documents to Engineer with claim for final Application for Payment.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit four sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type on white paper.
- E. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
- F. Part 2: Operation and maintenance instructions, arranged by system and/or process flow. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - 1. Significant design criteria.
 - 2. List of equipment.

3. Parts list for each component.
4. Operating instructions.
5. Maintenance instructions for equipment and systems.

6. Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.

G. Part 3: Project documents and certificates, including the following:

1. Shop drawings and product data.
2. Certificates.
3. Copies of warranties.

H. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned with Engineer comments. Revise content of documents as required prior to final submittal.

I. Submit final volumes revised, within ten days after.

1.8 WARRANTIES

- A. Provide duplicate copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D. Submit prior to final Application for Payment.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to Owner; obtain his signed receipt therefor prior to final payment.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01710

CLEANING

PART 1 GENERAL

1.1 SUMMARY

- A. Throughout the construction period, maintain the work areas in a standard of cleanliness as described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Provisions, Special Conditions, and all provisions of the Contract Documents.

1.2 QUALITY ASSURANCE

- A. Conduct inspections, and to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

- A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

- A. General:
 - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
 - 2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 - 3. Completely remove all scrap, debris, and waste material from the work areas.
 - 4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- B. Site:
 - 1. Inspect the work area and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
 - 2. Inspect all arrangements of materials stored in work areas. Restack, tidy, or otherwise service arrangements to meet the requirements of above.
 - 3. Maintain the work areas in a neat and orderly condition at all times.

- C. Structures:
 - 1. Inspect the work areas and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
 - 2. Sweep work area spaces clean meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
 - 3. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

3.2 FINAL CLEANING

- A. "Clean," for the purpose of this section, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work, remove from the work areas all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described above.
- C. Structures: Visually inspect work area surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter. Remove all traces of splashed material from adjacent surfaces. Remove spots, stains, and dirt from finished surfaces.
- D. Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Work.

3.3 CLEANING DURING OWNER'S OCCUPANCY

- A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Engineer.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents as described herein.

1.2 SUBMITTALS

- A. Comply with pertinent provisions of the Contract Documents.
- B. Prior to submitting request for final payment, submit the final Project Record Documents to the Engineer and secure his approval.

1.3 QUALITY ASSURANCE

- A. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each sheet of Drawings and other Documents where such entry is required to show the change properly.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

3.1 MAINTENANCE OF RECORD SET

- A. Drawings shall clearly show actual installed locations, depth, and sizes of:
 - 1. Pipe work of all descriptions under floors inside of buildings and structures.
 - 2. Electrical feeders under floor inside of buildings and structures, including locations of pullboxes and junction boxes in floors.

3.2 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding concealed aspects of the Work, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SUMMARY

- A. To aid the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding products incorporated into the Work, furnish and deliver the data described in this Section and in pertinent other Sections of these Specifications.

1.2 SUBMITTALS

- A. Submit two copies of a preliminary draft of the proposed Manual or Manuals to the Engineer for review and comments.
- B. Unless otherwise directed in other Sections, or in writing by the Engineer, submit three copies of the final Manual to the Engineer prior to indoctrination of operation and maintenance personnel.

1.3 QUALITY ASSURANCE

- A. In preparing data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the extent needed for communicating the essential data.

PART 2 PRODUCTS

2.1 INSTRUCTION MANUALS

- A. Where instruction Manuals are required to be submitted under other Sections of these Specifications, prepare in accordance with the provisions of this Section.
- B. Format:
 - 1. Size: 8-1/2" x 11"
 - 2. Paper: White bond, at least 20 lb weight
 - 3. Text: Neatly written or printed
 - 4. Drawings: 11" in height preferable; bind in with text; foldout acceptable; larger drawings acceptable but fold to fit within the Manual and provide a drawing pocket inside rear cover or bind in with text.
 - 5. Flysheets: Separate each portion of the Manual with neatly prepared flysheets briefly describing contents of the ensuing portion; flysheets may be in color.
 - 6. Binding: Use heavy-duty plastic or fiberboard covers with binding mechanism concealed inside the Manual; 3-ring binders will be acceptable; all binding is subject to the Engineer's approval.
 - 7. Measurements: Provide all measurements in U. S. standard units such as feet-and-inches, lbs, and cfm.
- C. Provide front and back covers for each Manual, using durable material approved by the Engineer, and clearly identified on or through the cover with at least the following information:

OPERATING AND MAINTENANCE INSTRUCTIONS

Location

Contractor

Manual Subject

Signature

Date

- D. Contents: Include at least the following:
 1. Neatly typewritten index near the front of the Manual, giving immediate information as to location within the Manual of all emergency information regarding the installation.
 2. Complete instructions regarding operation and maintenance of all equipment involved including lubrication, disassembly, and reassembly.
 3. Complete nomenclature of all parts of all equipment.
 4. Complete nomenclature and part number of all replaceable parts, name and address of nearest vendor, and all other data pertinent to procurement procedures.
 5. Copy of all guarantees and warranties issued.
 6. Manufacturers' bulletins, cuts, and descriptive data, where pertinent, clearly indicating the precise items included in this installation and deleting, or otherwise clearly indicating, all manufacturers' data with which this installation is not concerned.
 7. Such other data as required in pertinent Sections of these Specifications.

PART 3 EXECUTION

3.1 INSTRUCTION MANUALS

- A. Preliminary:
 1. Prepare a preliminary draft of each proposed Manual.
 2. Show general arrangement, nature of contents in each portion, probable number of drawings and their size, and proposed method of binding and covering.
 3. Secure the Engineer's approval prior to proceeding.
- B. Final: Complete the Manuals in strict accordance with the approved preliminary drafts and the Engineer's review comments.

END OF SECTION

SECTION 02060

DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. The following is a list and brief description of some, but not necessarily all of the items to be demolished. Demolished items and materials shall be disposed of off site unless otherwise directed.
 - 1. Existing Sump: Demolish the existing concrete top including the dry wall/metal stud wall currently supported by the concrete top. Remove the steel drum currently in the sump.
 - 2. Basement floor at new Manhole: Saw cut the existing concrete floor as required in the vicinity of the new manhole, demolish concrete and excavate for new manhole.
 - 3. Potable Water Connection (Bid Item No. 4): Schedule the work with Shelby County Government where the court house can be without potable water service, probably on a weekend. Shut off water supply at 2 locations, drain system and repair leaking pipe as required.

1.2 RELATED SECTIONS

- A. DIVISION 3 - CONCRETE.
- B. DIVISION 9 - FINISHES.
- C. DIVISION 11 - EQUIPMENT.
- D. DIVISION 15 - MECHANICAL.
- E. DIVISION 16 - ELECTRICAL.

1.3 QUALITY ASSURANCE

- A. Meet the requirements of the local regulatory agencies.
- B. Permit for transporting and disposal of debris.

1.4 JOB CONDITIONS

- A. Protection:
 - 1. Erect barriers, enclosures, and other items as required to protect personnel, property, structures, and utilities remaining intact.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Carefully remove materials and equipment designated to be removed. For equipment selected by the Owner to be retained by the Owner, deliver said items and store where directed by the Owner's Representative.
- B. Except where noted otherwise, maintain possession of materials being demolished. Immediately remove these materials from site if so directed by Owner.

- C. Carefully remove, store, and protect for re-installation all materials and equipment that is noted on drawings to be relocated or re-used.

2.2 DISPOSAL OF REMOVED MATERIALS

- A. Unless otherwise directed by the Owner, maintain position of the materials being removed and/or demolished and dispose of same away from Owner's site in accordance with the requirements of applicable authorities having jurisdiction.

PART 3 EXECUTION

3.1 DEMOLITION

- A. Remove items and perform demolition in an orderly and careful manner.
- B. Perform demolition in accordance with the requirements of applicable authorities having jurisdiction.
- C. Repair all demolition performed in excess of that required, at no cost to the Owner.
- D. Burning of materials on site is not permitted.
- E. Remove from site contaminated, vermin infested or dangerous materials encountered and dispose of by safe means so as not to endanger health of workers and public.
- F. Carry out demolition work in a manner that will cause as little inconvenience to adjacent occupied building areas as possible.
- G. Remove demolished materials, tools, and equipment from site upon completion of work. Leave site in a condition acceptable to the Owner.

END OF SECTION

SECTION 02732

SUMP MODIFICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Sump modifications shall consist of a new cast-in-place concrete top with embedded aluminum hatch and accessories to be installed on the existing concrete sump.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 3 - CONCRETE.
- C. DIVISION 16 - ELECTRICAL.

1.3 REFERENCES

- A. ASTM C 33 - Concrete Aggregates.
- B. ASTM C 94 - Ready-Mixed Concrete.
- C. ASTM C 150 - Portland Cement.
- D. ASTM C 478 - Precast Reinforced Concrete Manhole Sections.
- E. ASTM A 48 - Gray Iron Casting

1.4 UNIT PRICES - MEASUREMENT AND PAYMENT

- A. Sump Modifications: no separate payment. Paid for as part of the lump sum bid price.

PART 2 PRODUCTS

2.1 PRECAST CONCRETE MANHOLE TOP

- A. General: Sump top shall be cast-in-place concrete type, with cast-in aluminum hatch cover furnished by the pump equipment supplier.
- B. Materials: Provide hydrophilic water stop between new concrete and existing concrete, Hydrotite by Greenstreak or as approved

PART 3 EXECUTION

3.1 WORKMANSHIP

- A. Install the new sump top as indicated, level and complete in every respect, ready for the installation of the pumps and other equipment.
- B. All work shall be installed by competent workmen in their respective trades. At all times the installation shall be under the supervision of a supervisor who is thoroughly familiar with all portions of the installation.
- C. All work shall be accomplished in a finished, workmanlike manner reflecting craftsmanship in accordance with the standards of the trade.

- D. All work shall be performed in accordance with all federal, state, and local codes.

3.2 COORDINATION

- A. This contractor shall coordinate his work with the work of the other contractors and with the Owner so that the installation and completion of all work may proceed in an orderly and expeditious manner.

END OF SECTION

SECTION 02736

SOLIDS-HANDLING SUBMERSIBLE PUMPS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. This section includes a simplex electric submersible solids handling pump to be supplied with integral electric motor, discharge elbow, guide bar bracket, access cover, valves, electrical controls, and other miscellaneous installation accessories, with performance requirements identified herein. Additionally, an uninstalled spare pump shall be furnished to the owner. All equipment shall be supplied by a single source supplier that adheres to the quality standards established and expressly named in this specification. One Duty Pump and One Un-Installed Spare Pump shall be provided for this application.
- B. Acceptable manufacturers are Xylem Flygt or alternate approved by the owner and engineer. Under no circumstances shall alternate equipment be allowed without the written consent of the engineer as so evidenced by the final list of equipment approved for this project as so noted by final addendum at least four (4) days prior to the original bid date. All equipment approved for this project shall meet or exceed all performance, service, and warranty requirements of this specification.

1.02 RELATED REQUIREMENTS

- A. DIVISION 2 – SITEWORK.
- B. DIVISION 3 – CONCRETE.
- C. Section 13000 – PLANT PIPEWORK.
- D. DIVISION 16 – ELECTRICAL.

1.03 PRE-SUBMITTAL

- A. The contractor may submit alternate equipment for consideration (pumps, accessories, valves and controls), provided that certified technical documentation, stamped and signed by a registered professional engineer from the manufacturer, is presented that shows total compliance, or an itemized list of deviations/exceptions with technical justification of such, to all performance, construction, service and warranty requirements of this specification. This submittal shall be provided to the engineer by the contractor at least ten (10) business days prior to the advertised bid date. The engineer shall have sole discretion as to whether alternate equipment satisfies the intent and specific performance/mechanical elements as specified herein. Upon completion of review by the engineer and not less than, four (4) days prior to bid, a final listing of equipment appearing to meet this specification and conditionally approved for this project shall be provided to the bidding contractor. The contractor shall submit with his bid, all deviations/exceptions as noted above to these specifications.
- B. Pre-submittal data shall include, but not be necessarily limited to: typical motor curves, pump, performance curves; compliance documentation for all performance values described in Section 4.0; compliance documentation for all construction details described in, and calculations required by, Section 5.0; and service and warranty compliance documentation required by Section 6.0 of this specification.

- C. Conditional approval by the Engineer under this section is based on a general review only and in no way constitutes final approval of equipment, nor waives any requirement of these specifications, nor relieves the Contractor or Manufacturer of any degree of responsibility for compliance with specific requirements of other portions of these specifications. It should be finally noted that any and all costs associated with changes that arise from utilizing an alternate item other than as specified shall be borne by the general contractor.

1.04 QUALITY ASSURANCE

- A. GENERAL: The pumps shall be suitable for pumping raw sewage and shall be designed and fully guaranteed for this use. The fluid temperature range shall be from 40 degrees to 104 degrees F.
- B. STANDARDS: The test code of the American Hydraulic Institute for testing pumps and sound engineering practice shall be used. All pump performance documentation, including flow/head curves, shall adhere to the Hydraulic Institute Standards and shall allow no negative tolerance on flow, head, hydraulic efficiency or any other criteria deemed by the Engineer to be necessary to evaluate pumping system performance.
- C. ENVIRONMENTAL CONDITIONS: All equipment as specified herein shall be so supplied with respect to environmental conditions at the jobsite.

