

Project Manual for
Shelby County Government
Division of Corrections

Walkway Canopy
1045 Mullins Station Road
Memphis, TN 38134

Project Requisition #R042009

Owner
Shelby County Government
Shelby County, Tennessee

April 21, 2015

john pruet architects
1869 madison avenue
memphis, tn 38104
901.721.9062 phone
901.721.9063 fax
pruetarchitects@bellsouth.net

SECTION 00 01 10
TABLE OF CONTENTS

DIVISION 00 00 00	PROCUREMENT AND CONTRACTING REQUIREMENTS
SECTION 00 01 10	TABLE OF CONTENTS
SECTION 00 01 15	LIST OF DRAWINGS
SECTION 00 01 20	PROJECT DIRECTORY
SECTION 00 11 19	REQUEST FOR PROPOSAL
SECTION 00 41 13	BID FORM – STIPULATED SUM
SECTION 00 50 00	CONTRACTING FORMS AND SUPPLEMENTS: <ul style="list-style-type: none">• BID BOND• DRAFT COUNTY/CONTRACTOR AGREEMENT• PERFORMANCE BOND• LABOR AND MATERIAL PAYMENT BOND• SHELBY COUNTY GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
DIVISION 01 00 00	GENERAL REQUIREMENTS
SECTION 01 11 13	SUMMARY OF THE WORK
SECTION 01 11 20	SHELBY COUNTY GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
SECTION 01 21 43	TIME ALLOWANCES (Weather Delays)
SECTION 01 29 76	PROGRESS PAYMENT PROCEDURES
SECTION 01 31 13	PROJECT COORDINATION
SECTION 01 31 19	PROJECT MEETINGS
SECTION 01 32 16	CONSTRUCTION PROGRESS SCHEDULE
SECTION 01 33 23	SUBMITTALS
SECTION 01 50 00	CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
SECTION 01 66 00	DELIVERY, STORAGE AND HANDLING
SECTION 01 74 23	CLEANING
SECTION 01 77 19	CLOSEOUT REQUIREMENTS
DIVISION 02 00 00	EXISTING CONDITIONS
SECTION 02 30 00	SUB SURFACE INVESTIGATION REPORT
SECTION 02 41 19	SELECTIVE DEMOLITION
DIVISION 03 00 00	MASONRY
SECTION 03 30 00	CAST-IN-PLACE CONCRETE
DIVISION 05 00 00	METALS
SECTION 05 12 00	STRUCTURAL STEEL FRAMING
SECTION 05 31 00	STEEL DECKING
DIVISION 07 00 00	THERMAL AND MOISTURE PROTECTION
SECTION 07 54 23	MEMBRANE ROOFING SYSTEMS

END OF SECTION

SECTION 00 01 15
LIST OF DRAWINGS

- A1 COVER, LIST OF DRAWINGS, GENERAL NOTES, OVERVIEW PLAN,
- A2 PARTIAL ENLARGED PLAN, SECTION, DETAILS
- S2.0 WEST END STRUCTURAL PLAN
- S2.1 CENTER PORTION STRUCTURAL PLANS
- S2.2 EAST END STRUCTURAL PLAN
- E1 ELECTRICAL FLOOR PLAN
- E2 ELECTRICAL SPECIFICATIONS

END OF SECTION

SECTION 00 01 20
PROJECT DIRECTORY

OWNER: Shelby County Government
Division of Corrections
1045 Mullins Station Road
Memphis, TN 38134
901.222.8685 phone
901.222.8875 fax
bailey.waits@shelbycountyttn.gov
ATTN: Bailey Waits, Manager General Services

ARCHITECT John Pruet Architects
1869 Madison Avenue
Memphis, TN 38104
901.721.9062 phone
901.721.9063 fax
pruetarchitects@bellsouth.net
ATTN: John Pruet

SECTION 00 11 19
REQUEST FOR PROPOSAL

Attached herein:

Request for Proposal
Shelby County Government
Purchasing Department
160 N. Main, Suite 900
Memphis, TN 38103

Issued: April 29, 2015
Due: May 15, 2015 no later than 4:00 P.M. (Central Standard Time)

RFP #
SHELBY COUNTY GOVERNMENT
DIVISION OF CORRECTIONS
WALKWAY CANOPY PROJECT
1045 MULLINS STATION ROAD



Shelby County Tennessee

Mark Luttrell, Jr. Mayor

Request for Proposal

Shelby County Government

Purchasing Department

160 N. Main, Suite 900
Memphis, TN 38103

Issued: May 5, 2015

Due: May 26, 2015 no later than 4:00 P.M. (Central Standard Time)

RFP # 15-005-47

WALKWAY CANOPY

SHELBY COUNTY DIVISION OF CORRECTIONS

1045 MULLINGS STATION ROAD

Shelby County Government is soliciting written proposals on a competitive basis for Construction Services to Furnish and Install Walkway Canopy, Shelby County Division of Corrections, 1045 Mullings Station Road, Memphis, Tennessee 38134. 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 **VOLUNTARY** pre-bid conference will be held at 9:30 AM, Tuesday, May 19, 2015 at Shelby County Division of Corrections, Maintenance Office, 6359 Haley Road, Memphis, Tennessee 38134.

The proposal, as submitted, should include all estimated costs related to the services requested by the RFP specifications. If selected, your proposal will be the basis for negotiating a contract with Shelby County Government. Your proposal must be received in the Shelby County Purchasing Department **no later than 4:00 p.m. on Tuesday, May 26, 2015**. Proposals should be addressed to:

**Nelson Fowler, Manager A
Shelby County Government
Purchasing Department
160 N. Main St., Suite 900
Memphis, TN 38103**

The package containing an original (clearly identified as original) and seven (7) copies of your proposal must be sealed and marked with the Proposer's name and "CONFIDENTIAL, "WALKWAY CANOPY, SHELBY COUNTY DIVISION OF CORRECTIONS, 1045 MULLINS STATION ROAD, MEMPHIS, TENNESSEE 38134 RFP # 15-005-47" noted on the outside.

Sincerely,

**Nelson Fowler, Manager A
Shelby County Government
Purchasing Department**

**Cc: David Barber, Correction Center
Baily Waits, Correction Center**

TABLE OF CONTENTS

- I. INTRODUCTION
- II. MINIMUM PROPOSER REQUIREMENTS
- III. CORRESPONDENCE
- IV. PROPOSAL SUBMISSION DEADLINE
- V. PROPOSAL TIMELINE
- VI. PROPOSAL CONDITIONS
- VII. GENERAL REQUIREMENTS
- VIII. AWARD OF CONTRACT
- IX. NOTICE TO BIDDER

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

Please download all of the additional information and attachments that accompany this RFP.

I. INTRODUCTION

Shelby County Government (the “County”), is seeking proposals from interested and qualified Contractors to submit proposals to Furnish and Install a Walkway Canopy, for Shelby County Division of Corrections, 1045 Mullins Station Road, Memphis, Tennessee 38134.. 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 PROPOSERS REQUIREMENT

All Proposers must:

1. **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.
2. All bidders must submit a Bid Bond in the amount of 5% of their bid. This bond must be submitted with your bid.
3. The successful contractor must submit a performance/labor material bond, separate bonds each in the amount of 50% of the amount of the contract.
4. The successful contractor must submit a certificate of Insurance for the amount references in our specifications.
5. Have all appropriate licenses and certifications required in the State of Tennessee to perform the Services.
6. Meet all other requirements such as LOSB and performance requirements for Services in accordance with the provisions of this RFP.
7. Attend our **Voluntary** prebid conference.
8. Adhere to all Title VI requirements and provide proof/documentation.
9. A written statement of compliance to Title VI must be provided with your response.
10. Also, see page 27 for forms to be submitted with your bid.
11. 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 501, Memphis, TN 38103. The fax number is 901-222-1101.

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:

**Nelson Fowler, Manager A
Shelby County Government
160 N. Main St. Suite 900
Memphis, TN. 38103**

Respondents requesting additional information or clarification are to contact Nelson Fowler in writing at nelson.fowler@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 Friday, May 22, 2015 by 12:00 p.m. (CST).*** These guidelines for communication have been established to ensure a fair and equitable process for all respondents.

Note: 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.

IV. PROPOSAL SUBMISSION & DEADLINE

All proposals must be received at the address listed above no later than Tuesday, **May 26, 2015 @ 4:00 p.m. (CST)**. Facsimile or e-mailed 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.

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	Thursday, May 7, 2015
Voluntary Pre-Bid Conference	9:30 AM, Tuesday, May 19, 2015
Proposal Due Date	4:00 PM, Friday, May 26, 2015
Notification of Award	June 2015
Services to Commence	Upon Execution of the Contract

The County may reproduce any of the proposer's 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 proposer's 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 Proposer's 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 at least ninety (90) calendar days from the due date unless otherwise qualified.

g. Disclosure of Proposal Contents

Proposer understands and acknowledges that the County is a governmental entity subject to the laws of the State of Tennessee and that any reports, data, or other information supplied to the County is subject to being disclosed as a public record in accordance with the laws of the State of Tennessee. All proposals and other materials submitted become the property of Shelby County Government.

h. Non-Discrimination and Title VI

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.

Any recipient entity shall be subject to the requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., and regulations promulgated pursuant thereto. It shall develop a Title VI implementation plan with participation by protected beneficiaries as may be required by such law or regulations. To the extent applicable, such plan shall include Title VI implementation plans sub recipients of federal funds

through the entity. The contractor shall produce the plan upon request of Shelby County Government. Failure to provide same shall constitute a material breach of contract.

i.

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

**FURNISH AND INSTALL EXTERIOR SIGNAGE
PEGGY EDMISTON ADMINISTRATION BUILDING
1075 MULLINS STATION ROAD
MEMPHIS, TENNESSEE 38134**

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 its purchasing and contracting practices encourage the use of Locally-Owned Small Businesses (LOSB'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 LOSB'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? **15%** of the contract shall be contracted with LOSB's vendors. For assistance and information regarding LOSB participation, Bidders shall contact:

Ms. Vali Sweet
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@shelbycountytg.gov

Definitions

The definitions used in this document are as follows:

1. **“Bidder” or “Proposer”** 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 (LOS B)”** means a business whose home office is located in Shelby County, whose annual revenues do not exceed \$3,000,000 and who has been certified by Shelby County Office of Equal Opportunity Compliance.
7. **“Non-LOS B”** means a business, which is not certified as a LOSB.
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. **LOSB 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. Vali Sweet
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

- **LOSB Form A -- Certification of Efforts**

Contractors are required to submit **LOSB 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**

LOSB 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 were 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 may be 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

LOSB 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	LOSB 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
 LOSB Program**

LOSB FORM D

STATEMENT OF PAYMENTS TO LOSB'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: _____

 Authorized Representative (Print)

Address: _____

 Title

 Authorized Representative's Signature

Phone: _____

Date
Facsimile: _____

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.

j.

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or i 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*.
- 4. The Company is in compliance with T.C.A.~ 50-9-113. Further affiant saith not.

Principal Officer

STATE OF _____

COUNTY OF _____

Before inc 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:

k.

GRATUITY DISCLOSURE FORM

Shelby County Ethics Commission

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.

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. 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

A copy of your completed form will be placed on the Shelby County Internet website.

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.

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

GRATUITY DISCLOSURE FORM - MUST BE 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.

OR THE LOSB FORM C- MUST BE COMPLETED AND SUBMITTED BY EACH LOSB PROVIDING SUBCONTRACTED GOODS AND SERVICES CERTIFYING THAT THEY ARE PERFORMING 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.

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. Proposers are advised that the lowest cost proposal will not necessarily be awarded the contract, as the selection will be based upon qualification criteria as deemed by the County and as determined by the selection committee and the County Mayor.

b. Scope of Work

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

c. Project Time Frame

The Provider must be prepared to begin immediately upon receipt of a Notice to Proceed.

d. Reservation of Rights

The County reserves the right, for any reason to accept or reject any one more proposals, to negotiate the term and specifications for the services provided, to modify any part of the SEALED BID, or to issue a new SEALED BID.

VIII. AWARD OF CONTRACT

a. Selection Criteria

Contract(s) will be awarded based on the lowest responsive proposals received. The contents of the proposal of the successful Bidders will become contractual obligations and failure to accept these obligations in a contractual agreement may result in cancellation of the award.

b. Additional Information and References

Any additional information that would be helpful to the County evaluating your proposal, including a list of current and former clients with a similar profile to Shelby County should be submitted.

IX. NOTICE TO BIDDERS

Time and Place of Opening of Bids:

Sealed bids for the improvements described herein will be received and opened at **THE OFFICE OF THE SHELBY COUNTY ADMINISTRATOR OF PURCHASING, ROOM 900, SHELBY COUNTY ADMINISTRATION BUILDING, 160 NORTH MAIN, MEMPHIS, TENNESSEE 38103, at 4:00 PM, TUESDAY, MAY 26, 2015.**

NOTE: There will not be a public bid opening for this project.