1.05 SUBMITTALS

- A. General: Provide complete assembly and installation drawings, together with detailed specifications and data covering pumps, motors, material used, parts, devices and other accessories forming a part of the equipment furnished shall be submitted for approval in accordance with the procedure set forth in the contract documents.
- B. Setting plans - Setting plans shall include:
 - 1. Anchor bolt layout
 - 2. Anchor bolt dimensions.
 - 3. Outline dimensions and weights of pumps, bases, motors, and control enclosures.
- C. Pumps - Data and drawings shall include:
 - 1. Manufacturer, type and model number.
 - 2. Assembly drawing, nomenclature and material list, O & M manual, and parts list.
 - 3. Type, manufacturer, model numbers, location and spacing of bearings.
 - 4. Impeller type, diameter, thru-let dimensions, sphere size, number of vanes and identification number.
 - 5. Complete motor performance data including: rating, voltage/phase/frequency; design type; service factor; insulation class; motor pole number; actual rotation speed when combined with the specified pumps; current, power factor and active input power (KW) as a continuous function of shaft power from no load to at least 115 percent load; start (max. inrush) current; locked rotor current; NEC code letter; and motor torque as a continuous function through the motor start cycle from no rotation to synchronous speed.
 - 6. Complete performance test curve(s) showing full range (shutoff to run-out) head vs. capacity, NPSHR, hydraulic efficiency, motor active (KW) input power, motor total (KVA) input power (based on measured current and voltage), and shaft power (BHP). See Sec. 3.01 Shop Tests.
 - 7. Warranty for the proposed equipment.
- D. Recommended Operating Range: The manufacturer shall indicate, by arrows to points on the Q/H curves, limits recommended for stable operation, between which the pumps are to be operated to prevent surging, cavitation, and vibration. The stable operating range shall be as large as possible, and shall be based on actual hydraulic and mechanical characteristics of the units and shall meet the hydraulic performance requirements of the proposed system.

1.06 PERFORMANCE REQUIREMENTS

Primary Duty Point (GPM/ft.)	200 GPM@ 17' TDH
Minimum Shutoff Head (ft.)	25 Ft.
Maximum Active Motor Input Power Primary Duty Point (KW)	1.7 KW Input
Maximum Active Shaft Power at Primary Duty Point (KW)	1.3 KW Shaft
Maximum Specific Energy at Primary Duty Point (KWHr/MG)	142 KWHr/MG
Maximum NPSHRe at Primary Duty Point (Ft.)	14 Ft.
Minimum Motor Rating (HP) at 40 degrees C	3 HP @ 40° C
Voltage/Cycle/Phase	230VAC/60Hz/ 3Phase
Motor Design Type	NEMA Design B
Motor Service Factor	Greater than 1.10
Motor Insulation Rating	Class H
Maximum Pump Speed (RPM)	1700 RPM
Maximum Rated Current (A)	8.7 Amps
Minimum Rated (FL) Power Factor (%)	0.83
Maximum Starting Current (A)	44 Amps
Maximum NEC Code Letter	"G"
Minimum Discharge Size (inches)	4"

PART 2 - PRODUCTS

2.01 SUBMERSIBLE SOLIDS-HANDLING PUMPS

- A. General: Provide two (2) Xylem Flygt Corporation solids-handling submersible pumps (1 installed and 1 spare). Each pump shall be equipped with radial cooled submersible electric motors, inverter duty rated, connected for operation on 230 volts, 3 phase, 60 hertz, 4 wire service, with 50 feet of submersible cable (SUBCAB) suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards and also meet with P-MSHA Approval. Each pump shall be supplied with a mating 6" cast iron discharge connection to be mounted in the pump wet well, and with other accessories as shown on the plans.
- B. PUMP DESIGN: Each pump shall be capable of handling raw, unscreened sewage. The discharge elbow shall be permanently installed in the wet well along with the discharge piping. The pumps shall be automatically connected to the discharge connection elbow when lowered into place. Pumps shall be easily removable for inspection or service, requiring no bolts, nuts or other fastenings to be removed for the purpose and no need for personnel to enter the pump well. Sealing of the pumping unit to the discharge elbow shall be accomplished by a simple linear downward motion of the pumps with the entire weight of the pumping units guided to and pressed tightly against the discharge elbow with a metal to metal watertight contact. No portion of the pump shall bear directly on the floor of the sump, and there shall be no more than one 90 degree bend allowed between the volute discharge flange and sump piping. Guide bars, which shall steer the pump into proper contact with the discharge elbow shall be non-adjustable and shall not bear the weight of the pump.

- C. **PUMP CONSTRUCTION:** Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel or brass construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump. Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit. The pump volute shall be a single piece gray cast iron, ASTM A-48, Class 35B, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. Minimum inlet and discharge size shall be as specified. The volute shall have a replaceable suction cover insert ring in which are cast spiral-shaped, sharp-edged groove(s). The spiral groove(s) shall provide trash release pathways and sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The insert ring shall be cast of ASTM A-532 (Alloy III A) 25% chrome cast iron and provide effective sealing between the multi-vane semi-open impeller and the volute housing.
- D. **CABLE SEAL:** The cable entry seal design shall provide strain relief and preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of at least one elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the cable entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable. The assembly shall provide ease of changing the cable when necessary using the same entry seal. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable. The cable junction chamber shall be sealed off from the stator housing and shall contain a terminal board for connection of power and pilot sensor cables using threaded compression-type terminals. The use of wire nuts or crimp-type connectors is not acceptable.
- E. **COOLING SYSTEM:** Each unit shall be provided with an adequately designed radial dissipation type integral cooling system that allows up to 15 motor starts per hour with a partially-submerged motor on a continuous basis in an ambient 104 degree F environment, and in a standard available version, with no damage to motor windings, bearings, or drive shaft seals.
- F. **MECHANICAL SEAL:** Each pump shall be provided with dual tandem mechanical shaft seal system comprising two totally independent seal assemblies. The seals shall operate in a seal lubricant buffer chamber that hydro-dynamically lubricates the lapped seal faces at a constant rate. The inner seal, located between the lubricant buffer chamber and the stator housing, shall contain one stationary and one positively driven rotating ring, functioning as an independent secondary barrier between the pumped liquid and the stator housing. Both inner seal faces shall be corrosion resistant Tungsten Carbide (WC). The outer of the tandem set of seals functions as the primary barrier between the pumped liquid and the stator housing. This set shall consist of a stationary ring and a positively driven rotating ring, both of which shall be corrosion resistant WC. Each interface shall be held in contact by its own spring system supplemented by external liquid pressures. The seals shall require neither maintenance nor adjustment, but shall be easily inspected and replaceable. The lower (outer) seal shall not bear on the impeller and shall remain fixed upon impeller removal. The seal system shall not rely upon the pumped media for lubrication. Each pump shall be provided with a seal buffer chamber containing FDA-approved, non-toxic lubricant for the shaft sealing system. The buffer chamber shall be designed to ensure that air is left in the buffer chamber to absorb the expansion of the lubricant due to temperature variations. The drain and inspection plug, with positive anti-leak seal, shall be easily accessible from the outside.
- G. **SHAFT:** The pump and motor shaft shall be a single piece unit. The pump shaft is an extension of the motor shaft. Shafts using mechanical couplings shall not be acceptable. The shaft shall be stainless steel – ASTM A479 S43100-T. Shaft sleeves will not be acceptable.

- H. IMPELLER: The impeller(s) shall be of ASTM A-532 (Alloy III A) 25% chrome cast iron, dynamically balanced, semi-open, multi-vane, back-swept, non-clog design. The impeller vane leading edges shall be mechanically self-cleaned upon each rotation as they pass across a spiral groove located on the volute bottom. The internal volute bottom shall provide effective sealing between the pump volute and the multi-vane, semi-open impeller. The sharp spiral groove(s) shall provide the shearing edge(s) across which each impeller vane leading edge shall cross during its rotation in order to remain unobstructed. The clearance between the internal volute bottom and the impeller leading edges shall be adjustable. The impeller(s) vanes shall have screw-shaped leading edges that are hardened to Rc 45 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in waste water. The screw shape of the impeller inlet shall provide an inducing effect for the handling of sludge and rag-laden wastewater. Impellers shall be locked to the shaft and shall be coated with alkyd resin primer.
- I. BEARINGS: The integrated pump/motor shaft shall rotate on two (2) sealed and permanently lubricated bearings. External bearing lubrication ports, which allow bearing contamination and over-packing, will not be allowed. The upper bearing, providing for radial thrust, shall be a single row, roller or ball bearing. The lower bearing shall consist of one double row angular contact bearing for combined axial and radial loads. Minimum L_{10} bearing life shall be 50,000 hours at any usable portion of the pump curve.

2.02 MOTOR AND PROTECTION DEVICES

- A. General: Each pump shall be driven by a vertical, submersible squirrel cage, inverter duty, induction motor, shell type NEMA B design, housed in a dry watertight chamber. The motor and the pump shall be produced by the same manufacturer.
- B. Stator: The stator winding shall be insulated with moisture resistant Class H insulation, rated for a temperature of 180°C. The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin, resulting in a winding fill factor of at least 95%. The stator shall be heat shrink fitted into the cast iron stator housing. The use of multiple step dip and bake type stator insulation process is not acceptable. The use of bolts, pins, screws, or other fastening devices used to locate or hold the stator and that penetrate the stator housing shall be rejected. The motor shall be designed for continuous duty, while handling pumped media of up to 125 degrees F. The motor shall be capable of withstanding at least 10 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of aluminum.
- C. Embedded Switches: Three thermal switches shall be embedded in the stator end coils, one per phase winding, to monitor the stator temperature. These thermal switches shall be used in conjunction with, and supplemental to, external motor overload protection, and shall be connected to the motor control panel. The thermal switches and FLS shall be connected to a Mini CAS (Control and Status) monitoring unit. The Mini CAS is designed to be mounted in any control panel.
- D. Motor Design: The motor service factor (combined effect of voltage, frequency, viscosity, and specific gravity) shall be 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for continuous operation in a 40°C ambient environment and shall have a NEMA Class B maximum operating temperature rise of 80°C. A motor performance curve shall be provided upon request, showing torque as a function of speed, and current, power factor, speed, input power in KW, and efficiency as a function of shaft power. The motor shall be sized to be non-overloading when the pump is operated at any point on the pump performance characteristic curve. Pump and motor shaft shall be a solid continuous unit. The pump shaft is an extension of the motor shaft. Couplings and shafts incorporating sleeves shall not be acceptable. The pump shaft shall be completely isolated from the pumped liquid.
- E. Power Cables: Pump motor power cables installed shall be oil resistant chloroprene rubber jacketed, type SPC multi-conductor cable, suitable for submersible pump applications and heavy mechanical stresses. The power cable shall also be sized according to NEC and ICEA standards

and also have P-MSHA approval. The total length of each cable shall be a minimum of 40 feet long. Power cables shall each include a ground check conductor.

2.03 GUIDE BARS AND BRACKETS

- A. General: Two AISI 304SS Schedule 40 guide bars and brackets shall be provided for each pump for the purpose of guiding the pump unit in raising and lowering. The guide bars shall not support any portion of the weight of the pump. The lower guide bar holders shall be integral with the discharge elbow. The pump unit shall be guided on the bars by a guide bracket which shall be an integral part of the pump.

2.04 LIFTING CABLE AND FITTINGS

- A. Submersible pumps in duplex pump stations shall be furnished with a pump lifting-chain positive-recovery system consisting of:
 - a. Minimum of 10 meters (33 ft.) of nylon line, of diameter matching weight of lifting chain required, connected to a short length (approximately ten links long) of high tensile strength proof-tested chain of required capacity, connected to the lifting eye or lifting bail of the submersible pump and a forged "grip-eye" of wrought alloy steel, provided separately to connect to the end of the lifting cable or chain of the pump lifting device.
- B. The operation of the pump lifting-chain positive-recovery system shall be as follows:
 - 1. Connect small eye of "grip-eye" to end of chain or cable of external mechanical of lifting device.
 - 2. Slip top end of nylon line through large eye of "grip-eye".
 - 3. Lower "grip-eye" to top of pump while maintaining a taut nylon line, making sure short length of chain fastened to pump is also taut.
 - 4. Release tension on nylon line when "grip-eye" has reached pump top. Make certain upper end of nylon line has been secured.
 - 5. Take up tension on cable or chain of lifting device, "grip-eye" will engage links of short chain and lift pump.
- C. Device shall be the same as the "Flygt-Lift" manufactured by Flygt Corporation, Trumbull, Connecticut or approved equal.

2.05 ACCESS COVERS

- A. Access Door: (1 required for wet well) The floor access door shall be Model APS as manufactured by U.S.F. Fabrication, Inc. with the size being specified on the plans. Door leaf shall be 3/16 or 1/4-inch thick aluminum diamond plate reinforced respectively for a 300 p.s.f. live load. The frame shall be extruded aluminum with an integral anchor flange and door seat on all four sides. The floor access door shall be equipped with a flush lifting handle that does not protrude above the cover, and a 316 stainless steel hold open arm with red vinyl grip that automatically keeps the cover in its upright, open position. The door shall have 316 stainless steel hinges with 316 stainless steel tamper resistant bolts/locknuts. A staple for a padlock shall be supplied for security. An adhesive backed vinyl material that protects the product during shipping and installation shall cover the entire top of the frame and cover. Installation shall be in accordance with the manufacturer's attached instructions. The door shall be manufactured and assembled in the United States. Manufacturer shall guarantee the door against defects in materials and workmanship for a period of ten years.
- B. Safety Grate fall through protection shall also be provided. The *Hatch Safety Grate* smoothly rotates to its open, upright position and locks in place by a hold-open rod. The aluminum grate has an OSHA safety orange finish. Hardware components are made of stainless steel to resist corrosion.