Description of Work:

- a. The proposed work is officially known as: **Furnish and Install Walkway Canopy, Shelby County Division of Corrections**

Pre-Bid Meeting:

Bidders are encouraged to attend a **VOLUNTARY** pre-bid meeting to be held on **Tuesday, May 19, 2015 at 9:30 AM, at the Shelby County Division of Corrections, Maintenance Office, 1045 Mullins Station Road, Memphis, Tennessee 38134.**

Instruction to Bidders:

- (a) The RFP can be downloaded from The Shelby county Government website located at www.shelbycountyttn.gov and click the link "Department" at the top, then P for the Purchasing Department, then click on the link "Bids."
- (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 five percent of the amount of the bid. All proposal guarantees shall be made out to the COUNTY OF SHELBY.
- (c) All bidders must be licensed by the Tennessee State Board of Licensing

(d) General Contractors Evidence of this license must appear on the title page of the Proposal in the space provided, and also on the exterior of the envelope. The envelope enclosing each bid must show the Contractor's name, license number, expiration date thereof, and license classification of the contractor(s) bidding for the prime contract and for the masonry, 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 returned to the bidder unopened.

EOC Requirements:

As a condition precedent to bidding, bidders shall have received a current "Equal Opportunity Compliance Eligibility Number" 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, **901-222-1100**.

Use of Locally Owned Small Business (LOSB) participation on County projects is mandatory.

Bidders are encouraged to contact County-certified LOSB firms from the listing that can be obtained from Shelby County EOC department. 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

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.

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

DOCUMENT 00 41 13
BID FORM – STIPULATED SUM

To: Administrator of Purchasing
Shelby County Government
Suite 550
160 North Main St.
Memphis, TN 38103

Project: Shelby County Government Division of Corrections
Walkway Canopy
1045 Mullins Station Road, Memphis, Tennessee 38134

Date: _____

Submitted by: _____
(full name)

(full address) _____

1. OFFER

BASE BID - All Work not including the Additive Alternates listed on this bid form and not including the Contingency Allowance as indicated in the bid documents:

(\$ _____) State amount in both words and figures.

CONTINGENCY ALLOWANCE Ten percent (10%) of the Base Bid to the nearest whole dollar:

(\$ _____) State amount in both words and figures.

TOTAL BASE BID AMOUNT (Base Bid plus Contingency Allowance)

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by John Pruett Architects for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

_____ dollars,

(\$ _____) in lawful money of the United States of America.

We have included the security Bid Bond as required by the Notice to Bidders. All applicable federal

taxes are included and State of Tennessee and City of Memphis taxes are included in the Bid Sum.

2. ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for ninety days from the bid closing date. If this bid is accepted by the Owner within the time period stated above, we will:

- Execute the Agreement within seven days of receipt of Notice of Award.
- Furnish the required bonds within seven days of receipt of Notice of Award. In the form described in Supplementary Conditions.
- Commence work within seven days after written Notice to Proceed.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

3. CONTRACT TIME

If this Bid is accepted, we will: Complete the Work in ONE HUNDRED EIGHTY (180) calendar days from Notice to Proceed. CONTRACTOR agrees to provide COUNTY an amount equal to FIVE HUNDRED (\$500.00) Dollars per day for liquidated damages for each consecutive calendar day required for the completion of the contract beyond the time stipulated.

4. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # _____ Dated _____
 Addendum # _____ Dated _____
 Addendum # _____ Dated _____
 Addendum # _____ Dated _____
 Addendum # _____ Dated _____

5. APPENDICES

The following documents are attached to and made a condition of the Bid:

- LOSB Subcontractor & Supplier List
- Drug-Free Workplace Affidavit
- Bid security in form of Bid Bond

6. BID FORM SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the

jointventure in the appropriate form or forms as above.

END OF DOCUMENT

Section 00 50 00

CONTRACTING FORMS AND SUPPLEMENTS

Attached herein:

- BID BOND
- DRAFT COUNTY/CONTRACTOR AGREEMENT
- PERFORMANCE BOND
- LABOR AND MATERIAL PAYMENT BOND
- SHELBY COUNTY GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

END OF SECTION

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.

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

19

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 Oblige, 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)

**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 Contract 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.

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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.

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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 Initial _____

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 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.

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'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 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 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 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

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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 Contractors 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 Aliens; 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,

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.

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. Initial _____

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

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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 there from; and

Initial _____

.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.

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'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]

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: _____

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SECTION 01 11 13
SUMMARY OF THE WORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Project Summary
- B. Contractor's Use of Site and Premises
- C. Owner Occupancy
- D. Contracts

1.2 PROJECT SUMMARY

A. The "Project," of which the "Work" of this Contract is a part, is titled the Shelby County Department of Corrections Walkway Canopy, 1045 Mullins Station Road. It includes the complete provision and installation of a steel structure walkway canopy system, and other related work in accordance with plans and specifications by John Pruett Architects. The Project address is 1045 Mullins Station Road, Memphis, Tennessee 38134.

B. The "Work" of this Contract is defined in the Contract Documents to include the entire Project. The Shelby County General Conditions of the Contract for construction are made a part of this Project Manual as if fully included herein.

C. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, the Shelby County General Conditions of the Contract for construction, other Sections in Division 1 of these Specifications, the October 16, 2014 Subsurface Exploration Report by Geotechnology, Inc., Memphis, TN, and the September 16, 2014 Topographical Survey by ETI Corp. with underground utility locations provided by Geotechnology, Inc. Memphis, TN. It is the Contractors' responsibility to familiarize themselves with these documents prior to submitting a bid for the Work.
2. Owner Responsibilities: Work to be provided by the Owner includes temporary removal, replacement, or necessary alterations to all obstacles that may prevent the Contractor from executing the Work of this Contract including, though not limited to, Razor Wire installations, fencing, gates, or other built construction. The Owner shall also be responsible for the disconnection of electric power to pole light standards within the footprint of the new walkway canopy for subsequent removal of light pole standards by Contractor.
3. Contractor Responsibilities: The Contractor shall be responsible for the demolition and removal of all pole light standard base mounting construction that either projects above grade or occurs below grade within the footprint of the new walkway canopy, inclusive of permanent termination and capping of electric power at the former light standard locations. The Contractor shall also be solely responsible for the repair, replacement, or damage of any description that may occur to existing above grade construction and utilities or subsurface utilities and systems as a result of Work associated with this Contract. Topographical and subsurface utility location information indicated on the Documents included in the Bid Package are presented for reference purposes only and should not be relied upon for 100% accuracy. The Contractor shall exercise extreme caution

and maximum due diligence when making subsurface excavations.

1.3 CONTRACTOR'S USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:

1. Uninterrupted Owner occupancy and use of the facility.
2. Use of site and premises by the public, Shelby County DOC staff and the 24 hour occupants of the facility.
3. Unobstructed public paths of egress connecting the building to parking areas.
4. Unobstructed fire lanes, fire hydrants, and emergency vehicle access ways.

B. Before beginning work, the contractor must secure approval from the Architect for the following:

1. Areas permitted for personnel parking.
2. Access to the site.
3. Areas permitted for storage of materials and debris.
4. Areas permitted for the location of cranes, hoists and construction vehicles and equipment.

C. The interiors of all buildings and any exterior portions of the site not specifically cleared by the Owner for Contractor access are strictly "off limits".

1.4 OWNER OCCUPANCY

- A. The Owner will occupy the premises during the entire period of construction.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.
- D. Utilities may not be disrupted at any time during the project duration.

1.5 CONTRACTS

A. Basis of the Contract for Construction will be Competitive Bid (Base Bid Amount with fifteen percent (10%) Construction Contingency in addition to the Base Bid amount for a total combined Lump Sum Amount).

B. Contractor Qualifications: The Prime Contractor will be required to hold a current general Contractor's license in good standing in the State of Tennessee with a BC-B Classification, and will meet all requirements for doing business with Shelby County Government per Division 0 of these Specifications.

PART 2 – PRODUCTS (Not Used.)

PART 3 – EXECUTION(Not Used.)

END OF SECTION

SECTION 01 11 20

SHELBY COUNTY GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

1.01 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

A. The Shelby County General Conditions of the Contract for Construction, are made a part of the Project Manual.

1. The Contractor, his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor shall be bound by these General Conditions as if repeated in each Section of this Project Manual.

2. The failure on the part of the Contractor to familiarize himself or examine these Documents will in no way relieve him or her of their responsibilities and conditions set forth herein.

END OF SECTION

SECTION 01 21 43
TIME ALLOWANCES (Weather Delays)

PART 1 GENERAL

1.1 EXTENSIONS OF CONTRACT TIME

A. The basis for an extension of time in accordance with the Shelby County General Conditions of the Contract for Construction, an extension of time may be granted only for the number of Weather Delay Days in excess of the number of days listed as the Standard for the Baseline for that month. Time extension(s) will be at the Owner's Discretion.

1.2 STANDARD BASELINE FOR AVERAGE CLIMATIC WEATHER

A. Time extensions may be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where the Work is performed. For the purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Service statistics for the locality where Work is performed and on daily weather logs kept on the job site by the Contractor reflecting the effect of the weather on progress of the Work. Request for extension of time shall be made in writing within twenty (20) days following cause of delay. In case of continuing cause for delay, only one (1) claim is necessary. Time extension(s) will be at the Owner's Discretion.

1.3 ADVERSE WEATHER AND WEATHER DELAY DAYS

A. Adverse Weather is defined as the occurrence of one or more of the following conditions which prevent exterior construction activity or access to the site within twenty-four (24) hours:

1. Precipitation (rain, ice, snow) in excess of one-tenth inch (0.10") liquid measure.
2. Temperatures which do not rise above 32°F by 10:00 a.m.
3. Temperatures which do not rise above that specified for the day's construction activity by 10:00 a.m., if any specified.
4. Sustained wind in excess of twenty-five (25) mph
5. Standing snow in excess of one inch (1 ").

B. Adverse Weather may include, if appropriate, "dry-out" or "mud" days when all the following conditions are met:

1. For rain days above the standard baseline.
2. Only if there is a hindrance to the site access or site work.
3. At a rate no greater than 1 make-up day for each day of consecutive days of rain beyond the standard baseline that total 1.0 inch or more, liquid measure, unless specifically recommended otherwise by the Architect

C. A Weather Delay Day may be counted if adverse weather prevents work on the project for fifty percent (50%) or more of the Contractor's scheduled work day, including a weekend day or holiday if the contractor has scheduled construction activity that day.

1.4 DOCUMENTATION AND SUBMITTALS

- A. Submit daily jobsite logs showing which and to what extent construction activities have been affected by weather.
- B. Submit actual weather data to support claim for time extension, obtained from nearest NOAA Weather Station or other independently verified source approved by the Architect at the beginning of the project
- C. Use Standard Baseline data provided in this Section when documenting actual delays due to weather in excess of the average climatic range.
- D. Organize claim and documentation to facilitate evaluation on a basis of calendar month periods, and submit to the Architect for review in accordance with the Shelby County General Conditions of the Contract for Construction
- E. If an extension of time is appropriate, it shall be affected in accordance with the Owner's Approval and the provisions of the Shelby County General Conditions of the Contract for Construction.

END OF SECTION

SECTION 01 29 76
PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Schedule of Values
- B. Applications for Payment
- C. Certificates for Payment
- D. Progress Payments
- E. Substantial Completion
- F. Final Completion and Final Payment

1.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and 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 as a basis for reviewing the Contractor's Applications for Payment.

1.3 APPLICATIONS FOR PAYMENT

1.3.1. At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with an updated version of the most recently approved schedule of values for completed portions of the Work. Such application shall be notarized, if required, notarized and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

1.3.1.1 Such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

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

1.3.1.3. Periodic Affidavits and Waivers of Liens. The Contractor shall submit with each Application for Payment, affidavits and waivers of lien conditioned on receipt of payment from the Contractor. Said affidavits and conditional waivers of lien shall be submitted for the Contractor and all Subcontractors, Sub-subcontractors, and material suppliers for the period of time of this Application for Payment. With this Application for Payment, the Contractor shall also submit copies of Final Release of Liens, canceled checks or other documentation as evidence of payment to the Subcontractors, Sub-subcontractors, and material suppliers for all previously submitted conditional waivers of liens

1.3.2. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials

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

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

1.4 CERTIFICATES FOR PAYMENT

1.4.1. The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part.

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

1.5 PROGRESS PAYMENTS

1.5.1. After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

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

similar manner.

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

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

1.5.5. Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 1.5.2, 1.5.3 and 1.5.4.

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

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

1.5.8. Contractor to Discharge Mechanic's Liens. If any mechanics' or material suppliers' liens shall at any time be asserted or filed against the Project as a result of the Contractor's construction activities or those of any Subcontractors, Sub-subcontractors or material suppliers, the Contractor, at the Contractor's expense, shall promptly take and diligently prosecute appropriate action to have the same discharged of record or bonded off within thirty (30) days after notice of filing thereof or such lesser period as shall be necessary to prevent judgment execution or foreclosure of such mechanic's lien or any adverse consequences for the Owner. Upon the Contractor's failure to do so, the Owner, in addition to any other right or remedy that the Owner may have, may take such action as may be reasonably necessary to protect the Owner's interest, including payment or settlement of the lien claim and the Contractor shall reimburse the Owner any amounts paid or incurred by the Owner in connection with such action. The Contractor shall indemnify and hold harmless the Owner with respect to any claims or liens asserted by the Contractor's Subcontractors or Sub-subcontractors at any level if the Contractor has been paid with respect to the work or materials for which the claim or lien is asserted.