- C. When in its closed position, the *Hatch Safety Gate* provides fall-through prevention while allowing limited accessibility into the vault for maintenance purposes and visibility for inspections (nominal 4 x 6 inch grate openings). When opened, it acts as an additional barrier to the access door opening. Finally, since the hatch cover cannot be shut without first closing the *Hatch Safety Gate*, this fall-through system is always in its closed position when the next operator opens the hatch's cover. USF Fabrication safety grates operate independently of the cover's reinforcing so that the cover continues to meet its specified load and deflection requirements, even if the grate is damaged or removed. (Grate is designed for 300 p.s.f. loading.)

2.7 PUMP CONTROL PANELS

- A. CONTROL PANEL: It is the intention that this specification shall cover a complete Simplex Pump Lift Station Electrical Control System as hereinafter described and all necessary appurtenances which might normally be considered a part of the complete electrical system for this installation. It shall be factory assembled, wired and tested and covered by complete electrical drawings and instructions. The control system described hereafter shall be supplied by the pump supplier to provide single source responsibility for complete functioning system. Signal conditioning, setpoint, control, alternation, logic function, transducer, alarm and all other control functions shall be performed by solid-state modules which shall be standard catalog items of the system manufacturer, with proven field performance. At least one module of each type used in the system shall be stocked by the system manufacturer for system expansions or renewal parts purposes. The modules shall be of a compatible, integrated control family with a full range of control/protective/alternation/telemetry capabilities and associated housings, enclosure system and appurtenances to perform a variety of functions required by this project and foreseeable expansion. It is the intention of this specification to disallow non-standard, "one of a kind", experimental, unproven combinations of equipment. The control unit and redundant level sensors shall be standard products manufactured and stocked by the control supplier in order to assure one source responsibility, ready availability, proper system interconnections and reliable, long-term operation.
- B. CONTROL PANEL SCOPE: The equipment provided shall be a completely integrated automatic control system consisting of the required automation, phase conversion, and alarm monitoring equipment in a factory wired and tested assembly. The automatic control and alarm system components shall be standard, catalogued, stocked products of the system supplier to assure single source responsibility, immediately available spare/replacement parts, proper system interconnections and reliable long term operation. All equipment and materials shall be subject to the Engineer's review and shall not be purchased or manufactured until the review is complete. The supplier shall prepare detailed design information, procure, configure, start-up, and make ready for use, the complete system as indicated on the plans and specifications. These submittals and drawings include descriptions of functional operation and performance, as well as standards, but do not necessarily enumerate detailed specifications for all components and devices that are essential for system operation. However, all components and devices shall be furnished and installed as required to provide complete and operable systems for accomplishing the functions and meeting the performance set forth hereinafter. The system shall be installed by the contractor, complete and ready to operate, including all necessary connections to sources of electrical power, interconnection between field equipment and accessories as specified or as recommended for best operation for the equipment furnished. The hardware that is installed in the control system shall be readily available. None of the hardware in the system shall be part of a discontinued line or classified as hardware that is on repair status only. The contractor shall provide documentation verifying the continuing availability of the system hardware for full integration of the original hardware with future hardware improvements. All necessary mounting panels, stands, hangers, and brackets shall be furnished and installed and shall comply with the relevant sections of the Specifications. The Supplier shall include in the bid allowance for factory-trained service personnel to adjust all the equipment until the system has been completely accepted.

- C. **QUALITY ASSURANCE:** The Supplier shall maintain quality in both design and workmanship as well as materials used in manufacture of equipment supplied. All equipment supplied under this Contract shall be of new manufacture. The Supplier shall be a firm that is engaged in the manufacturing of process control systems. The system shall be in regular production with pre-designed hardware and software for process control systems. When the specification conflicts with a manufacturer's standard system, the standard system may be furnished if the intention of the specification is met. System shall be a standard system. Custom one of a kind application software and customized hardware components will not be accepted. A standard system is defined as one which is available, at time of bid, with fully tested hardware and software, full documentation, and prepared training classes such that no development must be done beyond system configuration. Supplier shall be responsible for detailed engineering, manufacture, programming, test, start-up and demonstration of all equipment and software programs to the Owner to provide a complete operating system. The manufacturer shall have been continuously involved in the design and manufacture of control systems for the past ten(10) years. The manufacturer shall have successfully built and placed into operation, systems similar to the one proposed herein and will furnish a list of at least ten (10) operating installations upon request by the Engineer. Provide all engineering and render coordination assistance, necessary for calibration of overall control system and to resolve interface discrepancies between panels, equipment, instrumentation and final control devices. Where interface conflicts exist, the Supplier shall document conflicts in writing to the City providing absolute information such as terminal numbers, device name, tests performed and diagnosis of problem. All equipment supplied shall be of the most current and proven design at the time of delivery. The completed System and the equipment provided by the Supplier shall be compatible with the functions required and shall be a complete working System. All electrical components of the System shall operate on 120 volt, single- phase, 60 Hertz current, except as otherwise noted in the specifications and on the drawings.
- D. **DOCUMENTATION:** The complete assembly shall be provided with job-specific wiring diagrams, parts lists, enclosure dimensional and door layout drawings and instructions. Production Schematics shall be submitted for approval for all equipment herein specified. The Production Schematics Submittal shall include a Document List. An Order Specification shall be included which shall describe in detail the major functionality of the equipment being provided as well as components used detailed down to major component level. Each panel shall be provided with a job-specific wiring diagram, parts list, enclosure door layout and enclosure dimension drawing. The wiring diagram requirement applies to all field mounted instrumentation and control equipment. Interconnection details shall be shown for all field mounted instrumentation. A Description of Operation shall be provided detailing the operation of the complete system, including the control and alarm handling. Provide As-built Drawings and Instruction Manuals. These manuals shall include corrected Shop Drawings. In addition, a detailed Programming and Operations Manual for the Microprocessor-based Controller Unit shall be included. The manual shall include all information as detailed for the Shop Drawing Submittals above.
- E. **U.L. SERIALIZED LABEL:** The control panel(s) shall be constructed in compliance with Underwriter's Laboratories Categories 508A.
- F. **WIRING:** All wiring shall be minimum 600 volt UL type MTW or AWM and have a current-carrying capacity of not less than 125% of the full load current. The conductors shall be in complete conformity with the national electric codes, state, local and NEMA electrical standards. For ease of servicing and maintenance, all wiring shall be color coded. The wire color code shall be clearly shown on the drawings, with each wire's color indicated. In addition, the equipment wiring shall be permanently marked with wire numbers that correspond to the system schematics. The numbering convention shall comply with the municipal industry standard. All control wiring shall be contained within plastic/PVC wiring duct with covers. Where dimensional constraints prevent the use of wiring duct, wires shall be trained to panel components in groupings. The wire groupings shall be bundled and tied not less than every 3 inches with nylon self-locking cable ties as manufactured by Panduit or equal. Every other cable tie shall be fastened to the enclosure

door or inner device panel with a cable tie mounting plate with pressure tape. Where wiring crosses hinged areas such as when trained from the inner device panel to the enclosure door, spiral wrap shall be used.

- G. **INCOMING SERVICE AND LIGHTNING ARRESTOR:** The feed for the simplex control panel shall be accomplished by tying into an existing distribution panel located in the building near lift station control panel. The feeder breaker to the lift station control panel shall be sized in accordance with the NEC and as indicated on the plans. The electrical contractor shall provide conduit and wiring between the existing distribution panel to the lift station. The power supply will be 240 volts, 3 phase, 4 wire, 60 Hertz.
1. A lightning arrestor shall be supplied in the control system and connected to each line of the load side of main power disconnect. The arrestor shall protect the control system against damage as the result of transient voltage surges caused by lightning interference, switching loads and power line interference's. It shall begin shunting to ground at 1000 volts maximum.
 2. Each panel shall be supplied with a properly sized control power circuit breaker and control power transformer where necessary. The breaker shall supply power to all control wiring within the enclosure. All major components and sub-assemblies shall be identified as to function with laminated, engraved bakelite nameplates, or similar approved means.
- H. **ENCLOSURE:** The described equipment shall be housed in a NEMA Type 3R, AISI 304 Stainless Steel, at least 36" high, 30" wide, 10" wall mounted enclosure.. The enclosure door shall be provided with a padlock-able hasp and aluminum dead front operator's inner door. This weatherproof, rain-tight enclosure shall be designed specifically for mounting in an unprotected outdoor location. It shall have a gasketed, hinged, front weather door with locking capability, and an internally mounted hinged dead front panel so that all the components normally actuated by Operating Personnel are accessible without opening the dead front and yet are not exposed to the elements or to unauthorized personnel.
- I. **INCOMING POWER CONNECTIONS:** The control panel shall include a power distribution terminal block for connection of the incoming service
- L. **BRANCH CIRCUIT BREAKERS AND VFD's:** A thermal magnetic circuit breaker shall be supplied as branch circuit protection for each pump motor. The circuit breaker must have a minimum ampere interrupting capacity of 25,000 @ 240 volt symmetrical RMS amps. The circuit breaker shall be operable through the operator's door of the enclosure and shall have a trip rating to allow full voltage starting and continuous operation of the motors. The circuit breaker shall be a Square-D FHL Line. The pump motor shall be supplied with a DANFOSS FC51 MICRO DRIVE - NEMA rated variable frequency drive with ambient-compensated, quick-trip class 10 overload sensing for submersible pumps in each phase to provide over current and running protection shall be provided for each pump motor. The drive shall accept an input voltage of between 220V and 250V and provide a constant output voltage of 230V. The overload trip setting shall be operator adjustable within normal pump operating ranges. Operator's door mounted, electronic overload reset push-buttons shall be provided. A control power circuit breaker shall be provided and operable through the operators door of the control panel to provide a disconnect means and short circuit protection for any 120 VAC (or less) devices not powered from motor starter circuits. The variable frequency drive will be manually set by the operator.
- M. **PUMP CONTROL SELECTOR SWITCHES AND "RUN" LIGHTS:** The control panel shall have three position selector switches mounted on the front door for Hand-Off-Auto operation of each pump. In the Hand position the motor shall be called to operate. In the Off mode the motor shall not be allowed to operate. In the Auto mode, the motor shall operate in response to control signals from the controller. The HOA will be a NEMA Type 4X selector switch(s) shall be industrial rated heavy duty NEMA Type 4X with modular contact block assemblies. Contact Blocks shall be stacking scew together type with parallel double break contacts with wiping action. Contact blocks shall be rated NEMA A600, 600 Volt, 10A continuous duty, 7200VA make,

720VA break AC. Contacts shall have compression type screw terminals with self lifting spring washers to insure that the wire remains secure even under sever vibration. Snap together contact blocks are not acceptable. All pilot devices specified herein are to be Square D Series 9001, Siemens Class 52, Allen-Bradley 800-H Line. Unless specified otherwise, Selector Switch(s) shall be of the maintained position.

2.9 SOLID STATE CONTROLLERS – GENERAL DESCRIPTION

1. The contractor shall furnish, install and place into operation a simple pump control system designed to operate wastewater pumps in a pump down mode as described herein. The control system shall be designed utilizing proven technology in control design for wastewater pump stations. The control system shall be operator and maintenance friendly to ensure ease of system set up and to limit system down time.
2. The control system shall be capable of operating 1 pump in a constant speed mode, at the voltage, horsepower, and full load current ratings.
3. Wetwell level sensing shall incorporate a low voltage, multiple contact conductance probe and conductance relays suitable for wastewater applications. The probe operation shall be unaffected by the presence of grease build up, foam, and debris in the wastewater, and shall not require entering the wetwell for installation and/or servicing.

2.10 MANUFACTURER

1. Acceptable manufacturers are Xylem Multitrode. A manufacturer's being named in this specification notwithstanding; all equipment approved for this project shall meet or exceed all performance, service, and warranty requirements of this specification.

2.11 QUALITY ASSURANCE

1. Experience: The manufacturer of the control system must be able to document ten years of experience in successfully designing and manufacturing similar control systems for wastewater pumping applications.
2. Record Documents: Five sets of as built drawings are to be supplied depicting "as-built conditions". This submittal is to include all field modifications made by the authorized start-up personnel during installation, start-up and testing.

An original copy of the final Quality Control report shall be submitted with the above as-built documents

3. Submittals: Complete assembly and installation drawings, wiring schematics with respective description of operation, and product data specifications for components shall be submitted for approval, prior to release for manufacture, in accordance with the procedure set forth in the contract documents. Assembly drawings shall include proposed dimensions of the enclosure as well as layout of the sub-panel and face mounted devices.

2.12 TESTING

1. Shop Test: Prior to shipment, the control panel shall be tested at the manufacturer's facility to assure proper operation of every function. Test records shall be retained by the manufacturer and be made available upon request by the Engineer or Owner.
2. Field Tests: Field tests shall include, as a minimum, the following:
 1. Check to ensure all terminations and electrical connections are tight
 2. Check to ensure the control panel has been properly grounded and conforms to NEC requirements.
 3. Perform a wetwell rise and fall simulation to ensure the level sensing and all control sequences, including alarms, are functioning properly.
 4. Check and adjust for specific application all power monitoring equipment to ensure proper power is available, and the control and pumping equipment is properly

protected.

5. Adjust thermal overload protection on all motor starters in accordance with the pump manufacturer's recommendation.

2.13 SYSTEM CONFIGURATION

The control system shall have the following components:

1. Pump circuit breaker
2. 120 volt control circuit breaker
3. Danfoss Micro Drive
4. Level sensing probe and level control/relay
7. Lightning / Surge arrestor
8. Elapsed time meters (mounted on deadfront panel)
9. Alarm light
10. HOA switch (mounted on inner panel door)
11. Pump run LED (green, mounted on inner panel door)
11. Motor overtemp pilot light (mounted on inner panel door)
12. Motor overtemp reset pushbutton (mounted on inner panel door)
13. SUBMEG – Meggering Module

2.14 SYSTEM OPERATION

1. General: The wet well level shall be monitored and controlled as follows:
Level 3 – High Level Alarm
Level 2 – Start lead pump on rising level
Level 1 – Stop lead pump on falling level
2. Equipment Shutdown: The control system shall be interlocked to ensure the following alarm or problem conditions will result in equipment shutdown
3. Thermal overload and/or seal failure as detected by the pump thermal and leakage sensors.
4. Alarms: The control system shall be interlocked to activate the alarm advisory upon occurrence of the following conditions. These outputs shall be provided as discreet Dry Contact Outputs to be connected to the Building Control System (NIAGRA CS-3) and wired to their panel located near the Pump Control Panel. The contractor shall be responsible for wiring and conduit to and from the NIAGRA RTU. The building System Integrator will be responsible for termination and configuration of the Building System Alarm System.

Alarm Outputs Monitored

1. High wetwell level
2. Pump Fail
3. Pump Run

2.15 EQUIPMENT

1. Liquid level Indicator/Controller (MTR) The level control relay shall be a DIN rail mounted device with supply and pump run LEDs, eight programmable activation delays, charge / discharge settable and four sensitivity settings. All settings shall be easily performed during the installation of the relay. The relay shall be programmable for pump-up or pump-down operation.
2. A green LED shall be provided on the front of the relay to indicate supply voltage is present. A red LED shall be provided on the front of the relay to indicate the relay output to the pump starter is activated.
3. Two independent output contact sets shall be provided, one single pole normally open, and one single pole double throw contact. Each output shall be capable of five amp resistive load at 250 VAC. An instantaneous, 2.5, 5, 10, 20, 40, 80, and 160 second activation delay shall

- be selectable from DIP switches mounted on the front of the unit.
4. A programming label shall be attached to the right hand side of the relay, clearly indicating all programmable settings.
 5. The relay shall be capable of receiving two probe inputs (wetwell level setpoints). The sensing voltage shall be a maximum of 13 VDC at .8 mA each.
 6. The level sensing probe shall be constructed from uPVC 1.25 inch tubing with molded sensor units at regular intervals along the probe. Each sensor unit shall be PVC injected to prohibit ingress of moisture, and the sensor material will be Avesta SMO254 stainless steel.
 7. The probe shall be mounted in a turbulent area of the wetwell, suspended on its own cable and connected to a .23 inch stainless steel hook, which shall be hooked to a 1.18 inch stainless steel angle containing a squeegee pad positioned in the opening of the wetwell to enable removal of the probe without entering the wetwell. The squeegee shall have a 1.18 inch slot, enabling the probe to be pulled through and cleaned.
 8. The probe shall have ten sensors spaced along its mast, and each sensor shall be individually connected to a correspondingly numbered PVC/PVC .03 inch flexible cable. The molded sensor unit will contain two Avesta sensors mounted on opposing sides of sensor unit. Each Avesta sensor will be .94 inches in length and no wider than .08 inches, and will protrude from the surface of the PVC mast. The probe shall be pressure injected with an epoxy resin to encapsulate all internal components and connections to form a rigid and homogenous unit. Each sensor unit containing the two Avesta sensors shall be rotated 90 degrees to the previous sensor unit to prevent tracking between sensors
 9. The cable shall be numbered (number and text) along the entirety of the cable at intervals not to exceed 7.5 inches for identification. The cables shall be capable of supporting the weight of the probe and cable, without the need for additional support. The cable shall be secured to the top of the probe by a synthetic rubber compression fitting.
 10. A SUBMEG AUTOMATIC MEGGERING system module shall be incorporated into the panel. Each pump cycle will initiate an automatic meggering sequence that will fail the pump to start in the event the resistance drops to 1 Meg-Ohm or less. The pump fail will be a common alarm fail.

2.16 LOCAL AND REMOTE ALARM SYSTEM

- A. A top mounted weatherproof, strobe alarm indication light assembly with shatter resistant polycarbonate red lens mounted on a polycarbonate/ABS blend case shall be provided. The alarm light shall be NEMA 4X rated, suitable for indoor or outdoor mounting and operate on 120 VAC and be PLC rated. The strobe tube shall provide a minimum of 300,000 peak candela output and shall be rated for 3,000 hour life. The alarm light shall flash upon occurrence of an alarm condition.
- B. A remote alarm system shall be provided to allow the owner to monitor the system via Dry Contact Outputs connected to the Building Alarm System (NIAGRA CS-3) as noted.

2.17 CONDENSATION PROTECTIVE HEATER

- A. A 100 watt, 120 VAC condensation protective heater and adjustable high temperature cutout thermostat shall be supplied in the control panel. The heater's surface area for heat dissipation shall be large enough to prevent a skin burn (if an operator's hand should inadvertently come in contact with the unit when energized).

PART 3 EXECUTION

3.1 INSPECTION

- A. Inspect all equipment upon arrival at job site and prior to installation. Notify manufacturer of any damage and/or shortage.

- B. Inspect concrete mounting pads and anchor bolts for correct size and alignment prior to installation.

3.2 PREPARATION

- A. Make corrections and/or repairs as required for items inspected and found to be deficient.

3.3 INSTALLATION

- A. Install pumps and accessories in strict accordance with the manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

- A. The manufacturer's field engineer or representative shall inspect and check the installation after erection and be on hand for initial start-up of the equipment for a period of at least three days. He shall also instruct treatment plant personnel in the operation and maintenance of the system.

- B. Control Panel Service, Training and Guarantee: The services of a factory trained, qualified representative shall be provided to inspect the completed installation, make all adjustment necessary to place the system in trouble-free operation and instruct the operating personnel in the proper care and operation of the equipment. After each system has been installed, the Supplier shall demonstrate with performance of each unit, and document that the system operates properly as specified. The Supplier shall provide systems training for operations totaling no less than 1 hour. All training shall be conducted at the site. Travel expenses are the responsibility of the Supplier. All equipment shall be guaranteed against defects in material and workmanship for a period of one year from the date of Owner's final inspection and acceptance to the effect that any defective equipment shall be repaired or replaced without cost or obligation to the Owner.

3.5 ADJUSTING AND CLEANING

- A. Adjust equipment as required and within limits of manufacturer's instructions for proper alignment.
- B. Apply proper type and quantity of lubricants for short term storage or start-up operation as applicable.
- C. Clean equipment of any foreign matter or substances.
- D. Field paint all components to be painted in accordance with manufacturers recommendations.

3.6 PROTECTION

- A. After installation and painting protect the equipment from any damage by work of other trades. Repair any damage that nevertheless occurs.

3.7 SERVICE

- A. The pump manufacturer shall have an authorized factory service center capable of completely servicing the proposed pumps within 100 miles of the project site. The pump manufacturer shall have a direct factory service center/stocking facility capable of completely servicing, and which stocks identical complete drive units, and spare parts for, the proposed pumps within 500 miles of the project site.

3.8 PUMP WARRANTY

- A. The pump manufacturer shall warrant the pumps for this project in accordance with their 5 Year/10,000 Hour Municipal Warranty for 3000 Series products as published in the latest release of their product catalog. The units supplied shall be warranted to be free from defects in materials and workmanship as prescribed by the referenced warranty to include parts and labor for the period so noted in the printed warranty. Congruent with the standard Municipal Warranty, the pump system supplier will provide a Twenty Year Motor Warranty to the owner. The pump system supplier shall provide a signed and properly executed written document to the owner for the specific project that defines the terms and conditions of the warranty to replace the stator and rotor parts at no charge where compliance with the warranty is verified. The pump system supplier shall have offered this warranty for a period of no less than 10 years and shall provide documentation to validate compliance. For both warranties, the manufacturer shall not have any obligation for other claims, losses, costs or expenses, including incidental and consequential damages relating to any defective parts. The warranty period for each warranty shall commence at the time of Start-Up or no longer than 90 days from the date of shipment to the contractor, whichever applies.

3.9 ACCESSORIES

- A. The anchor bolts, upper guide bar brackets and cable holder shall be fabricated from AISI 304 stainless steel.

END OF SECTION

SECTION 02761

CLEANING AND TELEVISION INSPECTION OF SEWER LINES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cleaning of sewer lines.
- B. Television inspection of sewer lines.

1.2 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: All work shall comply with rules and regulations of local, state, and federal agencies having jurisdiction.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CLEANING

- A. The sanitary sewer line designated to be cleaned shall be cleaned using the method necessary to ensure removal of rocks, mortar, grease, sand, dirt, and other obstructions in the sewer line. Acceptable methods of cleaning include:
 - 1. High velocity jetting (hydro-cleaning) equipment: Pump pressure for this method shall be maintained at about 2,000 PSI. Cleaning nozzles shall utilize 30 to 60 gpm through a 1 1/4 inch minimum size hose with sprays at 15 to 45 degrees to scour the inside of the sewer. The equipment shall include several nozzles including a cutting nozzle. Hose length shall be as required. Equipment shall include a water storage tank, engines, pumps, hose reel, hydraulic system, suction assembly for cleaning debris, and other standard and necessary features.
 - 2. Mechanical cleaning equipment: This method shall be used for removal of heavy solids deposition or severe intrusions. Mechanical cleaning equipment may consist of rodding machines, expanding cutters, porcupines, or other approved devices. Mechanical cleaning shall be followed by high velocity hydro-cleaning for finishing the cleaning work.

3.2 TELEVISION INSPECTION OF SEWER PIPE

- A. Video: The sewer line designated for television inspection shall be cleaned prior to inspection. The television equipment for the inspection shall be specifically designed and constructed for such inspection of a 6 inch diameter pipeline. The video camera system shall be operative in 100% humidity conditions and shall consist generally of: color, pan/tilt camera; 135 degree rotation forward to back, 360 degree rotation at pipe sidewall; lighting system; skid mounted or tractor driven; remote adjustment of focus and iris; footage counter; and other standard and necessary features. The video equipment shall include at least a monitoring screen; camera system controls; provision for making a video recording with title screen showing location, date, starting time, log number, and similar data; video recording equipment; audio equipment for adding verbal comments to the tape; and other standard and necessary items. Video tapes of the television inspection recording both video and audio presentations of the lines inspected shall be provided to the Owner. Each video recording shall show plainly the location of the television inspection, date, and distance along the line.

- B. Log: a written log shall be prepared for each section of sewer televised. Each log sheet shall show at least the following: project; location; date; time; video recording number; log number; inspector name; pipe size; direction of inspection; pipe material; location of defects; and other similar information.
- C. Monitoring: The Owner, Engineer and General Contractor shall have the right to view the monitor and the work in progress at any time.

END OF SECTION

SECTION 02767

LINING SEWER PIPE

PART 1 GENERAL

1.1 SECTIONS INCLUDES

- A. Provide all equipment and materials to line gravity sewer. The intent of this cured-in-place-pipe (CIPP) lining specification to reconstruct pipelines by the installation of a resin impregnated flexible tube, which when cured will fit tight and continuous against the original pipeline. The resin will be cured using either hot water under a hydrostatic head or steam pressure within the CIPP.

1.2 RELATED SECTIONS

- A. Section 02761 - CLEANING AND TELEVISION INSPECTION OF SEWER LINES

1.3 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: All work shall comply with rules and regulations of local, state, and federal agencies having jurisdiction.

1.4 REFERENCE STANDARDS

- A. This specification references standards from the American Society for Testing and Materials. ASTM F1216 (Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin Impregnated Tube), ASTM D 5813 (Cured In Place Thermosetting Resin Sewer Pipe), and ASTM D790 (Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials).

1.5 LOCATION AND CURRENT USAGE

- A. General: The sewer to be lined is a sanitary sewer/drain line from the Shelby County Court House, 140 Adams. The pipeline is accessible from the sub-basement of the court house and it is connected to a City of Memphis sanitary sewer in Washington Street through what appears to be a wye fitting.
- B. Access to Basement: Access to the basement area is very limited. There is a freight elevator with access to the sidewalk on Washington Street. The elevator platform is approximately 54" by 54". There are also some small basement windows on the east side of the basement area.
- C. Current Usage of Sewer: The sewer currently conveys some of the sanitary sewage and storm water from the court house.

1.6 SUBMITTALS

- A. Submit manufacturer's certificate of compliance for the material and manufacturer's installation instructions.

1.7 PROCEDURES

- A. Installation Procedures: The following installation procedures shall be adhered to unless otherwise approved.
 - 1. Safety: The Contractor shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving working with scaffolding and entering confined spaces.

2. Cleaning of Sewer Line: It shall be the responsibility of the Contractor to remove all internal debris from the sewer line as specified in Section 02761- CLEANING AND TELEVISION INSPECTION OF SEWER LINES.
3. Inspection of Pipelines: Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation, and it shall be noted so that these conditions can be corrected. A video recording and suitable log shall be kept for later reference by the Owner.
4. Bypassing Sewer Line: The Contractor, when required, shall provide for the flow of water around the section or sections of pipe designated for reconstruction. The bypass may include plugging the line and pumping the flow to an adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
5. Line Obstructions: It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, and debris that will prevent the installation.