1.6 SUBSTANTIAL COMPLETION

1.6.1. Substantial Completion is the stage in the progress of the Work when all required occupancy permits have been issued and the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

1.6.2. When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept

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

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

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

1.6.5. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. thereof within ninety (90) days. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

1.7 FINAL COMPLETION AND FINAL PAYMENT

1.7.1A. Upon receipt of the Contractor's 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 the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 1.7.2. as precedent to the Contractor's being entitled to final payment have been fulfilled.

1.7.2. Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases

and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

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

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

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.
- .4 latent defects appearing during or beyond the warranty period.

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

1.7.6. Final Affidavits and Waivers of Liens. The Contractor shall submit to the Architect and the Owner final affidavits and unconditional waivers of liens, in form and substance satisfactory to the Owner from the Contractor, Subcontractor, and Sub-subcontractor and material suppliers. On request of the Owner, the Contractor shall provide any additional information or documentation necessary under the then existing mechanic's lien laws.

1.7.7. Unless otherwise agreed to by the Owner, Final Completion of the Project shall be achieved no later than thirty (30) days following the date of Substantial Completion.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

SECTION 01 31 13
PROJECT COORDINATION

PART 1-GENERAL

1.1 SUMMARY

A. Includes coordination of the portion of the General Contractor's work with that of all subcontractors involved with any portion of the Project Scope of the Work, including all mechanical, electrical, and masonry work.

B. Related Sections

1. Section 01 11 13 - Summary of the Work
2. Section 01 31 19 – Project Meetings
3. Section 01 32 16 – Construction Progress Schedule
4. Section 01 33 23 – Submittals
5. Section 01 77 19 – Closeout Requirements

1.2 CONTRACTOR'S DUTIES

A. Work with trades associated with the Scope of the Work.

B. Coordinate the schedules of all trades, including mechanical and electrical and masonry subcontractors.

1. Verify timely deliveries of products for installation by all trades.
2. Verify that labor and materials are adequate to maintain schedules.

C. Conduct conferences among all subcontractors and other concerned parties, as necessary to:

1. Maintain coordination and schedules.
2. Resolve matters in dispute.

D. Participate in project meetings:

1. Report progress of each trade.
2. Recommend needed changes in schedules.
3. Transmit minutes of meetings to trades as appropriate.

E. Temporary Utilities:

1. Coordinate installation, operation and maintenance, to verify compliance with project requirements and with Contract Documents.
2. Verify adequacy of service at required locations.

F. Shop Drawings, Product Data and Samples - Submittals:

1. Prior to submittal, review for compliance with Contract Documents.
 - a. Check field dimensions, clearance dimensions and finish requirements.
 - b. Check relation to available space.
 - c. Check anchor bolt settings and setting of other embedded items.
 - d. Review the effect of any changes on the work of other contracts or trades.
 - e. Check items to receive field finish. Verify that item is suitable to receive such finish.

f. Check compatibility with mechanical and electrical equipment and work of other trades.

G. Coordination Drawings:

1. Prepare, as required to assure coordination of work of, or affected by trades or to resolve conflicts.
2. Contractor to review prior to transmitting to appropriate trades.
3. Reproduce and distribute Contractor approved copies to all concerned parties.

H. Observe required testing; maintain a record of tests:

1. Testing agency and name of inspector.
2. Subcontractor.
3. Manufacturer's Representative present.
4. Date and time of testing.
5. Type of product or equipment.
6. Type of test and results.
7. Retesting required.

I. Verify that subcontractors maintain accurate record of documents.

J. Substitution and Changes:

1. Review proposals and request:
 - a. Check for compliance with Contract Documents.
 - b. Verify with work and equipment of other trades.
2. Recommend action to concerned parties.

K. Observe work of all trades, including mechanical and electrical work for compliance with requirements of Contract Documents.

1. Maintain list of observed deficiencies.
2. Promptly report deficiencies or discrepancies to applicable parties.

L. Assemble documentation for handling of claims or disputes involving various trades.

M. Equipment Startup:

1. Check to assure that utilities and specified connections are complete and that equipment is in operable condition.
2. Observe test, adjust and balance.
3. Record results, including time and date of startup.

N. Inspection and Acceptance of Equipment:

1. Prior to inspection, check that equipment is clean, repainted as required, testes and operational.
2. Assist inspector; prepare list of items to be completed or corrected.
3. Should acceptance and operation of equipment constitute the beginning of the specified guarantee period, prepare and transmit written notice to Owner.

O. Assemble Record Documents for subcontractors; transmit to Architect for delivery to Owner.

1.3 COORDINATION SCHEDULE

A. The schedule designates areas of basic responsibility of contractors and subcontractors, including items of mechanical work and electrical power and control wiring for the project, but does not define scope.

B. Refer to respective Sections of Project Manual for detailed descriptions of work required.

C. Contractor Shall:

1. Maintain Schedule throughout construction period; record changes in responsibilities due to:

a. Modifications to Contract.

b. Field orders.

c. Substitutions.

2. Reproduce and distribute revised schedule promptly after each change to affected subcontractors, material suppliers and Owner.

END OF SECTION

SECTION 01 31 19
PROJECT MEETINGS

PART 1 GENERAL

1.1 SUMMARY

A. Work Included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Architect will conduct project meetings throughout the construction period.

B. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to, Shelby County General Conditions and Sections in Division 1 of these Specifications.
2. The Contractor's relations with his subcontractors and materials suppliers and discussions relative thereto are the Contractor's responsibility and normally are not part of project meetings content.

1.2 SUBMITTALS

A. Agenda Items: To the maximum extent practicable, advise the Architect at least 24 hours in advance of project meetings regarding items to be included on the agenda.

B. Minutes: The Architect will compile minutes of each project meeting and will furnish copies to the General Contractor and to the Owner. Recipients of copies may make and distribute such other copies as they wish.

1.3 QUALITY ASSURANCE.

A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

PART 2 PRODUCTS

(Refer to Products within other Sections within this Project Specification.)

PART 3 EXECUTION

3.1 MEETING SCHEDULE:

A. Except as noted herein for Pre-construction Meeting, project meetings will be held bi-weekly. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION:

A. The Architect will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.3. PRE-CONSTRUCTION MEETING.

A. Pre-Construction Meeting will be scheduled by the Architect. Provide attendance by authorized representatives of the Contractor and major subcontractors. The Architect will advise other interested parties, including the Owner, and request their attendance.

B. Minimum Agenda: Data will be distributed and discussed on at least the following items.

1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and the Architect.
2. Channels and procedures for communication.
3. Construction schedule, including sequence of critical work.

4. Contract Documents, including distribution of required copies of original documents and revisions.
5. Processing of Shop Drawings and other data submitted to the Architect for review.
6. Processing of Bulletins, field decisions, and Change Directives.
7. Rules and regulations governing performance of the Work.
8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

3.4 PROJECT MEETINGS

A. Attendance

1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the Work.
2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

B. Minimum Agenda

1. Review, revise as necessary, and approve minutes of previous meetings.
2. Review progress of the Work since last meeting, including status of submittals for approval.
3. Identify problems that impede planned progress.
4. Develop corrective measures and procedures to regain planned schedule.
5. Complete other current business.

C. Revisions to Minutes

1. Unless published minutes are challenged in writing prior to the next regularly scheduled progress meeting; they will be accepted as properly, stating the activities and decisions of the meeting.
2. Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
3. Challenge to minutes shall be settled as priority portion of "old business" at the next regularly scheduled meeting.

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1. SUMMARY

A. The contractor shall provide a schedule to serve as a basis for a detailed construction sequence. The detailed construction schedule shall describe and document the construction sequence necessary to execute the scope of work.

1.2 DESCRIPTION

A. Utilize a computer generated schedule for the planning and scheduling of all work required under the Contract Documents. In addition to construction activities, detailed network activities shall include the submittal of shop drawings, catalog cut sheets, and materials samples, review and approval of these submittals, and fabrication and delivery of materials and equipment. Work by separate contractors and project close - out activities shall also be included to account for their effect on the overall sequencing of the project.

1.3. SCHEDULE STANDARDS

- A. The schedule shall demonstrate a logical succession of work from start to finish. Constrained start and finish dates shall be kept to a minimum, such that the schedule logic (activity relationships and durations) will determine the schedule start and finish of each activity.
- B. The durations indicated for each activity shall be in "work - days" and shall represent the required time for the activity considering the scope of work and resources planned for the activity including time for inclement weather and other predictable delays.
- C. Multiple calendars shall be utilized as required to allow for specific times of the week, month, or year when specific activities can or cannot be accomplished. Specific examples include, but are not necessarily limited to, Site Based activities which require limited noise and other site based activities which require considerations, such as building occupant morning and afternoon commuting arrival and departure times, consult with the Architect regarding additional time-frames which require Site Based activities to take priority over normal owner use of the site.

PART 2 PRODUCTS

1.1. Not Used

PART 3 EXECUTION

3.1. GENERAL

- A. Prepare a computer generated schedule of all construction related work required by this contract.
- B. Include the following information in the database for each activity:
1. Activity Description - should indicate type of work being performed and. general location or phase.
 2. Calendar - the standard calendar is a five day workweek.
 3. Duration - should indicate "work - days" required to accomplish the task.

4. Schedule Dates - Early Start, Early Finish, Late Start, and Late Finish for each activity will result from the calculation of the schedule.

3.2 SUBMITTAL PROCEDURE

A. Time of Submittals:

1. Within Five (5) working days after Notice to Proceed, the Contractor shall submit its project schedule for review. The schedule produced and submitted shall indicate interim milestone and completion dates. The Architect will review the schedule within ten working days and state acceptance or rejection of the schedule.
2. Within ten working days after the conclusion of the Architect's review, the Contractor shall revise the schedule as required and resubmit. This schedule shall constitute the project Work schedule unless a revised schedule is required due to substantial changes in work or contract time, delinquency by the Contractor requiring a recovery schedule, or as otherwise provided.
3. Acceptance of the project schedule will be required prior to the processing of any application for payment.
4. Submit a copy of the schedule, clearly showing progress made during the previous month along with each Application for Payment.

B. Acceptance of Schedule:

1. The schedule will be acceptable when it provides a description of an orderly progression of the work to completion in accordance with the contract requirements, adequately defines the Contractor's work plan, and provides a workable arrangement for the processing of submittals in accordance with the requirements.
2. Review and acceptance of the Contractor's project schedule is for conformance to the requirements of the contract documents only. It does not relieve the Contractor of any responsibility for the accuracy or feasibility of the project schedule, or of the Contractor's ability to meet the interim milestone dates and contract completion date.

C. Submittal Items:

1. Initial submittals shall include the following:
 - a. Critical Path Graphic Report - include all activities for the entire project. Sort by early start, early finish, and total float; organize by submittal activities, construction activities, etc. Include activity ID, description, original duration, early start, early finish, and total float. Individual pages shall not exceed 11 inches by 17 inches.
 - b. Back-up digital file
 - e. Reports shall be submitted in triplicate plus any copies to be returned to the Contractor.
2. Monthly submittals to be included with Application for Payment shall include the following:
 - a. Project Narrative. Report - shall include a brief description of work that was accomplished during the previous month as well as work to be pursued during the upcoming month.
 - b. Critical Path Graphic Report - shall be a three-month look ahead schedule to include previous month's progress plus work to accomplish during the two months following the data date. Schedule bars shall be compared to the initial schedule as a baseline. Include the same activity information as in initial bar chart graphic report.
 - c. Back-up digital file
 - d. Reports shall be submitted in triplicate plus any copies to be returned to the Contractor.

D. Schedule Revisions:

1. No changes may be made in the sequence, duration, or relationship of any activity without the acceptance of the Architect. Requests for minor changes to the schedule may be submitted in the form similar to the schedule form identified herein. More substantial revisions will require re-submittal of the entire schedule.

2. If at any time the Architect considers the milestone or completion dates to be in jeopardy because of work activities behind schedule, the Contractor shall provide a revised Critical Path Work Schedule, including resource requirements, to show how the Contractor intends to bring the project back on schedule. "Activities behind schedule" are any activities whose current schedule early dates are later than indicated in the initial schedule.
3. If a change directive has a schedule impact, that impact shall be submitted with the change directive request.

END OF SECTION

SECTION 01 33 23
SUBMITTALS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Proposed products list.
- C. Shop drawings.
- D. Product data.
- E. Samples.
- F. Manufacturers' instructions.
- G. Manufacturers' certificates.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Architect accepted form.
- B. Sequentially number the transmittal forms. 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 submittals to expedite the Project, and deliver to Architect at business address. 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 Architect review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.3 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.4 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Architect.

1.5 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Architect.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

1.6 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Architect's selection.
- C. Include identification on each sample, with full Project information.
- D. Submit the number or samples specified in individual specification Sections; one of which will be retained by Architect.
- E. Reviewed samples which may be used in the Work are indicated in individual specification Sections.

1.7 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.8 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturer's certificate to Architect 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 Architect.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 50 00
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 Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
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 and on the Contract Document Drawings where applicable.