PART 2 PRODUCTS

2.1 CURED-IN-PLACE PIPE (CIPP) LINER MATERIALS

- A. Liner Pipe: This shall be Insituform Technologies, Inc. Perma-Liner Industries, Inc., or equal cured-in-place liner material, installed by a certified installer.
- B. The existing pipe reconstruction will be accomplished using a reinforced liner tube, with a 6 mm minimum final cured tube wall thickness, measured to exact length and inside diameter utilizing a thermosetting resin that meets required physical and chemical resistance properties. The reinforced liner will be impregnated with resin then loaded into an approved air pressured launching system or inverted using a hydrostatic head pressure of water. The liner will be aligned to the open end of the existing pipe. Once the liner is aligned, the launching system will invert the resin-impregnated liner with air or water pressure. The inversion process is completed once the liner has fully inverted to the adjacent sewer manhole. Pressure will be held while the liner is cured using hot water or steam. Records of cure schedule must be kept. Follow resin manufacturers cure chart for proper cure and cooling times. The liner must be below 100 degrees F before head pressure is relieved. The sewer collection pipe will be immediately televised for the inspector's approval. A copy of the televised inspection must be recorded for future reference.
- C. The liner tube will consist of a poly-ethylene, poly-propylene, or poly-urethane coating with one or more layers of needled felt. The liner tube will be fabricated together using a butt stitched seam sealing process with a heat welded sealing tape to ensure airtight seal. The liner tube will be capable of carrying resin and withstanding installation pressures and curing temperatures. The liner tube will be lined on one side with a translucent impermeable chemically resistant waterproof coating. This coating will be on the inside of the lined pipe after curing is completed. The coating will provide a smooth and seamless inner wall.
- D. The resin will be a two-part, 100% solids epoxy containing no styrene. The epoxy resin shall be formulated to have a gel (pot) life appropriate for the scope of the work. The epoxy shall be heat cured by an internal exothermic chemical reaction initiated by hot water or steam. Polyester and Vinyl Ester resins are also permitted.
- E. Structural Requirements: The CIPP shall be designed as per ASTM F1216. The layers of the cured CIPP shall be uniformly bonded to the existing pipe wall. It shall not be possible to separate any two layers. The cured pipe material (CIPP) shall conform to the minimum structural standards, as listed below.

Required Cured-In-Place Lateral Lining Standards	Minimum
Flexural Strength (ASTM D 790)	4,500 PSI
Flexural Modulus (ASTM D 790)	250,000 PSI
Tensile Strength (ASTM D 638)	3,000 PSI
Compressive Strength (ASTM D 695)	4,000 PSI
Tensile Elongation (ASTM D 638)	5 PSI
Chemical Resistance (ASTM D 543)	<20% loss

- F. Patents: The Contractor shall warrant and save harmless the Owner and his Engineer against all claims for patent infringement and any loss thereof.

2.2 ACCEPTANCE

- A. The completed relining operation shall be inspected by remote television, a video recording provided, and the completed installation shall show no visual and material defects. The surface shall be smooth and free of pits, wrinkles, pinholes, cracks and crazing and shall substantially conform to the shape of the existing pipe.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 03302

CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Provide and prepare sub-grade to receive concrete.
- B. Provide forming as required.
- C. Provide concrete complete with reinforcement.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 5 - METAL.
- C. DIVISION 16 - ELECTRICAL.

1.3 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: All work shall comply with rules and regulations of local and state agencies having jurisdiction.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Portland Cement: ASTM C150; normal - Type I.
- B. Aggregates: ASTM C33.
 - 1. Fine aggregates shall be natural sand, or sand prepared from stone, or other inert materials having similar characteristics as approved.
 - 2. Coarse shall be crushed, washed limestone only.
- C. Water: Clean and free from injurious amounts of oil, alkali, organic matter, or other deleterious material.
- D. Air entrainment (for all exterior exposed concrete): ASTM C260 or AASHTO M-154. Air entraining admixtures shall be added to the mixer in the amount necessary to produce the specified air content.
- E. Water-reducing, set-controlling admixtures shall meet the requirements of ASTM C494, Type A, water-reducing or Type D, water-reducing and retarding. Water-reducing admixtures shall be added at the mixer separately from air-entraining admixtures in accordance with the manufacturer's printed instructions.

2.2 REINFORCEMENT

- A. Reinforcing Steel: 60 ksi (414 MPa) yield strength; deformed billet steel bars; ASTM A615; plain finish.
- B. Tie Wire: Minimum 16 gauge annealed type, or patented system acceptable to Engineer.

- C. Minimum Reinforcement: Whether indicated or not, unless otherwise indicated, provide Welded Wire Fabric (WWF) 6x6-W1.4 x W1.4 in all sidewalks, driveways, and pads larger than 18 inches square.

2.3 CONCRETE MIX

- A. Ready-Mix Concrete: All concrete shall be ready-mix concrete with crushed limestone coarse aggregates.
- B. Mix and proportion to produce minimum 4,000 psi concrete at 28 days with maximum slump of 4 inches and 5.5 percent air entrainment, ASTM C94 OR AS INDICATED ON DRAWINGS, unless noted on drawings otherwise.
- C. Use accelerating admixtures in cold weather only when acceptable to Engineer. Use of admixtures shall not relax cold weather placement requirements. Do not use calcium chloride.
- D. Use set-retarding admixtures during hot weather only when acceptable to Engineer.

PART 3 EXECUTION

3.1 PREPARATION OF SUB-GRADE

- A. Insure rough grading has brought sub-grade to required elevations.
- B. Fill soft spots and hollows with additional fill.
- C. Level and compact sub-grade, to receive concrete to the minimum required dry density compaction of 95 percent standard Proctor.
- D. Sub-grade: Place concrete only on a moist compacted subgrade or base, free from loose material. Do not place concrete on a muddy or frozen sub-grade.

3.2 FORMING

- A. All forms shall be free from warp, tight enough to prevent leakage of mortar, and substantial enough to maintain their shape and position, without springing or settlement, when concrete is placed or vibrated. Forms shall be clean and those for surfaces to be exposed shall produce a smooth, even finish without fins or board marks. Set forms for slabs on ground at exact finished grade; check for line and grade and correct as necessary immediately before concreting. Provide uniform bearing for such forms.
- B. Slabs on Grade Minimum Thickness: Unless otherwise indicated, sidewalk on grade shall be at least 4 inches thick and all other slabs on grade shall be at least 5 ½ inches thick, all with minimum reinforcement specified above.
- C. Slabs on Grade Expansion Joints: Unless otherwise indicated, provide expansion joints, using expansion joint material, at regular intervals not exceeding 20 feet, forming rectangular slabs with equal length sides as nearly as practicable.

3.3 PLACING CONCRETE

- A. Concrete shall be deposited so as to require as little rehandling as practicable. Spade concrete thoroughly along forms and expansion joints, and work carefully into corners and around reinforcement. Tamp and screed to a dense mass. Do not mix or place concrete when the air temperature is below freezing. If the temperature may be expected to fall below 40 degrees Fahrenheit within 24 hours after concrete is placed, heat water and aggregate to bring the temperature of concrete mix to at least 50 degrees Fahrenheit. Consolidate concrete by means of a mechanical vibrator unless otherwise approved.
- B. Time in Transit: The maximum time elapsed between loading the concrete on the truck and placing in final position shall be 45 minutes.
- C. Retempering: Water shall not be added after the concrete has been placed on the truck unless authorized by the Engineer or his authorized representative.
- D. Weather Conditions: In addition to ACI 302, comply with the following:
 - 1. Cold Weather: "Recommended Practice for Cold Weather Concreting" ACI 306.
 - 2. Hot Weather: "Recommended Practice for Hot Weather Concreting" ACI 305.
- E. Concrete shall not be placed on frozen subgrade.
- F. Protection: Do not remove forms for 24 hours after pouring concrete. Protect concrete from traffic for a period of 7 days after pouring.

3.4 FINISHING CONCRETE

- A. General: The concrete shall be struck-off, consolidated, and finished with mechanical equipment in such a manner that after final finishing, it shall conform to the cross section shown on the Plans. Hand finishing will be permitted in narrow widths, areas of irregular dimensions, and in the event of breakdown of the mechanical equipment, to finish the concrete already deposited on the grade.
- B. Final Surface Finish (Ref ACI 301):
 - 1. Pavements shall have a broomed or burlap drag finish providing a uniform, skid-resistant texture.
 - 2. See drawings for other type of finish.

3.5 CURING CONCRETE

- A. General: Immediately after finishing operations have been completed, the surface of the slab shall be coated and sealed with a uniform layer of membrane curing compound applied as recommended by the manufacturer. When the forms are removed, curing compound shall be applied to the sides of the slab.
 - 1. Areas in which the curing membrane is damaged within a period of three days shall be resprayed with curing compound.
 - 2. Curing compound may be omitted when the concrete is otherwise protected from surface drying for three days.
- B. Impervious Membrane: Concrete shall be cured through the application of a transparent, impervious membrane of a type approved by the Engineer. The liquid shall contain a fugitive dye and shall be of such composition as not to react with the concrete nor alter appreciably its natural color. Apply the liquid immediately after free water has disappeared from the finished surface of the concrete; apply in a fine mist and in such manner as to cover the surface with a uniform, flexible film, ample to seal the surface thoroughly, and without marring the concrete finish. Keep workmen, equipment, and materials off the membrane for three days after applying.

END OF SECTION

SECTION 04101
CEMENT MORTAR

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Mortar for manhole construction.

1.2 RELATED SECTIONS

- A. Section 04221 - CONCRETE BRICK MASONRY.

1.3 SUBMITTALS

- A. Manufacturer's literature describing products and application.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to minimum 50 degrees Fahrenheit (10 degrees C) prior to, during, and 48 hours after completion of masonry work.
- B. Protect cementitious materials against exposure to moisture. Use of cementitious or other materials that have become caked and hardened from absorption of moisture will not be permitted.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged material in original containers with seals unbroken and labels intact until time of use.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Portland Cement: Type I conforming to ASTM C150.
 - 1. Natural gray in color.
- B. Sand: Conforming to ASTM C144.

2.2 MIXES

- A. Cement mortar mixes shall consist of 3 parts sand and 1 part Portland cement unless otherwise approved to conform to the required Building Codes and ASTM C-270.

PART 3 EXECUTION

3.1 PREPARATION OF MORTAR

- A. Unless otherwise approved, materials shall be mixed in a batch mechanical mixer only. The actual mixing time shall not be less than two minutes per batch. Mortar shall be mixed only in amounts as can be quickly used, and no retempering shall be permitted. The use of chemical additives to mortar is prohibited, except with written permission.

END OF SECTION

SECTION 04221

CONCRETE BRICK MASONRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Brick for manhole construction.

1.2 RELATED SECTIONS

- A. DIVISION 3 - CONCRETE.
- B. Section 04101 – CEMENT MORTAR.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to a minimum of 50 degrees Fahrenheit (10 degrees C) prior to, during, and 48 hours after completion of masonry work.

1.4 SUBMITTALS

- A. Concrete Brick: Submit current laboratory tests establishing that units meet ASTM requirements.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete Brick shall conform to requirements of ASTM C55 for Grade A units.

PART 3 EXECUTION

3.1 INSTALLATION

- A. All masonry work shall be installed in a first class manner by craftsmen experienced and skilled in the type of work involved. All masonry units shall be laid to a line and plumb, in full accordance with the measurements and details shown.
- B. All units in walls shall be laid in a stack bond header pattern for a 8-inch minimum thickness solid brick wall.
- C. Concrete brick shall be laid in a full bed of mortar with a ½ inch minimum thickness coating of mortar covering each face.
- D. Do all miscellaneous masonry work as indicated, and/or necessary to the construction shown, in accordance with the best practice.

3.2 GROUTING OF PIPES, ETC., THAT PASS THRU CONCRETE BRICK WALLS

- A. Where conduits, pipes, etc. pass through brick walls, all joints shall be grouted solid. All joints shall be air tight.

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Manhole steps, manhole rims and covers, hatch covers, miscellaneous aluminum items and other miscellaneous metal angles and shapes for supports and shop fabricated metals items.

1.2 RELATED WORK AND APPLICABLE REQUIREMENTS SPECIFIED ELSEWHERE

- A. Related Work:
 - 1. DIVISION 2 - SITEWORK.
 - 2. DIVISION 3 - CONCRETE.
 - 3. DIVISION 4 - MASONRY.
 - 4. DIVISION 5 - METALS.

1.3 REFERENCE STANDARDS

- A. Published Specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to work in this section where cited below:
 - 1. ASTM A36 - Structural Steel.
 - 2. ASTM A53 - Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.
 - 3. ASTM A307 - Low-Carbon Steel Externally and Internally Threaded Fasteners.
 - 4. ASTM A325 - High Strength Bolts for Structural Steel Joints.
 - 5. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.
 - 6. ASTM A500 - Cold-formed Welded and Seamless Carbon Steel Structural Tubing.
 - 7. ASTM A501 - Hot-formed Welded and Seamless Carbon Steel Structural Tubing.
 - 8. AWS D1.1 - Structural Welding Code.
 - 9. FS TT-P-31 - Paint, Oil: Iron Oxide, Ready Mix, Red and Brown.
 - 10. FS TT-P-641 - Primer Coating, Zinc Dust-Zinc Oxide (for Galvanized Surfaces).

1.4 QUALITY ASSURANCE

- A. Welders' Qualifications: Welders shall be qualified in accordance with AWS D1.1.
- B. Design Criteria:
 - 1. Work shall be designed to support normally imposed loads and meet requirements of AISC.
 - 2. Built-up parts shall not exhibit warp.
 - 3. Weather-exposed joints shall be formed to drain or exclude moisture and water.

1.5 SUBMITTALS

- A. Manufacturer's literature describing products including details and dimensions.
- B. Shop Drawings:
 - 1. Show at large scale construction of various parts, methods of joining, thickness of metals, profiles of surfaces, reinforcing, anchorage, and structural supports. Include information regarding concealed and exposed joints, welds, and fastenings.
 - 2. Where welded connectors, concrete, or masonry inserts are required.
- C. Samples: Only as requested.
- D. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Steel Sections: ASTM A36.
- B. Bolts, Nuts, and Washers: ASTM A325.
- C. Self Welding Shear Studs: ASTM A108.
- D. Low-Alloy Steel Deformed Bars for Concrete Reinforcement: ASTM A706.
- E. Welding Materials: AWS D1.1 and AWS D12.1; type required for materials being welded.
- F. Primer: TNEMEC 37-77 Chem-Prime or equal.
- G. Touch-up Primer for Galvanized Surfaces: FS TT-P-645.

2.2 FABRICATION

- A. Verify dimensions on site prior to shop fabrication.
- B. Fabricate items with joints tightly fitted and secured.
- C. Fit and shop assemble in largest practical sections, for delivery to site.
- D. Grind exposed welds flush and smooth with adjacent finished surface. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of structure, except where specifically noted otherwise.
- F. Make exposed joints butt tight, flush, and hairline.
- G. Supply components required for anchorage of metal fabrications. Fabricate anchorage and related components and finish as metal fabrication, except where specifically noted otherwise.

2.3 FINISH

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Do not prime surfaces in direct contact bond with concrete or where field welding is required.
- C. Prime paint items scheduled with one coat.
- D. Galvanize items to minimum 2.0 ounce per square foot (610 g/sq m) zinc coating in accordance with ASTM A386.

2.4 MANHOLE STEPS

- A. Manhole steps shall be plastic covered bent steel type, No. PS-1 as manufactured by M.A. Industries, East Point, GA, "Sure Foot" as manufactured by Oliver Tire & Rubber Co., Atlanta, GA, or equal.

2.5 MANHOLE RIMS AND COVERS

- A. This shall be cast iron, heavy traffic pattern type with covers marked SEWER and a minimum 22-inch clear opening. Metal used in the manufacturer of castings shall conform to minimum requirements ASTM A48 Class 30B for Gray Iron or ASTM A536 Grade 65-45-12 for Ductile Iron. Machine or grind surfaces for the prevention of warbling. Cover shall be bolt down type without vent holes. Frame shall be at least 6 inch total depth with bottom flange to be cast into concrete so top of frame is flush with finish floor. Castings shall be delivered to the job site in non-painted condition and shall be one of the following or equal:
1. John Bouchard & Sons Company, Nashville, TN
 2. Harper Foundary & Machine Company, Jackson, MS
 3. Vulcan Foundary Inc., Demham Springs, LA
 4. Neenah Foundary Company, Neenah, WI
 5. Deeter Foundary, Lincoln, Nebraska

2.6 MISCELLANEOUS ALUMINUM ITEMS

- A. Aluminum Items: These shall be factory prefabricated aluminum assemblies, of the size indicated. The cover shall be complete with 1/4" thick diamond pattern or smooth finish 6061-T6 aluminum alloy plate with structural stiffeners welded thereto to support, unless otherwise indicated, at least 100 psf live load with not more than 1/4" deflection. All welding shall be done by the "MIG" or the "TIG" process. See detailed drawing in the back of these specifications.
- B. Corrosion Protection: All surfaces of the above specified aluminum items which will contact concrete shall be factory coated with coal tar paint or other suitable material which will prevent corrosion and electrolytic action.

2.7 MISCELLANEOUS STEEL FABRICATED ITEMS

- A. Unless otherwise indicated shop fabricate this from ASTM A36 steel sections as indicated and as required.
- B. In the fabrication shop, clean all steel surfaces to at least SSPC-SP3 Power Tool Cleaning conditions and apply one coat of rust inhibitive primer, TNEMEC 37-77 Chem Prime or as approved.

2.8 GRATINGS

- A. General: Replace the existing grating specified below.
- B. Grating: These shall be rectangular or I-section bearing bars as manufactured by Borden, Type W/B or equal. Bearing bar size and spacing shall match existing or as required to support a minimum uniform load of 100 PSF with not more than 1/4" deflection or a concentrated load of 200 pounds at mid-span with not more than 0.15" deflection whichever requires the heavier grating, all in accordance with the grating manufacturer's ratings. Arrangement shall be as indicated, as existing and as required.

2.9 PUMP GUIDE RAILS

- A. These shall be 2 inch IPS Schedule 40 stainless steel pipe, length as required. Two required for each pump.

2.10 WET WELL HATCH COVER - See Section 02736 - SOLIDS HANDLING SUBMERSIBLE PUMPS.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Perform field welding in accordance with AWS D1.1.
- C. After installation, touch-up field welds, scratched or damaged surfaces with primer.

END OF SECTION

SECTION 13000
PLANT PIPEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Work includes piping, valves and related accessories that generally are exposed to view.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 5 - METALS.
- C. DIVISION 11 - EQUIPMENT.
- D. DIVISION 16 - ELECTRICAL.

1.3 SUBMITTALS

- A. Submit manufacturer's data, layout drawings, list of materials takeoff and related items for all work included in this Section.

1.4 COORDINATION OF PIPEWORK

- A. Coordinate the work of this Section with that of all other Sections in which pipework is specified, so that all pipework and related items indicated on the overall contract drawings will be provided without duplication and without omissions.

1.5 PIPE SIZES AND ARRANGEMENTS

- A. These shall be as indicated, except that subject to prior approval, minor changes may be made if necessary to accommodate the actual equipment furnished. Unless otherwise indicated, install all exposed pipework parallel or at right angles to beams, walls, ceilings, or other building and structure lines, straight, true and plumb to line, in a neat, pleasing, and workmanlike manner, all as approved.

- 1.6 All coatings supplied under this contract that contacts potable water shall have been approved by the National Sanitation Foundation (NSF) or the American National Standards Institute (ANSI) certified parties as meeting NSF product standard 60 and 61.

PART 2 PRODUCTS AND EXECUTION

2.1 HANGERS AND SUPPORTS

- A. All hangers, concrete anchors, other anchors, nuts, bolts, washers, brackets, hanger rods, and all other devices shall be Type 304, 316, 18-8 or other suitable stainless steel or cast or ductile iron. No steel devices coated or otherwise, will be accepted.

- B. Secure hangers, supports, and other devices to structures as specified below. Provide angle iron, pipe, or other suitable steel auxiliary pipe supports, as required. Where attachment method and/or anchorage material types are indicated, provide anchorage accordingly; OTHERWISE, anchorage shall be:
1. New construction: stainless steel anchor bolts, or iron concrete inserts cast-in-place in concrete, except that expansion anchors as specified below may be used for small pipework, and where approved. For pipes larger than 12" supported by concrete inserts, provide 2 No. 5 steel reinforcing rods through each insert yoke.
 2. Existing concrete construction: Hilti or as approved suitable epoxy and/or expansion anchors, each installed as recommended by its manufacturer to develop his full rated shear and pull-out rating of the anchor.
 3. Steel construction: stainless steel bolts and nuts, stainless steel clamps, or welded-on clips or lugs.
 4. Other construction: anchors suitable for the conditions involved.
- C. Hangers: Where types of hangers and spacings thereof are indicated, provide these accordingly; OTHERWISE, hangers and hanger spacings shall be:
1. Horizontal suspended pipes: standard stainless steel clevis type hangers, with the hanger manufacturer's recommended size stainless steel hanger rods, supporting nuts under the hangers, and stainless steel locknuts above the hangers; as applicable to types and outside diameters of pipes involved.
 2. Maximum hanger spacings: 1/4" O.D. copper tubing, 4 feet; other 1" and smaller copper tubing and 1" and smaller pipe, 8 feet; and all copper tubing and pipe larger than 1", 10 feet. In all cases, place hangers at or sufficiently near elbows, tees, valves, other specialties, and risers to provide adequate pipework support.
- D. Floor Supports: Provide base elbows, concrete piers, metal pedestals, or other suitable supports for pipework supported by floor or other construction below pipework.
1. Maximum floor support spacings shall be as specified in paragraph above for hangers. In all cases, place floor supports at or sufficiently near elbows, tees, risers, valves, and other specialties to provide adequate pipework support.
- E. Underground Piping: Support underground piping with full-length bearing of pipe barrels on firm trench bottoms.
- F. Hydraulic Control Tubing: Single and multiple runs of this tubing may be supported with suitable approved plastic or non-corrosive metal clips or brackets which are designed and factory-made for this purpose, and will hold the tubing at least 1 inch clear of the structure surfaces.
- G. Pump Connections: Whether indicated on drawings or not, provide a suitable pipe support as near as practicable to each pump inlet and outlet piping connection, to prevent weight of piping and valves from bearing on pump.

2.2 TYPES OF PIPES AND USAGES

- A. Types of pipes for the various usages shall be as specified below. Detailed requirements for the various types of pipes shall be specified in other Articles hereinafter.
1. Where pipe type is indicated on drawings: Provide the indicated type pipe ONLY.
 2. Where pipe type is NOT indicated on drawings: Provide types of pipe for various applications as follows:
- B. Ductile iron pipe with special epoxy lining shall be used for:
1. Underground sewage piping with standard bituminous exterior coating.
 2. Other locations where epoxy lined iron pipe is indicated or specified.

- C. Schedule 40 PVC piping shall be used for pump discharge piping and other drain piping where indicated.

2.3 DUCTILE IRON PIPE, FITTINGS, AND JOINTS

- A. Pipe: Underground Ductile iron pipe shall conform to AWWA Specification C151, and shall have at least 150 psi working pressure rating. Ductile iron pipe for sewage service shall have a special epoxy lining recommended by the lining manufacturer for sewage service. MINIMUM wall thickness and MINIMUM thickness classes at all points, including in bottoms of surface depressions, shall be as tabulated below.

<u>Pipe Size</u>	<u>Wall Thickness</u>	<u>Thickness Class</u>	<u>Pipe Size</u>	<u>Wall Thickness</u>	<u>Thickness Class</u>
4"	0.26"	51	16"	0.34"	50
6"	0.25"	50	18"	0.35"	50
8"	0.27"	50	20"	0.36"	50
10"	0.29"	50	24"	0.38"	50
12"	0.31"	50	30"	0.39"	50
14"	0.33"	50	36"	0.43"	50

- B. Outside Coating:
 - 1. Buried and non-exposed piping shall have outside bituminous coating.
 - 2. All exposed piping, submerged, non-submerged, interior and exterior: outside of piping shall be shop or field blast cleaned to SSPC SP6 Commercial Blast condition for all other exposed piping and primed with TNEMEC 66-1211 Epoxoline Primer, Koppers 654 Epoxy Primer, or an equal epoxy primer which is recommended by the coating manufacturer is compatible with the field painting specified in Section 09901. Apply the primer to at least the manufacturer's recommended dry film thickness.
- C. Fittings for Ductile Iron Pipe: These shall be ductile iron short body pattern conforming to AWWA Specification C110, Class 150 or heavier, with special epoxy lining for sewage service, outside coating as specified above, and flanged or mechanical joint ends ONLY as specified or indicated for the various pipe locations and applications.
- D. Flanged Joints: These shall be ANSI Class 125 faced and drilled flanges, with plain rubber full face or ring gaskets for liquid service, standard steel square or hexagon head bolts, and standard steel hexagon nuts. Flanges shall be especially designed and sized for the pipe involved, with counterboard long hubs completely covering the pipe threads. Use flanged joints at the following locations:
 - 1. All above ground piping, unless otherwise specified or indicated.
 - 2. At all connections to items having flanged ends, and at all connections to wafer type butterfly valves.
 - 3. At other locations where flanged joints are indicated or required.
- E. Mechanical and Push-On Joints: These shall conform to AWWA Specification C111, with plain rubber gaskets for normal liquid service EXCEPT THAT FITTINGS SHALL NOT HAVE PUSH-ON JOINTS. Use these at the following locations:
 - 1. Where indicated.
 - 2. In underground piping, except where other types of joints are specified hereinafter; push-on joints may be used on pipe, but not on fittings.
- F. Certificates: Submit a certificate from the manufacturers certifying that all ductile iron pipe and fittings furnished for this project comply with the above specifications.

2.4 MECHANICAL COUPLING JOINTS

- A. Mechanical Coupling Joints: These shall be Smith-Blair (Rockwell), Dresser, or Victaulic type, as follows:
1. Smith-Blair (Rockwell) couplings shall be Style 431 cast type, Dresser couplings shall be Style 53 cast type for ductile iron pipe, Style 62 for joining ductile iron to steel pipe; each with plain rubber gaskets for normal liquid service and special high temperature (200°F minimum) for aeration air service. Where necessary to prevent joints from separating under pressure, provide suitable tie rods attached to pipe on each side of coupling with suitable clamps.
 2. Victaulic couplings shall be Style 31, with grade H or T gaskets. Pipe ends shall be properly grooved to accommodate these couplings.
 3. Where mechanical type couplings are indicated by specific type, use the indicated type only; otherwise, use either of the above specified types where mechanical couplings are indicated.
 4. Also, subject to prior approval, either of the above specified types of mechanical couplings may be used where other types of joints are neither indicated nor specified.