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 water and electricity.
2. Sanitary facilities.
3. Enclosures such as tarpaulins, barricades, and canopies.
4. Emergency Preparedness supplies.

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: At no cost to the Contractor, the Owner will furnish all necessary water for testing, sterilizing, flushing, and other construction purposes, subject to the following conditions:

1. Water will be available from existing water facilities, at locations designated by the Owner. The Contractor shall make all necessary arrangements and shall provide all necessary hoses, temporary pipework, portable tanks, and other equipment to convey the water to the usage locations.
2. Carefully conserve all water, and do not waste it unnecessarily.
3. Before each water delivery from the existing water facilities, obtain the Owner's prior approval of the time and duration of flow, approximate rate of flow, and approximate volume of water required.

B. Electricity: Owner will provide.

1. Electricity will be available from existing electrical facilities, at location approved by the Owner. The Contractor shall make all necessary arrangements with local electrical utility company and shall provide all temporary wiring and temporary equipment required to convey the electricity to the usage locations.
2. Carefully conserve all electricity, and do not waste it unnecessarily.
3. Do not overload existing electrical facilities, and do not adversely affect the operation of any existing electrically operated equipment.
4. Remove all temporary electrical work promptly after it is no longer required.

2.2 SANITARY FACILITIES

- A. Provide temporary sanitary facilities in the quantity required for use by all personnel.
- B. Maintain in a sanitary condition at all times.

2.3 TEMPORARY CONSTRUCTION

- A. Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, chutes, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

2.4 REMOVING AND REPLACING FENCES, SOD, ETC.

- A. Where required to install the Work, carefully remove and store all interfering fences, mailboxes, culverts, etc. After installation of work and backfilling, reinstall these items and restore them to at least the conditions which existed prior to the commencement of work, using materials and workmanship to match those of the original construction and installation.
- B. Carefully remove and store all interfering shrubbery, trees, sod, flowers, and other planting, sufficiently in advance of construction. After installation of work and backfilling, reset and restore these items to at least the conditions that existed prior to the commencement of work.
- C. Upon completion of the Work, restore all lawns to at least the conditions that existed prior to the commencement of the work.
- D. Site infrastructure damaged during the course of the Work will be replaced or repaired to at least the conditions that existed prior to the commencement of the work. These items include, though are not limited to, driveway and parking lot surfaces, sidewalks, curbs, and gutters.

2.5 EQUIPMENT AND MATERIALS STORAGE AND PROTECTION

- A. Equipment and Materials Which Will Be Installed Indoors: At all times prior to its installation within permanent facility 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 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 all architectural finish materials and products.
- B. Equipment and Materials Which Will be Installed Outdoors: At all times prior to its installation, store this equipment and these materials on pallets, skids, runners, platforms, or other suitable supports which will hold all parts of this equipment and these materials at least six inches above ground; provide watertight coverings for those stored items which may be damaged by rain or snow; all as approved.

C. 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.

D. At Contractor's expense, provide temporary weathertight storage for materials which may be damaged by storage exposed to weather.

2.6 TRAFFIC CONTROL

A. Schedule and perform all work to interfere as little as possible with vehicular traffic flow. Poor planning and gross inconsideration of traffic flow will be just cause for the Owner to stop the Contractor's work until the unsatisfactory conditions have been remedied. Blocking of service driveways and fire lanes is prohibited.

B. Provide safety precautions and warnings in accordance with Shelby County General Conditions of the Contract for Construction.

C. Use only site entrances that have been approved by the Owner for temporary use as Construction Entrances.

PART 3 - EXECUTION

3.1 MAINTENANCE AND REMOVAL

A. Maintain temporary facilities, controls, and emergency supplies 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 Architect.

END OF SECTION

SECTION 01 66 00
DELIVERY, STORAGE AND HANDLING

1 GENERAL

1.1 SUMMARY

A. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

B. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.
2. Additional procedures also may be prescribed in other Sections of these Specifications.

1.2 QUALITY ASSURANCE

A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.3 MANUFACTURERS' RECOMMENDATIONS

A. Except as otherwise approved by the Architect, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.4 PACKAGING

A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.

1. Maintain packaged materials with seals unbroken and labels intact until time of use.
2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.

B. The Architect may reject as non-complying such material and products that do not bear identification satisfactory to the Architect as to manufacturer, grade, quality, and other pertinent information.

1.5 PROTECTION AND HANDLING

A. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.6 REPAIRS AND REPLACEMENTS

A. In event of damage to the Owner's property or to work in progress, promptly make replacements and repairs to the approval of the Architect and at no additional cost to the Owner.

B. Additional time required to secure replacements and to make repairs will not be considered by the Architect to justify an extension in the Contract Time of Completion.

END OF SECTION

SECTION 01 74 23
CLEANING

PART 1 - GENERAL

1.1 SUMMARY

A. Throughout the construction period, maintain the buildings and site 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 Conditions and Sections in Division 1 of these Specifications.
2. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

A. Conduct daily inspection, and more often if necessary, 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

1.1 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

1.2 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

1.1 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. Remove on a daily basis all scrap, debris, and waste material from the job site or store in a secured area to be designated by the Owner.
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. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Re-stack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.1-A-1 above.
3. Maintain the site in a neat and orderly condition at all times.

1.2 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 job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.

C. Site:

1. Unless otherwise specifically directed by the Architect, broom clean paved areas on the site and public paved areas adjacent to the site and completely remove resultant debris.
2. Remove all nails and other debris produced by the Work.

D. Schedule final cleaning as approved by the Architect to enable the Owner to accept a completely clean Work.

1.3 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 Architect in accordance with the General Conditions.

END OF SECTION

SECTION 01 77 19
CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Closeout Procedures
- B. Final Cleaning
- C. Project Record Documents
- D. Operation and Maintenance Data
- E. Warranties and Bonds

1.2 RELATED WORK

- A. Agreement Between Owner and Contractor.
- B. Section 01 11 13 - Summary of the Work.
- C. Section 01 33 23 – Submittals.
- D. Shelby County General Conditions of the Contract for Construction

1.3 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in Section 01 29 76 Progress Payment Procedures for issuance of Certificate of Substantial Completion.
- B. When Contractor considers that the Work has reached final completion, 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 the Architect's inspection.
- C. In addition to submittals required by the conditions of the Contract, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Architect will issue final Change Directive reflecting approved adjustments to Contract Sum not previously made by Change Directive.
- E. Submit all close-out documents and products to the Architect.

1.4 FINAL CLEANING

- A. Complete prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view; remove ALL temporary labels, stains and foreign substances, clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment.
- C. Thoroughly clean all exterior and interior finishes.
- D. Identify, remove and dispose of all debris and hazardous waste from site. Dispose of materials in compliance with current local, state and federal environmental requirements.

1.5 OPERATION AND MAINTENANCE DATA

- A. Provide names and addresses of manufacturers and suppliers of equipment and materials and general and

subcontractors.

B. Provide data for:

1. Lighting Fixtures
2. Any other items specifically identified in individual specification sections of this Project Manual.

C. Submit four (4) sets prior to final inspection, bound in 8-1/2" x 11" three-ring side binders with durable plastic covers, tabbed with permanent tab markers and identified on face and spine.

1. Part 1: Directory, listing names, addresses and telephone numbers of Architect/Engineer and Contractor(s).
2. Part 2: Operation and maintenance instructions arranged by system. For each system give names, addresses, and telephone numbers of subcontractors and suppliers.

Provide:

- a. Appropriate design criteria.
- b. List of Equipment
- c. Maintenance instructions, identifying required cleaning materials and solutions for removals of (i.e. graffiti, marker ink, efflorescence, Etc.)
- d. Maintenance instructions, to protect finishes.
- e. Shop drawings and product data.
- f. Warranties.

1.6 ADDITIONAL DOCUMENTATION

A. Provide the following documentation in addition to that previously specified:

1. Consent of Surety to Final Payment
2. Contractor's Affidavit of Release of Liens
3. Contractor's Affidavit of Payment of Debts and Claims.
4. Lien Waiver from all Subcontractors.
5. Non-asbestos/lead Certification.

1.7 WARRANTIES AND BONDS

A. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble documents executed by subcontractors, suppliers, and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.

B. Submit material prior to final application for payment. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing(s) of ALL Manufacturers Warranties, date(s) of acceptance as start and end of warranty period(s).

C. Manufacturers Warranties:

1. Reference ALL other related specification sections.

D. Contractor Warranties:

1. Provide all Contractor's and subcontractor's materials and workmanship warranties.

1.8 PRODUCTS

A. Provide ALL Products Data with ALL other related product information to the Architect to assist the Owner with the proper maintenance, repair, or replacement re-use of all Products utilized for this Project.

1.9 SPECIAL CERTIFICATION(S)

- A. Provide duplicate, notarized copies.
- B. Provide certification(s) that products and materials installed are free of asbestos and comply with current local, state and federal requirements regarding use of non-asbestos materials.
- C. Provide certification(s) that products and materials installed are free of lead and comply with current local, state and federal requirements regarding use of non-lead materials.
- D. Provide copies of all environmentally related permits required, and fee receipts for disposal of hazardous materials from the construction site (if applicable).

1.10 FINAL ACCEPTANCE AND PAYMENT

- A. Conform to Contract requirements for Final Completion and Final Payment, Section 01 29 76, Paragraph 1.7, "Progress Payment Procedures."

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

Section 02 30 00
SUB SURFACE INVESTIGATIONS

Soils Report Attached

END OF SECTION

**SUBSURFACE EXPLORATION REPORT
PROPOSED COVERED WALKWAY
SHELBY COUNTY DEPARTMENT OF CORRECTIONS
MEMPHIS, TENNESSEE**

Prepared for:

PRUETT ARCHITECTS
Memphis, Tennessee

Prepared by:

GEOTECHNOLOGY, INC.
Memphis, Tennessee

Geotechnology Project No. J023685.01

October 16, 2014



October 16, 2014

J023685.01

Mr. John Pruett, AIA
Pruett Architects
1869 Madison Avenue
Memphis, Tennessee 38104

SUBSURFACE EXPLORATION REPORT
PROPOSED COVERED WALKWAY
SHELBY COUNTY DEPARTMENT OF CORRECTIONS
MEMPHIS, TENNESSEE

Dear Mr. Pruett:

Enclosed is the report of the subsurface exploration performed by Geotechnology, Inc. for the referenced project. The report includes our understanding of the project, observed site conditions, conclusions and/or recommendations, and support data as listed in the Table of Contents.

It has been our pleasure to provide these services to you, and we would welcome the opportunity to provide other services during the course of the project. Please contact us if you need further information or clarification about this document.

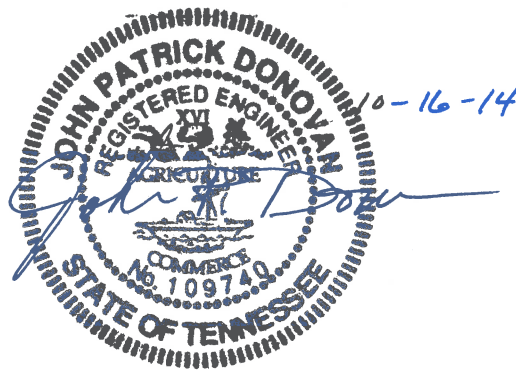
Very truly yours,

GEOTECHNOLOGY, INC.

Pat Donovan, P.E.
Branch Manager

JKH/ASE/JPD/JAB:jkh

Copies submitted: (1) Hard copy
(1) PDF copy



SUBSURFACE EXPLORATION REPORT
PROPOSED COVERED WALKWAY
SHELBY COUNTY DEPARTMENT OF CORRECTIONS
MEMPHIS, TENNESSEE

TABLE OF CONTENTS

		<u>Page</u>
I.	PROJECT INFORMATION	1
	Authorization	1
	Purpose and Scope of Services	1
	Project and Site Description	1
II.	FIELD EXPLORATION AND LABORATORY TESTING	1
	Field Exploration	1
	Laboratory Testing	2
III.	GENERAL SUBSURFACE CONDITIONS	3
	Stratigraphy	3
	Groundwater	3
IV.	DESIGN CONSIDERATIONS	3
	Design Seismic Information	3
	Deep Foundations	3
	Lateral Load Analysis of Deep Foundations	4
V.	RECOMMENDED ADDITIONAL SERVICES	5
VI.	LIMITATIONS OF REPORT	5

ILLUSTRATIONS

	<u>Plate</u>
Site Location and Topography	1
Aerial Photograph of Site and Boring Locations	2

APPENDICES

Important Information About Your Geotechnical Report	A
Boring Logs: B-1 through B-6	B
Boring Log: Terms and Symbols	
Laboratory Test Results	C

SUBSURFACE EXPLORATION REPORT
PROPOSED COVERED WALKWAY
SHELBY COUNTY DEPARTMENT OF CORRECTIONS
MEMPHIS, TENNESSEE

SECTION I - PROJECT INFORMATION

AUTHORIZATION

The services documented in this report were provided in general accordance with the terms, conditions, and scope of services described in the Geotechnology proposal No. P023685.01, dated September 16, 2014. Our services were authorized by your signed acceptance of our terms and conditions on September 16, 2014.

PURPOSE AND SCOPE OF SERVICES

The purpose of our services was to develop recommendations for geotechnical aspects of the design and construction of the proposed project as defined in the Scope of Services of the referenced proposal. The services consisted of drilling six borings, laboratory testing, engineering analyses, and preparation of this report. Important information prepared by The Association of Engineering Firms Practicing in the Geosciences (ASFE) for studies of this type is presented in Appendix A for your review.

SITE AND PROJECT DESCRIPTION

The project site is located on the grounds of the existing facility at 1045 Mullins Station Road in Memphis, Tennessee as shown on Plate 1 (Site Location and Topography). A canopy will be constructed to cover the walkway between the east entrance and the west end courtyard. The site is relatively flat, with an existing approximately 900 foot concrete walkway. It is our understanding that the canopy will be supported on drilled shafts. The maximum load per shaft is reported to be 15 kips (DL+LL).

SECTION II - FIELD EXPLORATION AND LABORATORY TESTING

FIELD EXPLORATION

The field exploration consisted of drilling six borings, designated as Boring B-1 through B-6, at the approximate locations shown on Plate 2. The borings were located by representatives of Geotechnology using site features for reference. Several borings were offset from planned locations to avoid existing underground utilities along the walkway. The client should retain a registered land surveyor to establish exact boring locations and elevations if precise data are required.

The borings were drilled to approximate depths of 15 and 30 feet using a rotary drill rig (CME 550) and hollow stem augers. After discussions with Department of Corrections

personnel, hand auger equipment was used within the upper 5 feet at each boring location due to uncertainties regarding underground utility locations. Standard Penetration Tests (SPT's) were performed using an automatic hammer. Blow counts, or 'N'-values, were recorded and are presented on the boring log. Split-spoon samples and relatively undisturbed Shelby tube samples were obtained in general conformance with applicable ASTM standards at the depths indicated on the boring logs. The samples were visually examined by the drill crew, and transported to our laboratory for further testing, and for examination by a geotechnical engineer. The boring logs are presented in Appendix B. An explanation of the terms and symbols used on the boring logs is also provided in Appendix B.

The boring logs represent conditions observed at the time of exploration and has been edited to incorporate results of the laboratory test data, as appropriate. Unless noted on the boring logs, the lines designating the changes between various strata represent approximate boundaries. The transition between materials could be gradual or could occur between recovered samples. The stratification given on the boring logs, or described herein, should not be used as the basis of design or construction cost estimates without realizing that there can be variation from that shown or described.

The boring logs and related information depict subsurface conditions only at the specific location and time where sampling was conducted. The passage of time could result in changes in conditions, interpreted to exist, at or between the locations where sampling was conducted.

LABORATORY TESTING

The samples were classified in general accordance with the Unified Soil Classification System (ASTM D 2487 and D 2488). The classifications were based on visual examination of the soil samples, with the results of the laboratory testing used to verify the visual classification.

Laboratory tests were performed on select soil samples to evaluate pertinent engineering and index properties. The testing included moisture content determinations, Atterberg Limits, gradation, and unconfined compression (UC). The laboratory test results are generally presented on the boring logs in Appendix B. The results of the Atterberg Limits, gradation and UC tests are presented in Appendix C. The laboratory test and corresponding test method standard used are presented in the following table.

Summary of Laboratory Tests and Methods	
Laboratory Test	Test Method
Moisture Content	ASTM D 2216
Atterberg Limits	ASTM D 4318
Unconfined Compression	ASTM D 2166
Sieve Analysis	ASTM D 422

SECTION III – GENERAL SUBSURFACE CONDITIONS

STRATIGRAPHY

The stratigraphy encountered in the borings consisted of fine-grained soils, which are underlain by interbedded fine- and coarse-grained soils.

The fine-grained soils were classified as silty clay (CL). The moisture content of the samples ranged from 10 to 28 percent. The SPT N-values varied from 4 to 19 blows per foot (bpf). The shear strength tests resulted in undrained shear strengths of 940 to 1,400 pounds per square foot (psf). The results of field and lab testing indicated medium stiff to very stiff consistencies in the fine-grained material.

The underlying interbedded fine- and coarse-grained soils were comprised of fat clay (CH), sandy clay (CL) silty sand (SM), and clayey sand (SC). In the coarse-grained materials, the SPT N-values ranged from 25 to 31 bpf, indicating medium dense to dense conditions. In the fine-grained materials, the SPT N-values ranged from 8 to 19 bpf, indicating medium stiff to very stiff consistencies.

GROUNDWATER

Groundwater was not observed during drilling operations. Groundwater levels could vary significantly over time due to the effects of seasonal variation in precipitation, recharge, or other factors not evident at the time of exploration.

SECTION IV - DESIGN CONSIDERATIONS

DESIGN SEISMIC INFORMATION

The site lies within the influence of the New Madrid Seismic Zone (NMSZ). It is our understanding that the canopy will be designed in accordance with the 2012 International Building Code (IBC). The site is assessed to be Site Class “D”, based on N-values and our experience in the vicinity of the site.

DEEP FOUNDATIONS

Drilled shafts have been evaluated for use at the site. Recommended maximum allowable axial capacities and design soil parameters for ultimate capacities are presented in the following tables. Drilled shafts used to resist uplift and lateral loads should be reinforced full depth. The structural engineer should verify the structural capacity of the piles based on the requirements of the applicable building code. If a different foundation system, configuration or higher load capacities are required, then Geotechnology should be notified so that the required analysis is performed in a timely manner.

Recommended Drilled Shaft Capacities			
Diameter (inches)	Embedment Length (feet)	Maximum Allowable Capacity (kips)	
		Downward	Uplift
24	15	15	6

Drilled Shaft Foundations

Construction Considerations. The drilled shaft construction should be in accordance with FHWA publication FHWA-IF-99-025 (Drilled Shafts: Construction Procedures and Design Methods). The drilling method should minimize the possibility of sloughing or necking. The use of casing, drilling slurry or the combination thereof, may be required, depending on the embedment length of the shaft. The construction operation should be monitored by the geotechnical engineer or his representative.

LATERAL LOAD ANALYSIS OF DEEP FOUNDATIONS

Geotechnology performed a lateral load analysis to provide the designer with information for preliminary design purposes. The analysis utilized the computer program LPILE 6.0. It was based on the following assumptions and specific design input:

- Shaft diameter of 24 inches
- Design (28-day) concrete strength of 4000 psi
- Eight No. 7 vertical reinforcing bars, grade 50 steel
- Concrete cover of 3.94 inches from the pile perimeter to the center of the reinforcing steel
- The shaft head is free to rotate (non-restrained head condition)
- Level finished grade around the shafts
- Maximum ground line shear force of 2.2 kips
- Maximum ground line moment of 30 ft-kips
- An axial compression load of 15 kips

The results of the analysis are presented in the following table.

LATERAL LOAD PRELIMINARY ANALYSIS				
Shaft Length ft.	Lateral Loading Condition	Maximum Lateral Deflection, in.	Maximum Bending Moment, ft. kip	Maximum Shear Force, kip
15	Static	0.06	33.85	5.2

SECTION V - RECOMMENDED ADDITIONAL SERVICES

The conclusions and recommendations given in this report are based on interpretation of exploration data and Geotechnology's experience. The client must recognize that variations could occur from conditions observed in the borings, particularly within existing fills or previously developed areas. Design recommendations are based on data from borings, sampling and related procedures. Actual subsurface conditions could vary from those encountered in the borings. Therefore, design recommendations are subject to adjustment in the field, based on subsurface conditions encountered during construction.

We recommend that Geotechnology be retained to review grading and foundation plans to observe that recommendations given in this report have been correctly implemented. On-site services are required during site grading since placement techniques can significantly impact performance of the completed project.

Construction observation is intended to enhance compliance with project plans and specifications. It is not insurance, nor does it constitute a warranty or guarantee of any type. In all cases, contractors are solely responsible for the quality of their work and for adhering to plans and specifications.

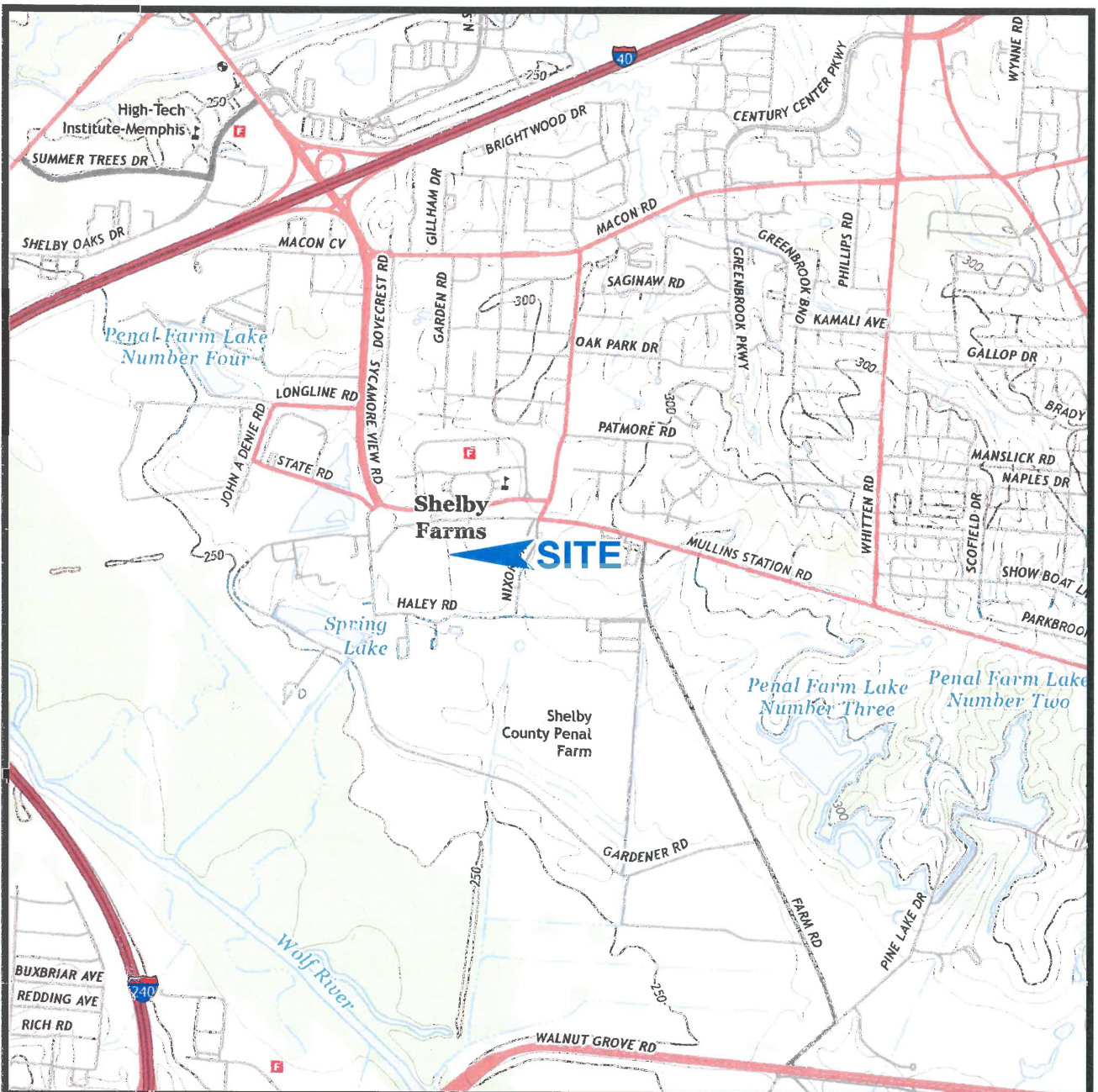
SECTION VI - LIMITATIONS OF REPORT

This report has been prepared on behalf of and for the exclusive use of the client for specific application to the named project as described herein. If this report is provided to prospective contractors, the client should make it clear that the information is provided for factual data only and not as a warranty of subsurface conditions included in this report. Unanticipated soil conditions could require the expenditure of additional funds to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs.

Geotechnology has attempted to conduct the services reported herein in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions. The recommendations and conclusions contained in this report are professional opinions. No other representation, expressed or implied, is included or intended.

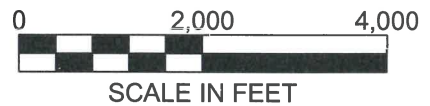
Unless specifically stated in our proposal or this report, the scope of our services for this phase of the project did not include any environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic material in the soil, surface water, groundwater or air, on or below or around this site. Any statements in this report or on the boring logs regarding odors noted or unusual or suspicious items or conditions observed are strictly for the information of our client. Our scope did not include any services to investigate or detect the presence of mold or any other biological contaminants (such as spores, fungus, bacteria, viruses, and the by-products of such organisms) on and around the site, or any services designed or intended to prevent or lower the risk of the occurrence of an infestation of mold or other biological contaminants.

The analyses, conclusions, and recommendations contained in this report are based on the data obtained from the subsurface exploration. The field exploration methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Discrete sampling cannot be relied on to accurately reflect natural variations in stratigraphy that could exist between sample locations and/or intervals. Unless specifically noted, the scope of our services did not include an assessment of the effects of flooding and natural erosion of adjacent creeks or rivers on the project site.