2.5 SPLIT MECHANICAL COUPLINGS

- A. Split couplings shall be Straub "Open-Flex" or as approved, specific size as required, complete with stainless steel casing, EPDM gasket material and other standard and necessary items.

2.6 PVC PIPE, FITTINGS, AND JOINTS

- A. PVC pipe shall be Schedule 40, Type 1 rigid type, with Type 1 PVC socket fittings, PVC 150 pound flanges, and solvent welded joints. Provide suitable PVC threaded-to-socket adapters where required to connect PVC pipe to threaded openings. Use Teflon pipe joint tape on all threaded joints.
- B. Make up solvent welded joints in accordance with piping and solvent manufacturer's directions. Install PVC piping with ample flexibility to allow for free expansion and contraction, without putting excessive stress on piping supports, or equipment. Provide a PVC union at each piping connection to each equipment item, so that piping can be disconnected from equipment without requiring cutting of piping, whether indicated on drawings or not. Use Teflon tape type joint compound on threaded joints.

2.7 CHECK VALVES, CUT-OFF VALVES AND VALVE BOXES

- A. General: For each location where a certain type of cut-off valve is specified, indicated, or required for the application involved, provide the appropriate type accordingly, OTHERWISE, cut-off valves shall be either gate type or butterfly type.
- B. Resilient Seat Gate Valves: These shall be iron body, modified wedge disc type, conforming to AWWA Specification C509, as manufactured by Watrus Series 500, American, M&H, or U.S. Pipe. Each valve shall have "O" ring type stem seal, standard handwheel, and shall be opened by Counter-Clockwise stem rotation. Except where otherwise specified, indicated or required for the application involved, all gate valve ends shall be flanged with plain rubber gaskets.
- C. Check Valve: For pump in Sump: this shall be Prince, Figure 813, wafer, swing type with cast iron body, minimum tension stainless steel spring, BUNA-N seal, and other standard and necessary features.

- D. Backflow Check Valve: This shall be a Prince, Figure 810, wafer body, swing type, with cast iron body, minimum tension stainless steel spring, Buna N seal, and other standard and necessary features.

2.8 VALVES AND RELATED ACCESSORIES

A. General:

- 5. Type of valve required for each individual location and application shall be as indicated on the drawing. Detailed requirements of the various types of valves shall be as specified below.
- 6. Where the type of valve is not indicated or specified, use one of the types specified below as suitable for the conditions involved.
- 7. Unless otherwise indicated, underground cut-off valves for cast iron and ductile iron pipe may be either gate or butterfly type.

2.9 PRESSURE GAGE AND DIAPHRAGM SEAL

- A. Pressure gages: these (1 required) shall be standard indicating dial type, liquid-filled; with mini-diaphragm seal, all stainless steel construction, 2 ½ inch minimum size dial, 0 to 30 psi range, 1/4 inch NPT bottom connection, with pointer travel at least 200 degrees, and will all standard features, as manufactured by Ashcraft, Metek, Marshalltown, Weiss or as approved.
- B. Cut-off valves and Nipples: Provide a brass ball valve and two stainless steel nipples for each pressure gauge arrangement.
- C. Pipe Tap: Provide an iron or steel service saddle with a 1/2 inch NPT tap attached to the 4 inch PVC pump discharge immediately downstream of the check valve. Provide a ½ inch diameter hole appropriately located in the PVC pipe.

END OF SECTION

SECTION 16010

GENERAL PROVISIONS, ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Basic Electrical requirements specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements.
- B. General and procedural requirements for work specified under Sections of Division 16 shall be as required herein.

1.2 RELATED SECTIONS

- A. DIVISION 3 - CONCRETE.
- B. DIVISION 16 - ELECTRICAL.
- C. Section 16050 - BASIC MATERIALS AND METHODS, ELECTRICAL.

1.3 CONTRACTOR'S RESPONSIBILITY

- A. Contractor agrees to assume responsibility for liability, workmanship, and quality of materials concerning work sublet to others. Before contract is sublet, submit in writing the names of proposed subcontractor and obtain written approval therefor.

1.4 CODES AND FEES

- A. All work shall be installed in accordance with the applicable provisions of the local codes, the National Electrical Code, and the National Electrical Safety Code.
- B. All electrical materials shall have Underwriters' approval where applicable, and shall be so labeled where UL labeling is customary.
- C. All electrical equipment shall conform to applicable NEMA Standards whether specified hereinafter or not, and to other applicable Standards which may be specified hereinafter.
- D. The Contractor shall be responsible for obtaining local permits, payment of fees and notification for inspection by code authorities consistent with the schedule of work.

1.5 ACCURACY OF DATA AND DRAWINGS

- A. Drawings and Data: Electrical drawings are generally diagrammatic, and where not dimensioned or detailed, indicate approximate locations and general arrangements of electrical work. All electrical work offsets, rises, and fittings are not necessarily shown; however, provide these as required by the conditions involved.
- B. Equipment NOT furnished by Electrical Section but requiring electrical connections: from other Sections and others furnishing this equipment, determine exact electrical connection requirements therefor; locations and arrangements of electrical connections indicated for this equipment are APPROXIMATE ONLY.

1.6 EQUIPMENT LISTS, SHOP DRAWINGS, SAMPLES AND SUBMITTALS

- A. Submit under provisions of Section 01300 and General Conditions.
- B. Submit to the Engineer for approval, within 30 days after receipt of Notice to Proceed with the work, a complete list of materials, equipment and accessories proposed for use, including complete descriptions and specifications of any proposed substitutions, manufacturer's shop drawings, and roughing-in work. Submit five (5) copies of all items for approval and furnish additional copies if required for installation purposes.
- C. Submission material and all shop drawings for the various items of equipment shall be marked with the respective mark number or identification of the equipment shown on the drawings or specified. The shop drawings shall list all ratings, capacities, accessories, and other pertinent data to show that the proposed item is as called for and as specified.
- D. Shop drawings shall show sizes and details of required concrete and steel machine foundation, locations of anchor bolts, physical dimensions of equipment, capacity characteristics of equipment, and all other work pertinent to details. Concrete foundations are specified under "Concrete Work" section, but steel racks or stands for mechanical apparatus shall be furnished and installed as part of the mechanical work.

1.7 QUALITY CONTROL

- A. Comply with Section GENERAL CONDITIONS.
- B. Qualifications: Where specific qualifications are specified in individual specification section, provide required data with Subcontractor list.

1.8 GUARANTEE

- A. Comply with Section GENERAL CONDITIONS.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 EQUIPMENT INSTALLATION

- A. Install all equipment in accordance with applicable manufacturer's drawings and recommendations.
- B. Identification of circuits and equipment: Identification designations shall correspond to those indicated on electrical drawings and as specified in corresponding articles describing the equipment.

3.2 TEST, INSPECTIONS, ADJUSTMENTS, AND CLEANUP

- A. Other wiring, 600 volts and less: Make insulation tests with a "Megger", demonstrate that neither short circuits nor ground faults exist, and that wiring complies with NEC.
- B. Furnish suitable testing equipment, give the Engineer and all applicable authorities ample advance notice of all proposed tests and readiness of work for inspections, and conduct each test in their presence, as approved. Do not conceal electrical work until all necessary inspections have been made and all required tests have been approved by the Owner's Representative and all applicable authorities.

- C. Put entire electrical system in operation, test all equipment, remedy all defects, and make all necessary adjustments. Demonstrate that the entire system functions satisfactorily, as specified, as indicated, and as approved.
- D. After electrical system has been tested and before any field painting is commenced, clean up all electrical work thoroughly. Remove all foreign matter which has accumulated in all equipment and enclosures. Clean and polish all other surfaces that are not to be painted so that they present a new and acceptable appearance.

3.3 PROTECTION AND CLEANING

- A. Work shall be protected at all times. Conduit openings shall be closed with caps or plugs until permanent connections are made.

3.4 OPERATING INSTRUCTIONS

- A. Furnish the services of a competent man (or men) to instruct the Owner's personnel in the proper operation and maintenance of all equipment, for a period of not less than one-half ($\frac{1}{2}$) working day.
- B. Furnish and deliver to the Owner three sets of operating instructions for all equipment installed under this contract, including shop drawings, piping diagrams, wiring diagrams, maintenance recommendations and information concerning replacement parts.

END OF SECTION

SECTION 16050

BASIC MATERIALS AND METHODS, ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Equipment and materials used in the work shall be in accordance with the contract documents; of the best quality and grade for the use intended; shall be new and unused; and shall be the manufacturer's latest standard or current model for which replacement parts are readily available.
- B. Work shall be installed under the constant supervision of a qualified superintendent and by skilled and qualified electricians.
- C. All apparatus and equipment shall be installed and connected in accordance with the best engineering practices and in accordance with the manufacturer's recommendations. All auxiliary wiring, relays, contactors, controllers, and electrical connections of any description recommended by the manufacturer and required for the proper operation of all items of equipment furnished under this contract shall be furnished and installed complete.
- D. Basic Electrical Requirements specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 16 - ELECTRICAL.
- C. Section 16010 - GENERAL PROVISIONS, ELECTRICAL.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.

1.4 ELECTRICAL WIRING FOR EQUIPMENT OF OTHER SECTIONS

- A. General:
 - 1. All electrical wiring of every description required to operate all equipment furnished by other Sections shall be done by the Electrical Section, except as otherwise specified hereinafter. Read carefully all other Sections in which electrically operated equipment is specified, and include in the electrical work all electric wiring required for the proper operation of the equipment, whether indicated on the electrical drawings or not. Coordinate the Electrical section work with that of all other Sections that furnish equipment requiring electrical connections.
 - 2. All control devices required to operate the equipment shall be furnished by the Section that furnishes the equipment, unless otherwise specified. All control devices which are not factory mounted on the equipment and require electrical connections ONLY shall be installed by the Electrical Section. All control devices which are not factory mounted on the equipment and require piping, linkage, remote bulb, or other mechanical connections as well as electrical connections shall be installed by the Section that furnishes the equipment involved, ready for electrical connections.
 - 3. Outlet locations indicated on the electrical drawings for motors, controls, and other electrically operated items of other Sections are APPROXIMATE ONLY, as the actual wiring requirements are not necessarily identical for the various makes of each item of equipment involved. However, the Electrical Section shall locate all outlets and arrange all wiring to properly serve the equipment ACTUALLY INSTALLED, generally as indicated on the

electrical drawings, but EXACTLY in accordance with rough-in sheets and/or wiring diagrams furnished by the other Sections involved.

4. The necessary wiring diagrams shall be furnished by the Section that furnishes the equipment involved, and after these are approved, do all wiring accordingly.
- B. Wiring NOT Included: Wiring which is factory installed on equipment.
- C. Wiring Included: Generally equipment of other Sections requiring wiring, includes but shall not be limited to the following items:
1. Special construction: equipment connections.
 2. Special type wire (other than type MTW): If any of this is required for other Divisions, that wire shall be furnished by the other Divisions and installed under this Division.

PART 2 PRODUCTS

2.1 HANGERS, SUPPORTS, AND SLEEVES

- A. Hangers or supports for conduits and raceways shall be standard conduit or raceway straps, or other suitable clamping devices.
- B. Maximum hanger or support spacings for all conduits shall be as required by the Codes.
- C. Adequately support all boxes, starters, and other devices, and equipment. Where supporting method is indicated or detailed, provide supports accordingly; OTHERWISE, supports shall be as required by the Codes, and as approved.
- D. Provide all necessary sleeves for conduits and other electrical items passing through concrete and masonry construction, where electrical items are not installed prior to concrete placing and masonry laying. Sleeves through concrete walls, concrete columns, and concrete beams shall be IPS steel pipe or rigid steel conduit, flush with finished concrete surfaces. Sleeves for all exposed conduits passing through floors (except slabs on ground) where water on floor can pass through the opening shall be galvanized IPS pipe or galvanized rigid steel conduit extending two inches above finished floor, and flush with slab below. Other sleeves may be sheet metal or plastic.

2.2 CONDUIT AND FITTINGS

- A. Conduits: These shall be zinc coated rigid steel, zinc coated steel electrical metallic tubing (hereinafter referred to as "thin wall conduit"), ANSI Specification C80.5 rigid aluminum, Carlon Schedule 40 Certainteed PVC Schedule 40 or Cantex PVC Schedule 40 as approved UL listed heavy wall rigid PVC, as applicable. In each case where the conduit type is indicated, specified, or required by the Codes, install only the indicated, specified, or Code required type; OTHERWISE, conduit usage shall be as follows:
 1. Embedded in concrete: rigid steel coated with bituminous compound or PVC coated.
 2. In contact with ground: rigid steel coated with bituminous compound or PVC Schedule 40 conduit.
 3. For supporting fixture, outlet boxes, and other devices and equipment which are not directly anchored to the building structure: rigid steel or rigid aluminum conduit, with all joints and connections threaded.
 4. Flexible connections: flexible steel conduit ("Greenfield"), in short lengths only, at each motor connection and other location requiring flexibility; of liquid tight type where exposed to weather or excessive moisture.
 5. All other locations: thin wall, rigid steel, rigid aluminum, or PVC conduit, as applicable.
- B. Conduit Fittings: For metallic conduit, fittings shall be zinc coated steel, cast aluminum, or cast zinc. For PVC conduit, fittings shall be of the same materials and make as those of the conduit. All fittings exposed to weather shall be weatherproof type.