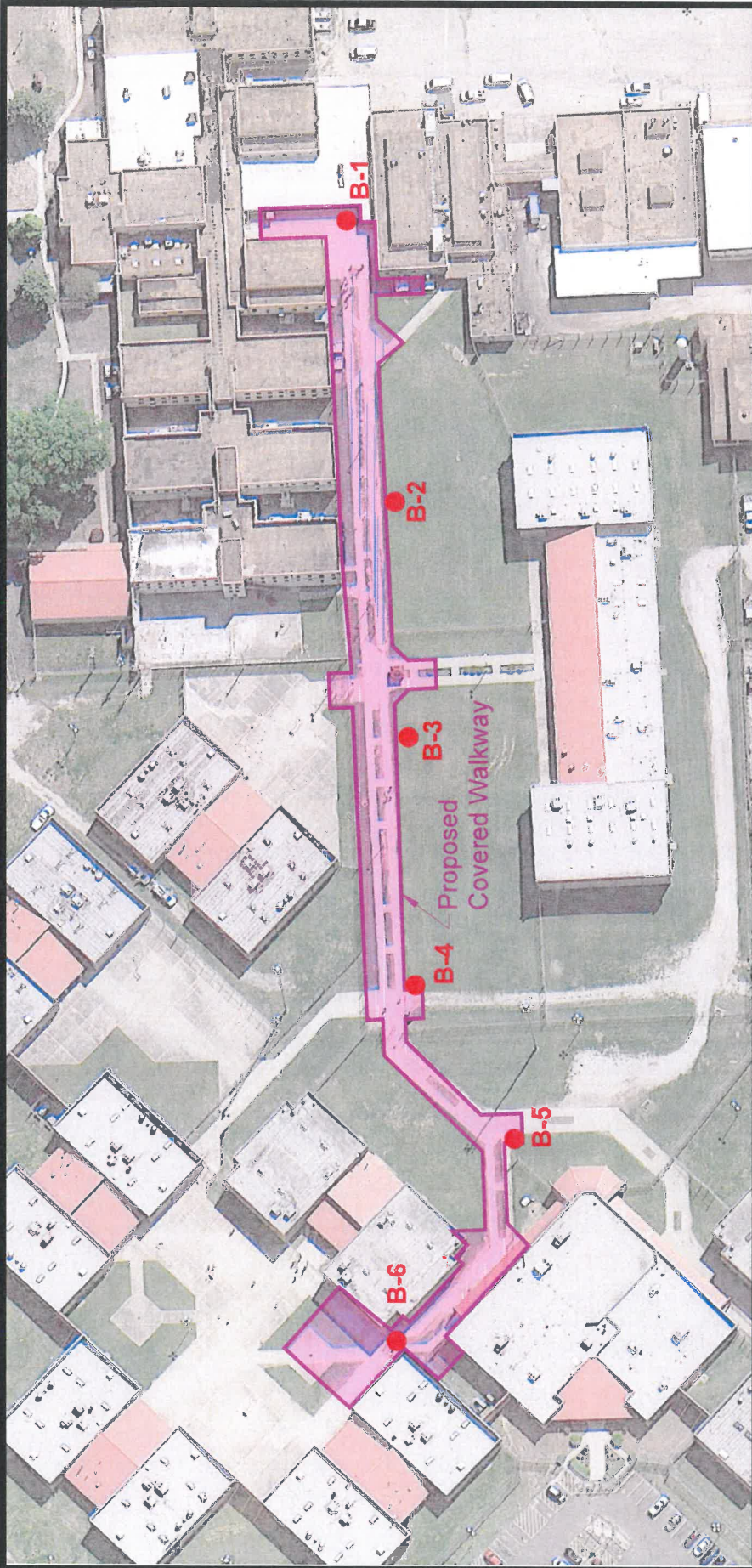


NOTES

1. Plan adapted from a 7.5 minute U.S.G.S. map for Ellendale, Tennessee quadrangle last revised in 2013



Drawn By: WAH	Ck'd By:	App'vd By:
Date: 10-8-14	Date:	Date:
<p>Covered Walkway Shelby County Jail Memphis, Tennessee</p>		
<p>SITE LOCATION AND TOPOGRAPHY</p>		
Project Number J023685.01		PLATE 1



Drawn By: WAH	Ck'd By:	App'vd By:
Date: 10-8-14	Date:	Date:
Covered Walkway Shelby County Jail Memphis, Tennessee		
AERIAL PHOTOGRAPH OF SITE AND BORING LOCATIONS		
Project Number J023685.01		PLATE 2

NOTES

- Plan adapted from an April 22, 2014 aerial photograph courtesy of Google Earth and from an untitled drawing dated September 15, 2014 prepared by John Pruet Architects.
- Borings were located in the field with reference to existing site features and are shown approximate only.

LEGEND

● Boring Location

SCALE IN FEET

APPENDIX A

**IMPORTANT INFORMATION ABOUT
YOUR GEOTECHNICAL ENGINEERING REPORT**

Important Information about Your Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.*

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/The Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE THE GEOPROFESSIONAL BUSINESS ASSOCIATION

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Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

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APPENDIX B

**BORING LOGS: B-1 THROUGH B-6
BORING LOG: TERMS AND SYMBOLS**

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Surface Elevation: _____		Completion Date: <u>9/26/14</u>		GRAPHIC LOG		SHEAR STRENGTH, tsf				
Datum _____						Δ - UU/2 \circ - QU/2 \square - SV 0.5 1.0 1.5 2.0 2.5	STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
						\blacktriangle N-VALUE (BLOWS PER FOOT) WATER CONTENT, % PLI ----- LL 10 20 30 40 50				
DEPTH IN FEET	DESCRIPTION OF MATERIAL			DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD		SAMPLES				
	Medium stiff, brown, silty CLAY - (CL)									
				*	HA1					
				*	HA2					
5				3-3-5	SS3					
				97	ST4					
10										
				2-3-3	SS5					
15										
	Loose, brown, clayey SAND - SC			2-2-4	SS6					
20	Boring terminated at 20 feet.									
25										
30										

GROUNDWATER DATA

FREE WATER NOT ENCOUNTERED DURING DRILLING

DRILLING DATA

___ AUGER 3 3/4 HOLLOW STEM
 WASHBORING FROM ___ FEET
MH DRILLER MM LOGGER
D50 DRILL RIG
 HAMMER TYPE Auto

Drawn by: BDE Checked by: _____ App'vd. by: _____
 Date: 10/6/14 Date: _____ Date: _____



Shelby County DOC- Covered Walkway
 Pruett Architects

REMARKS: *Upper 5 feet hand augered due to utilities

LOG OF BORING: B-1

Project No. J023685.01

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Surface Elevation: _____		Completion Date: <u>9/26/14</u>		GRAPHIC LOG		SHEAR STRENGTH, tsf Δ - UU/2 ○ - QU/2 □ - SV 0,5 1,0 1,5 2,0 2,5		
Datum _____						STANDARD PENETRATION RESISTANCE (ASTM D 1586) ▲ N-VALUE (BLOWS PER FOOT)		
DEPTH IN FEET		DESCRIPTION OF MATERIAL				DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD		WATER CONTENT, % PL -----●----- LL 10 20 30 40 50
5		Medium stiff to stiff, brown and gray, silty CLAY - CL		* HA1		●		
				* HA2			●	
				5-7-9 SS3		▲	●	
10				3-3-4 SS4		▲	●	
15				3-3-4 SS5		▲	●	
20		Medium dense, brown, silty SAND - SM		8-12-15 SS6			●	▲
25		Medium stiff, brown and gray, fat CLAY - CH		3-3-5 SS7		▲	●	
30		Stiff, brown and gray CLAY with trace organics - CL		3-4-7 SS8		▲	●	
		Boring terminated at 30 feet.						

GROUNDWATER DATA

FREE WATER NOT ENCOUNTERED DURING DRILLING

DRILLING DATA

___ AUGER 3 3/4 HOLLOW STEM
 WASHBORING FROM ___ FEET
MH DRILLER MM LOGGER
D50 DRILL RIG
 HAMMER TYPE Auto

Drawn by: BDE Checked by: _____ App'vd. by: _____
 Date: 10/6/14 Date: _____ Date: _____



Shelby County DOC- Covered Walkway
 Pruett Architects

REMARKS: *Upper 5 feet hand augered due to utilities

LOG OF BORING: B-2

Project No. J023685.01

Surface Elevation: _____

Completion Date: 9/26/14

Datum _____

Shear Strength, tsf

Δ - UU/2 ○ - QU/2 □ - SV
0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

PLI |-----| LL
10 20 30 40 50

DEPTH
IN FEET

DESCRIPTION OF MATERIAL

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)
SPT BLOW COUNTS
CORE RECOVERY/RQD

SAMPLES

Medium stiff to very stiff, brown and gray, silty CLAY - CL

* HA1

* HA2

3-3-2 SS3

6-10-9 SS4

3-4-6 SS5

3-4-7 SS6

with sand

Stiff, brown and gray, sandy CLAY - CL

Boring terminated at 20 feet.

GROUNDWATER DATA

FREE WATER NOT
ENCOUNTERED DURING DRILLING

DRILLING DATA

___ AUGER 3 3/4 HOLLOW STEM
WASHBORING FROM ___ FEET
MH DRILLER MM LOGGER
D50 DRILL RIG
HAMMER TYPE Auto

Drawn by: BDE Checked by: App'vd. by:
Date: 10/6/14 Date: Date:



Shelby County DOC- Covered Walkway
Pruett Architects

REMARKS: *Upper 5 feet hand augered due to utilities

LOG OF BORING: B-3

Project No. J023685.01

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

LOG OF BORING 2002 WL J023685.01.GPJ GTINC 0638301.GPJ 10/14/14

LOG OF BORING 2002 WL J023685.01.GPJ GTINC 0638301.GPJ 10/14/14

Surface Elevation: _____ Datum _____		Completion Date: <u>9/26/14</u>		GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES	SHEAR STRENGTH, tsf				
DEPTH IN FEET	DESCRIPTION OF MATERIAL	Δ - UU/2 \circ - QU/2 \square - SV 0,5 1,0 1,5 2,0 2,5									
		STANDARD PENETRATION RESISTANCE (ASTM D 1586)									
		\blacktriangle N-VALUE (BLOWS PER FOOT) WATER CONTENT, % PL ----- LL 10 20 30 40 50									
5	Soft to stiff, brown and gray, silty CLAY - (CL)										
			*	HA1							
			*	HA2							
	trace sand		5-5-6	SS3							
	with sand		2-3-4	SS4							
10			112	ST1							
	with sand		2-2-2	SS5							
15											
	Medium dense to dense, tan, silty SAND - SM		6-10-15	SS6							
20											
			4-11-20	SS7							
25											
	Very stiff, brown and gray, silty CLAY with sand - CL		4-8-11	SS8							
30	Boring terminated at 30 feet.										

GROUNDWATER DATA

FREE WATER NOT ENCOUNTERED DURING DRILLING

DRILLING DATA

AUGER 3 3/4 HOLLOW STEM WASHBORING FROM FEET
 MH DRILLER MM LOGGER
 D50 DRILL RIG
 HAMMER TYPE Auto

Drawn by: BDE Checked by: _____ App'vd. by: _____
 Date: 10/6/14 Date: _____ Date: _____



Shelby County DOC- Covered Walkway
 Pruett Architects

REMARKS: *Upper 5 feet hand augered due to utilities

LOG OF BORING: B-4

Project No. J023685.01

Surface Elevation: _____

Completion Date: 9/26/14

Datum _____

SHEAR STRENGTH, tsf

Δ - UU/2 ○ - QU/2 □ - SV
0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE

(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

PLI |-----| LL
10 20 30 40 50

DEPTH
IN FEET

DESCRIPTION OF MATERIAL

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)
SPT BLOW COUNTS
CORE RECOVERY/RQD

SAMPLES

Stiff, brown, silty CLAY - CL

* HA1

* HA2

3-4-5 SS3

4-4-6 SS4

Medium stiff, brown, sandy CLAY - CLS

2-3-4 SS5

Medium dense to dense, tan, poorly graded SAND with silt-
(SP-SM)

7-12-19 SS6

4-12-13 SS7

Stiff, brown, sandy CLAY - CL

4-5-7 SS8

Boring terminated at 30 feet.

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

LOG OF BORING 2002 WL J023685.01.GPJ GTINC.0638301.GPJ 10/14/14

GROUNDWATER DATA

FREE WATER NOT ENCOUNTERED DURING DRILLING

DRILLING DATA

AUGER 3 3/4 HOLLOW STEM
WASHBORING FROM FEET
MH DRILLER MM LOGGER
D50 DRILL RIG
HAMMER TYPE Auto

Drawn by: BDE Checked by: App'vd. by:

Date: 10/6/14 Date: Date:



Shelby County DOC- Covered Walkway
Pruett Architects

REMARKS: *Upper 5 feet hand augered due to utilities

LOG OF BORING: B-5

Project No. J023685.01

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.
 LOG OF BORING 2002 WL J023685.01.GPJ GTINC 0638301.GPJ 10/14/14

Surface Elevation: _____		Completion Date: <u>9/26/14</u>				SHEAR STRENGTH, tsf							
Datum _____							Δ - UU/2 \circ - QU/2 \square - SV 0,5 1,0 1,5 2,0 2,5						
DEPTH IN FEET		DESCRIPTION OF MATERIAL		GRAPHIC LOG		DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD		SAMPLES		STANDARD PENETRATION RESISTANCE			
										(ASTM D 1586) \blacktriangle N-VALUE (BLOWS PER FOOT)			
PL		LL		WATER CONTENT, %		10 20 30 40 50							
5	Medium stiff to stiff, brown and gray, silty CLAY - (CL) trace sand with sand		*	HA1									
10			*	HA2									
15			6-5-6	SS3									
20			2-3-4	SS4									
25			111	ST1									
30			2-2-3	SS5									
35	Medium dense, tan, silty SAND - SM		6-11-15	SS6									
40	Boring terminated at 20 feet.												
45													
50													
GROUNDWATER DATA				DRILLING DATA				Drawn by: BDE		Checked by:		App'vd. by:	
<input checked="" type="checkbox"/> FREE WATER NOT ENCOUNTERED DURING DRILLING				<input type="checkbox"/> AUGER <u>3 3/4</u> HOLLOW STEM WASHBORING FROM _____ FEET <input type="checkbox"/> MH DRILLER <u>MM</u> LOGGER <u>D50</u> DRILL RIG HAMMER TYPE <u>Auto</u>				Date: 10/6/14		Date:		Date:	
Shelby County DOC- Covered Walkway Pruett Architects													
LOG OF BORING: B-6													
Project No. J023685.01													

REMARKS: *Upper 5 feet hand augered due to utilities

BORING LOG: TERMS AND SYMBOLS

GENERAL NOTES

- Information on each boring log is a compilation of subsurface conditions based on soil or rock classifications obtained from the field as well as from laboratory testing of samples. The strata lines on the logs may be approximate or the transition between the strata may be gradual rather than distinct. Water level measurements refer only to those observed at the times and places indicated, and may vary with time, geologic condition or construction activity.
- Relative composition and Unified Soil Classification designations are based on visual estimates and are approximate only. If laboratory tests were performed to classify the soil, the unified designation is shown in parenthesis.
- Value given in Unit Dry Weight/SPT Column is either a unit dry weight in pounds per cubic foot, if adjacent to a ST sample designation, or blows per 6-inch increment if adjacent to a SS sample designation.

ABBREVIATIONS

- UU/2 Shear Strength from Unconsolidated – Undrained Triaxial Test (ASTM D2850)
 QU/2 Shear Strength from Unconfined Compression Test (ASTM D2166)
 SV Shear Strength from Field Vane (ASTM D2573)
 PL Plastic Limit (ASTM D4318)
 LL Liquid Limit (ASTM D4318)

LEGEND

CS	Continuous Sampler
GB	Grab Sample Taken From Auger Cuttings Or Wash Water Return
NX 100 42	NX Rock Core with Percent Recovery/R.Q.D. Given In Adjacent Column
PST	Three Inch Diameter Piston Tube Sample
SS	Split Spoon Sample (Standard Penetration Test)
ST	Three Inch Diameter Shelby Tube Sample
*	Sample Not Recovered
SV	Field Vane Test

SPLIT – BARREL SAMPLER DRIVING RECORD

Blow Per Foot (N-Value)

	Description
25.....	25 blows drove sampler 12 inches after initial 6 inches of seating.
75/10".....	75 blows drove sampler 10 inches after initial 6 inches of seating.
50/S3".....	50 blows drove sampler 3 inches during initial 6 inch seating interval.

- NOTES: 1. To avoid damage to sampling tools, driving is limited to 50 blows during any six inch interval.
 2. N-Value (Blow Count) is the standard penetration resistance based on the total number of blows, using a 140-lb hammer with 30-inch free fall, required to drive a split spoon the last two of three, 6-inch drive increments. (Example: 4/7/9, N = 7 + 9 = 16). Values are shown as a summation on grid plot and may be shown as 4/7/9 in Unit Dry Weight – SPT column.

RELATIVE COMPOSITION

Trace.....0-10 %
 With/Some.....11-35 %
 Soil modifier such..... > 35 %
 As silty, clayey, sandy, etc.

DENSITY OF GRANULAR SOILS

Descriptive Term: **N-Value**
 Very Loose.....0 - 4
 Loose.....5 - 10
 Medium Dense.....11 - 30
 Dense.....31 - 50
 Very Dense.....> 50

STRENGTH OF COHESIVE SOILS

Consistency	Undrained Shear Strength Tons Per Sq. Ft.	Field Test	Approximate N-Value Range
Very Soft.....	less than 0.12	Thumb will penetrate soil more than 1" ..	0 - 1
Soft.....	0.13 to 0.25	Thumb will penetrate soil about 1" ..	2 - 4
Medium Stiff.....	0.26 to 0.50	Thumb will penetrate soil about ¼" ..	5 - 8
Stiff.....	0.51 to 1.00	Thumb hardly indents soil.....	9 - 15
Very Stiff.....	1.01 to 2.00	Thumb will not indent soil, but readily indented with thumbnail.....	16 - 30
Hard.....	greater than 2.00	Thumbnail will not indent soil.....	> 30

SOIL GRAIN SIZE

U.S. STANDARD SIEVE

12"		3"		¾"		4		10		40		200			
BOULDERS	COBBLES	GRAVEL				SAND				SILT	CLAY				
		COARSE		FINE		COARSE		MEDIUM FINE							
300	76.2	19.1	4.76	2.00	0.42	0.074	0.002								

SOIL GRAIN SIZE IN MILLIMETERS

SOIL STRUCTURE

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Calcareous – Having appreciable quantities of carbonate.
 Fissured – Containing shrinkage or relief cracks, often filled with sand or silt; usually more or less vertical.
 Slickensided – Having planes of weakness that appear slick and glossy. The degree of slickensidedness depends upon the spacing of slickensides and the ease of breaking along those planes.
 Layer -- Inclusion greater than 3 inches thick.
 Seam – Inclusion 1/8 inch to 3 inches thick extending through the sample</p> | <p>Parting – Inclusion less than 1/8 inch thick.
 Pocket – Inclusion of material of different texture that is smaller than the diameter of the sample.
 Interlayered – Soil samples composed of alternating layers of different soil types.
 Intermixed – Soil samples composed of pockets of different soil types and a layered or laminated structure is not evident.
 Laminated – Soil sample composed of alternating partings or seams of different soil type.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		SYM BOL	DESCRIPTION			
Coarse-Grained Soils (More than 50% Larger than No. 200 Sieve Size)	Gravel and Gravelly Soils	Clean Gravels Little or no Fines	GW GP	Well-Graded Gravel, Gravel-Sand Mixture Poorly Graded Gravel, Gravel-Sand Mixture		
		Gravels with Appreciable Fines	GM GC	Silty Gravel, Gravel-Sand-Silt Mixture Clayey-Gravel, Gravel-Sand-Clay Mixture		
		Clean Sands Little or no Fines	SW SP	Well-Graded Sand, Gravelly Sand Poorly Graded Sand, Gravelly Sand		
	Sand and Sandy Soils	Sands with Appreciable Fines	Sands with Appreciable Fines	SM SC	Silty Sand, Sand-Silt Mixture Clayey Sand, Sand-Clay Mixture	
			Silt and Silty Soils	Liquid Limit Less Than 50	ML CL OL	Silt, Clayey Silt, Silty or Clayey Very Fine Sand, Slight Plasticity Clay, Sandy Clay, Silty Clay, Low to Medium Plasticity Organic Silts, or Silty Clays of Low Plasticity
				Liquid Limit More Than 50	MH CH OH	Silt, Fine Sandy or Silt Soil with High Plasticity Clay, High Plasticity Organic Clay of Medium to High Plasticity
Highly Organic Soils		PT	Peat, Humus, Swamp Soil			

PLASTICITY CHART

Plasticity Index (PI) vs. Liquid Limit (LL) and Relative Plasticity

Nonplastic Cannot Roll Into Ball
Trace Plasticity Barely Roll Into Ball
Medium Plastic Can be Rolled Into Ball
Highly Plastic No Rupture by Kneading

VISUAL DESCRIPTION CRITERIA*

TABLE 1: CRITERIA FOR DESCRIBING ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular	Particles are similar to angular description but have rounded edges
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges
Rounded	Particles have smoothly curved sides and no edges

TABLE 2: CRITERIA FOR DESCRIBING PARTICLE SHAPE

Description	Criteria
Flat	Particles with width/thickness X3
Elongated	Particles with length/width X3
Flat and Elongated	Particles meet criteria for both flat and elongated

TABLE 3: CRITERIA FOR DESCRIBING MOISTURE CONDITION

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp, but no visible water
Wet	Visible free water, usually soil is below the water table

TABLE 4: CRITERIA FOR DESCRIBING REACTION WITH HCL

Description	Criteria
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming rapidly

TABLE 6: CRITERIA FOR DESCRIBING CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

*NOTES: 1. Tables adapted from ASTM D2488 "Description and Identification of Soils" (Visual-Manual Procedure)

2. Tables 5, 7 and 11 incorporated into other information on this plate.

TABLE 8: CRITERIA FOR DESCRIBING DRY STRENGTH

Description	Criteria
None	The dry specimen crumbles into powder with mere pressure of handling
Low	The dry specimen crumbles into powder with some finger pressure
Medium	The dry specimen breaks into pieces or crumbles with considerable finger pressure
High	The dry specimen cannot be broken with finger pressure. Specimen will break into pieces between thumb and a hard surface.
Very High	The dry specimen cannot be broken between the thumb and a hard surface

TABLE 9: CRITERIA FOR DESCRIBING DILATANCY

Description	Criteria
None	No visible change in the specimen
Slow	Water appears slowly on the surface of the specimen during shaking and does not disappear or disappears slowly upon squeezing.
Rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing.

TABLE 10: CRITERIA FOR DESCRIBING TOUGHNESS

Description	Criteria
Low	Only slight pressure is required to roll the thread near the plastic limit. The thread and the lump are weak and soft.
Medium	Medium pressure is required to roll the thread to near the plastic limit. The thread and the lump have medium stiffness
High	Considerable pressure is required to roll the thread to near the plastic limit. The thread and the lump have very high stiffness

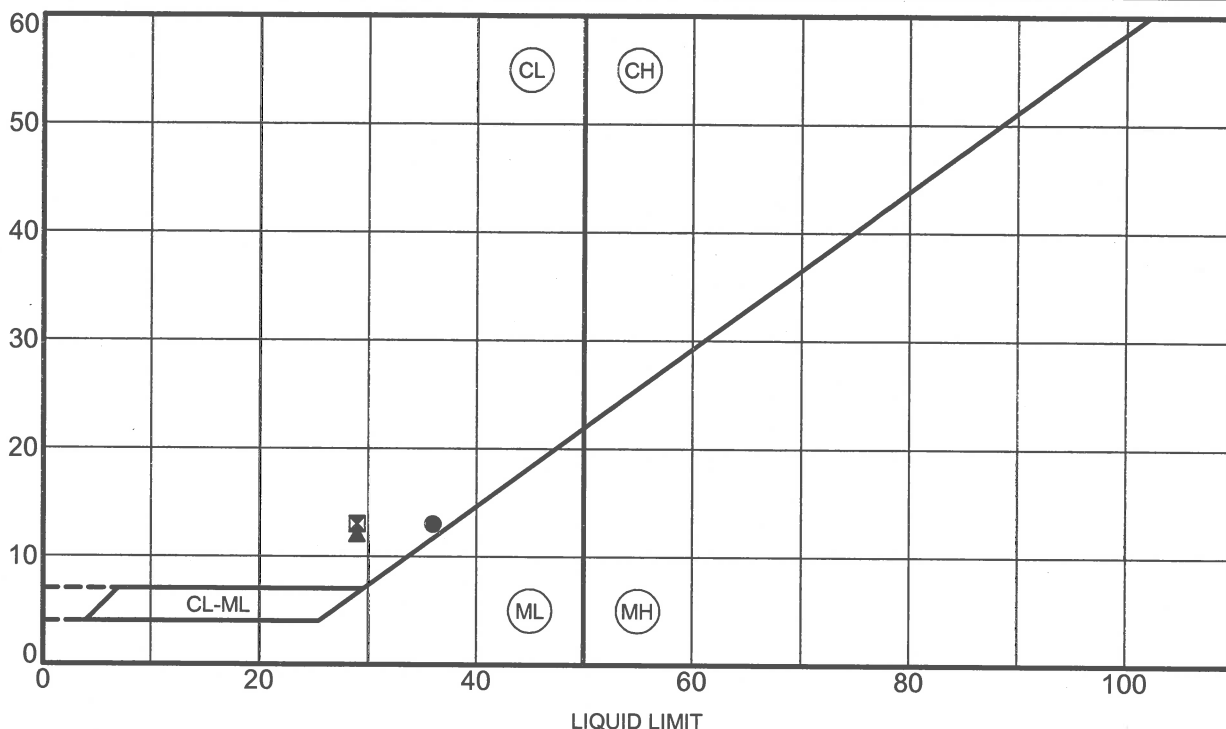
TABLE 12: IDENTIFICATION OF INORGANIC FINE-GRAINED SOILS FROM MANUAL TESTS

Soil Symbol	Dry Strength	Dilatancy	Toughness
ML	None to low	Slow to rapid	Low or thread cannot be formed
CL	Medium to high	None to slow	Medium
MH	Low to medium	None to slow	Low to medium
CH	High to very high	none	High