- C. Installation:
1. General: ream ends of all conduits after cutting. Prior to wire pulling, keep all open conduit ends plugged, and swab out all trapped conduits in which water or moisture has collected. Where conduits are concealed in walls, install these conduits so that the exposed wall faces will not be marred.
 2. PVC conduits: solvent weld all joints between PVC materials, with cement furnished by the conduit manufacturer. Provide suitable adapters where PVC conduits are coupled to metallic conduits. Provide a rigid steel elbow at the base of each exposed riser from below ground and below floor to above ground and above floor.
 3. Conduit routing, general: see TYPE OF SYSTEM, METHOD OF WIRING hereinbefore for locations where concealed and exposed conduits are required and/or permitted. Where conduit routings are detailed or dimensioned install conduits accordingly; OTHERWISE, install concealed conduits with the shortest practicable path, and install all exposed conduits in straight, level, and plumb lines, parallel with or at right angles with beams, walls, ceilings, and other building lines.
 4. Branch circuit conduit routings: except where detailed or dimensioned, the indicated branch circuit conduit routings are generally diagrammatic, and are intended to show the required circuitry from panelboards to outlets. However, if necessitated by job conditions, deviations from the indicated routings may be made, provided that regardless of the actual installed arrangement of the conduits: each outlet marked with the same circuit number is connected to the same corresponding numbered circuit; outlets are switched and controlled as indicated; and no home run is brought into any switch box unless otherwise indicated.
 5. Thin wall conduit: Use compression type fittings with proper tools for all joints and terminations. Point screw type fittings are not permitted.

2.3 PULL BOXES, JUNCTION BOXES

- A. General: Pull boxes and junction boxes shall be of the types and minimum sizes indicated, or as required for the conditions involved where types and sizes are not indicated. Before installation, check proposed locations of boxes with the architectural, structural, and mechanical drawings, and locate each box so that it will be accessible in the finished project.
- B. Above Ground Boxes: These shall be galvanized steel of at least Code gauge for each size involved, and of weatherproof construction where exposed to weather.

2.4 OUTLET BOXES

- A. General: Outlet boxes and covers therefor shall be steel or cast ferrous metal with zinc or other suitable metallic rustproof coating, or cast aluminum, all of the proper sizes and types to accommodate the conduits, conductors, connections, devices, fixtures, architectural conditions, and structural conditions involved.
- B. Special Box Requirements:
1. Exposed-to-weather outlet boxes shall be cast metal, with threaded hubs and gasketed covers, all strictly weatherproof.
- C. Installation:
1. Before installation, check proposed location of each outlet box with the architectural, structural, and mechanical drawings, and locate each outlet box so that it will be accessible and interference free in the finished project.
 2. Where equipment is served by exposed flexible cords, locate the outlet box as near as practicable to the equipment connection point, to minimize flexible cord length.

2.5 WIRE, JOINTS, AND SPLICES, 600 VOLTS AND LESS

- A. Power wire shall be copper only: Types shall be as follows:
1. Where type is indicated: indicated type only.

2. High temperature and other special conditions: types NEC approved for the conditions involved.
 3. Exposed flexible cords: Type S, with grounding conductor.
 4. Direct earth burial: Type USE, with neoprene jacket.
 5. All other lighting and power wire: No. 8 and larger, Type THWN stranded; No. 10 and smaller, Type THWN/THHN solid.
- B. Control wire shall be Type MTW copper, stranded.
- C. Signaling, sound, communications, alarm, indicating, and other special system wire shall be copper, of the types specified hereinafter with the equipment, or as indicated, or as recommended by the equipment manufacturers if neither indicated nor specified.
- D. Wire Sizes: Where sizes are neither indicated nor otherwise specified wire sizes shall be:
1. Branch circuit wire: No. 12.
 2. Control wire: No. 14, or as recommended by the control manufacturer.
 3. Special system wire: as recommended by the manufacturer of the equipment involved.
- E. Identification:
1. General: All wires shall be identified as required by NEC.
 2. Control and special systems wire: these shall be color coded throughout, or identified at each terminal and junction point with a suitable permanently attached tag or label.
- F. Joints and Splices: Make these with suitable solderless connectors, in the various boxes, gutters, and similar locations, but not in any conduit. Leave enough wire slack to permit at least one splice or joint to be remade in case of fault.
1. Branch circuit, control, and special system wire joints: use Ideal, Buchanan, 3M, or similar tool-applied to twist-on type connectors.
 2. All other wire joints: use IlSCO tin plated aluminum type pressure connectors, or suitable brass, bronze, or copper pressure type connectors.
 3. Insulate all joints and splices with suitable insulating sleeves or caps integral with the connectors or separate therefrom, or with vinyl plastic insulating tape.
- 2.6 DISCONNECT SWITCHES, MOTOR STARTERS, AND SEPARATE CIRCUIT BREAKERS
- A. General: Except as otherwise specified below, Electrical Section shall provide disconnect switches, circuit breakers, and motor starters for all motors and other electrically operated equipment, regardless of who furnishes and/or installs that equipment. Types and locations of these devices shall be as indicated, or as required where types and/or locations are not indicated.
1. These devices which are located on other equipment shall be as specified under the corresponding headings; these devices NOT located on other equipment shall be as specified below, and shall be separately mounted.
 2. Separately mounted disconnect switches, circuit breakers, and motor starters shall be Eaton, Square D, Allen-Bradley, ITE, or as approved. Enclosure types shall be: NEMA 3R for devices exposed to weather; NEC required type for devices in other special locations; and NEMA 1 type for devices in other locations. Each circuit breaker and each disconnect switch, including those integral with motor starters, shall have padlocking means.
 3. All terminals for disconnect switches, circuit breakers and motor starters shall be rated and marked for 75 degrees C terminations.
- B. Disconnect Switches: These shall be: non-fused heavy duty type safety switches where overcurrent protection is not required; and fused heavy duty type safety switches or circuit breakers (as indicated) where overcurrent protection is required; except that other suitable properly rated switches may be used for fractional hp motors and other small loads.
- C. Circuit Breakers: These shall be molded case type. Breakers shall be quick make, quick break type with trip indications shown and with common trip handle on all multipole breaker.

- D. Identification of Separately Enclosed Devices: Identify each separately enclosed circuit breaker, disconnect switch, magnetic motor starter, and manual motor starter, by attaching to the device cover a metal or plastic nameplate clearly and permanently lettered with the description and location of the equipment controlled by the device.
- E. Devices Furnished by Other Sections or Others:
 - 1. 3/4 hp and small single phase roof mounted fans: If the disconnect switches for these are furnished with and factory mounted on the equipment; Electrical Section shall connect to fan motors and/or switches, as required. Verify that disconnects are furnished by others.

2.7 DEVICES

- A. General:
 - 1. Wiring devices shall be Bryant, Hubbell, Arrow-Hart, Leviton, Sierra, Eagle Specification Line, General Electric, or other makes as approved or as specified below. Type of wiring devices required for this project shall be as indicated on the drawings, or suitable for the application involved if type is not indicated; qualities, ratings, and other requirements of wiring devices shall be as specified below. All wiring device types specified below may not necessarily be required for this project. Disregard specifications for devices which are neither indicated nor required for this project.
 - 2. Receptacle configurations shall conform to NEMA standards.
 - 3. Exposed finish shall be: for each device with a plastic plate, same color as that of plate; for devices with stainless steel plates, ivory or black; and for all other devices, black. Coordinate with Engineer prior to ordering.
- B. Devices: Qualities, ratings, and other requirements shall be:
 - 1. Wall switches: 20A 120-277VAC, single or double pole, 3 or 4 way, as applicable; Bryant 4901 series; Hubbell 1221 series; A-H 1991 series. Where indicated as WEATHERPROOF, the above specified switch, with Bryant 7420, Hubbell 7420, or A-H 7420 spring door cover.
 - 2. Ground fault circuit interrupter receptacles: (Commercial) 20A 125 volt feed through duplex 5ma sensitivity type with test and reset buttons; A-H GF 5342, Bryant GFR53FT, Hubbell GF5362. Where indicated as WEATHERPROOF, the above specified receptacle with Bryant GFRWPH, Hubbell CWP26H, A-H 4501 or approved equal spring door cover.
 - 3. Other devices not specified above; as indicated on the drawings.
- C. Device Plates: Unless otherwise specified or inapplicable to the devices involved, plates shall be: brown plastic for flush devices zinc coated steel for surface devices and weatherproof type if installed outdoors.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Conduits and other raceways shall be installed in such an orderly manner.
- B. Circuiting: Circuit numbers shown on drawings indicate specific panelboard to which each branch circuit shall be connected, and specific outlets which shall be connected to each branch circuit, and unless otherwise indicated these circuit numbers do not necessarily indicate actual number of circuit breaker in each panel to which each branch circuit shall be connected. Connect each outlet marked with same circuit number to same numbered branch circuit, and connect each branch circuit to indicated panelboard. In each individual panelboard:
 - 1. Balance active circuits on panelboard busses, and leave spare circuit breakers equally divided among panelboard busses, as nearly as practicable.
 - 2. Connect each ungrounded wire of each 3 and 4 wire common neutral circuit to a different panelboard bus.

- C. Provide templates, layouts drawings, and supervision to ensure correct placement of anchors and conduit projecting in concrete.
- D. Painting shall be done to repair scratches to surfaces, electrical equipment nameplates shall be protected from paint.
- E. Qualifications: Where specific qualifications are specified in individual specification section, provide required data with Subcontractor list.

3.2 TYPE OF SYSTEM, WIRING METHOD

- A. Electrical system characteristics: These shall be as indicated. In addition, whether indicated or not, provide low voltage (less than 120 volts) wiring for controls and other purposes, as required for the complete electrical system.
- B. Enclosures: Regardless of voltage or use, install wiring in conduits and metal or other enclosures, unless otherwise indicated or otherwise specified.
- C. Flexible Cords: Exposed flexible cords approved for the purpose involved shall be used to connect equipment where indicated or specified, and where equipment is factory furnished with or factory arranged for flexible cord connections only. However, in each such case, install the supply outlet as near as practical to the equipment served thereby, and use the shortest practical length of exposed flexible cord between the equipment and the outlet. If a receptacle is used as an outlet, the receptacle and the cord plug shall be 3 or 4 wire (as applicable) grounding twist-lock type.

3.3 GROUNDING

- A. Ground electrical equipment and conductors as required by NEC and other applicable electrical codes.
 - 1. Panelboards served by individual transformers: ground panelboard neutral busses to building grounding system.
 - 2. All metallic cable sheaths, cable shields, metal conduit, transformer cases, cabinets and pedestals shall be made electrically secure to form a continuous system and shall be grounded.
 - 3. The neutral shall only be grounded at the panelboard or service grounding device. Grounding conductors shall be continuous between the service and the driven grounding electrode or other grounding electrode as permitted in Part H of NEC Article 250.
 - 4. All conduits shall have code sized green equipment grounding conductors with diameter based on the largest circuit in each conduit.

3.4 FEEDER, STARTER, SWITCH, PROTECTIVE DEVICE, AND OTHER ELECTRICAL DEVICE SIZES

- A. Capacities of feeders, motor starters, circuit breakers, switches, protective devices, and other electrical devices indicated to be furnished and installed by Electrical Section for electrically operated equipment, regardless of who furnishes and/or installs that equipment, are based upon the average horsepower and/or electrical ratings. HORSEPOWER AND/OR ELECTRICAL RATINGS OF ELECTRICALLY OPERATED EQUIPMENT INDICATED ON ELECTRICAL DRAWINGS SHALL NOT LIMIT SIZES OF THE ELECTRICALLY OPERATED EQUIPMENT AND CAPACITY OF THE ELECTRICAL WORK THEREFOR.
 - 1. Before ordering materials and commencing electrical work for electrically operated equipment, Electrical section shall: check horsepower and/or electrical rating of each individual electrically operated equipment items, regardless of who furnishes and/or installs that equipment; and adjust sizes of all applicable feeders, motor starters, circuit breakers, switches, protective devices, and other electrical devices furnished by Electrical Section, as required to provide proper protection and satisfactory operation of the electrically operated equipment actually installed. This includes increasing to next larger size, or

decreasing to next smaller size, all feeders, circuit breakers, starters, switches, protective devices, and other electrical devices involved, as required to match capacities of corresponding electrically operated equipment actually installed, except that no sizes shall be decreased without approval.

- B. Switches, circuit breakers, motor starters, protective devices, and other electrical devices furnished by other Sections and by others for installation and/or wiring by Electrical Section, are specified elsewhere to have adequate capacities to serve the electrically operated equipment for which they are furnished. However, BEFORE ordering materials, installing and/or wiring each of these devices, Electrical Section shall check each individual device's electrical rating with the horsepower and/or electrical rating of the corresponding electrically operated equipment actually installed, regardless of who furnishes and/or installs the devices and equipment. Electrical Section shall not install and/or wire any device that is found to be the incorrect size, and shall see to it that correctly sized devices are furnished by the applicable Section and other applicable persons in all cases.
- C. The intent and requirement of the above is to obtain a coordinated electrical system and all of the above shall be done by Electrical Section as part of the contract, at no extra cost to the Owner.

END OF SECTION