APPENDIX C

LABORATORY TEST RESULTS

P L A S T I C I T Y
I N D E X

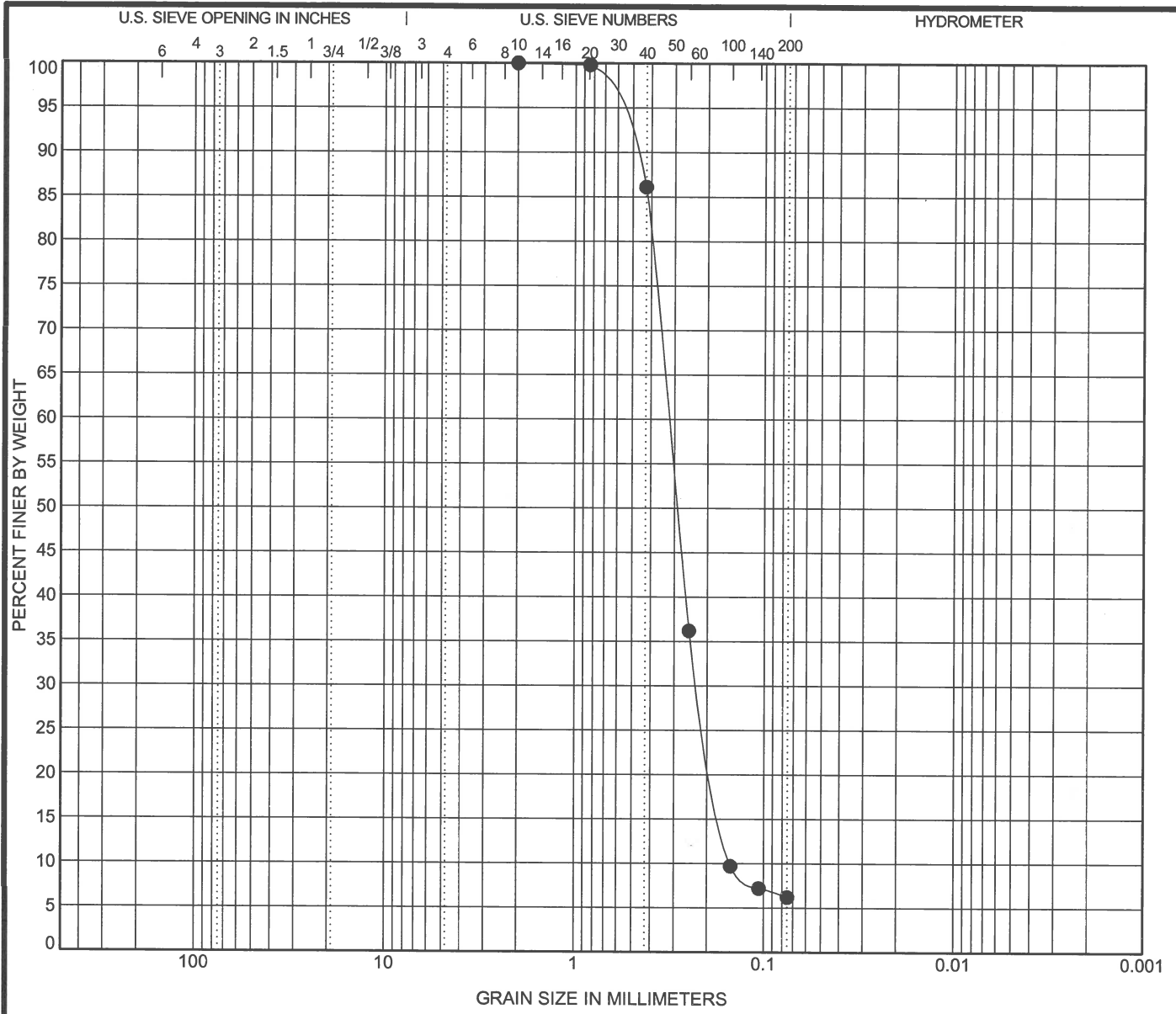


Specimen Identification	LL	PL	PI	Fines	Classification
● B-1	7.0	36	23	13	LEAN CLAY(CL)
☒ B-4	10.0	29	16	13	LEAN CLAY(CL)
▲ B-6	10.0	29	17	12	LEAN CLAY(CL)

US ATTERBERG LIMITS J023685.01.GPJ US LAB.GDT 10/14/14



ATTERBERG LIMITS RESULTS
 Shelby County DOC- Covered Walkway
 Pruett Architects
 J023685.01



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● B-5 18.5	POORLY GRADED SAND WITH SILT(SP-SM)				1.01	2.13

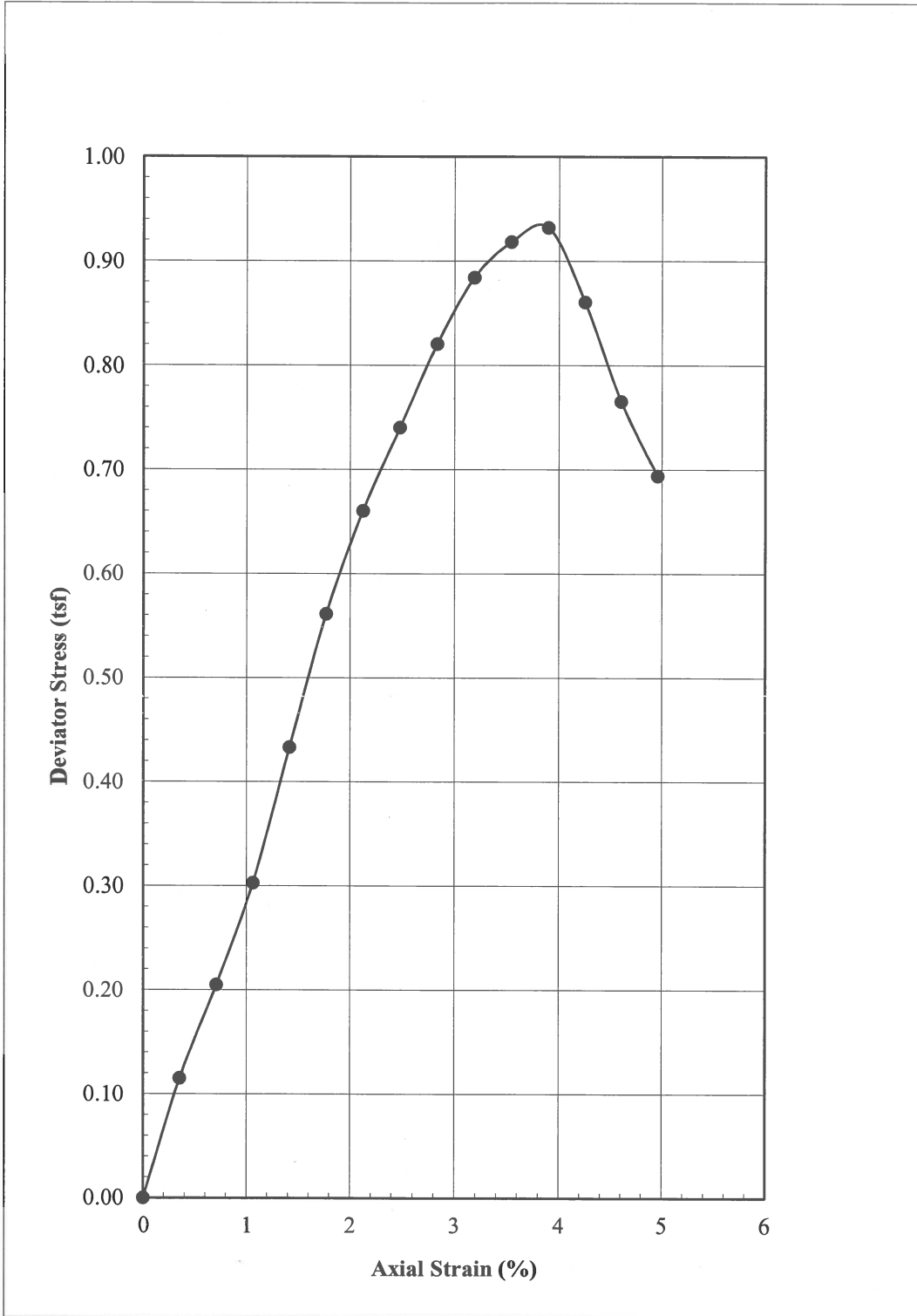
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-5 18.5	2	0.322	0.222	0.151	0.0	93.8	6.2	

US GRAIN SIZE J023685.01.GPJ US LAB.GDT. 10/14/14



GEOTECHNOLOGY
FROM THE GROUND UP

GRAIN SIZE DISTRIBUTION
Shelby County DOC- Covered Walkway
Pruett Architects
J023685.01



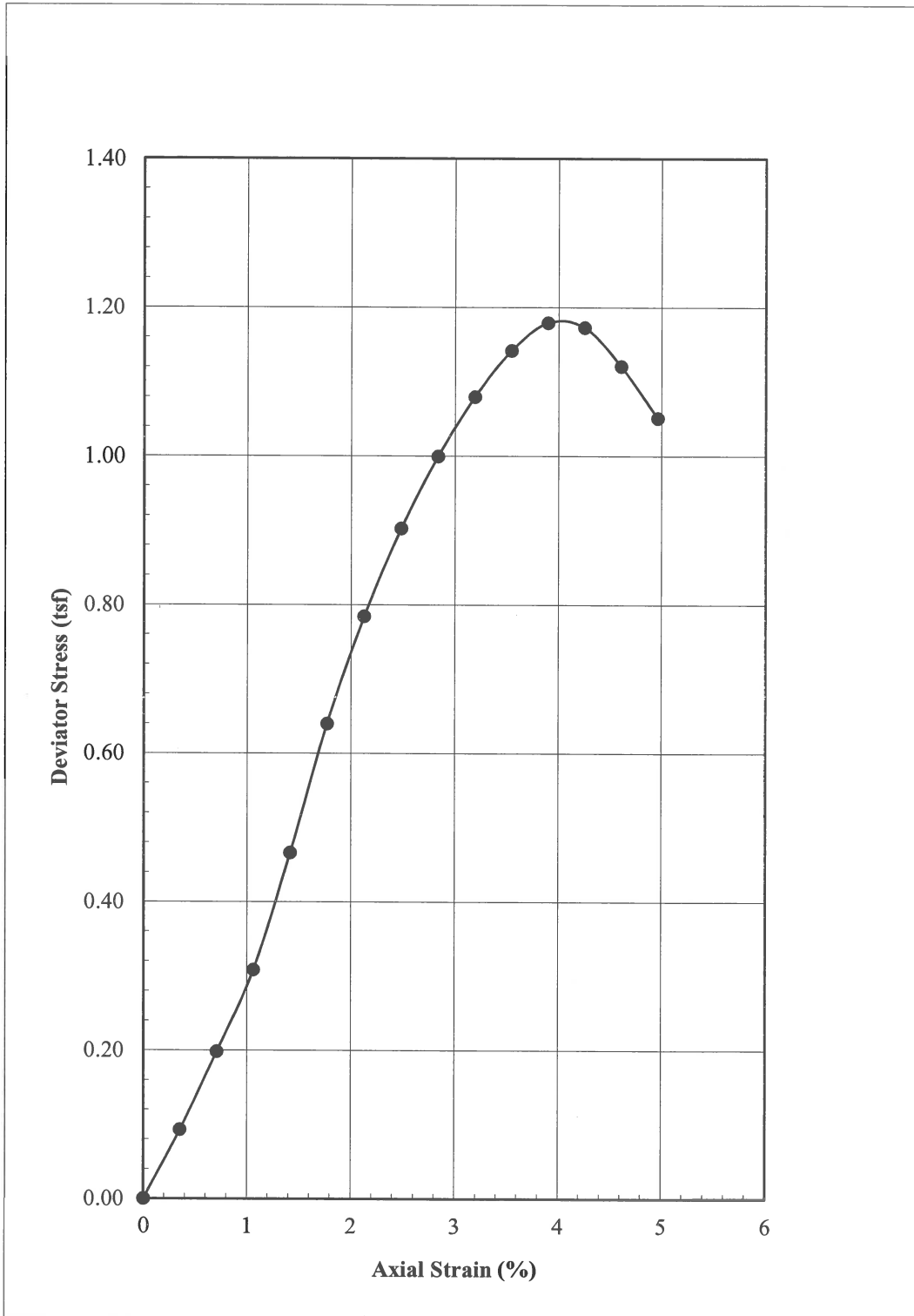
UNCONFINED COMPRESSION TEST

ASTM D 2166

Project No.: J023685.01

Boring: B-1

Sample: ST-4 - Depth: 7 ft.



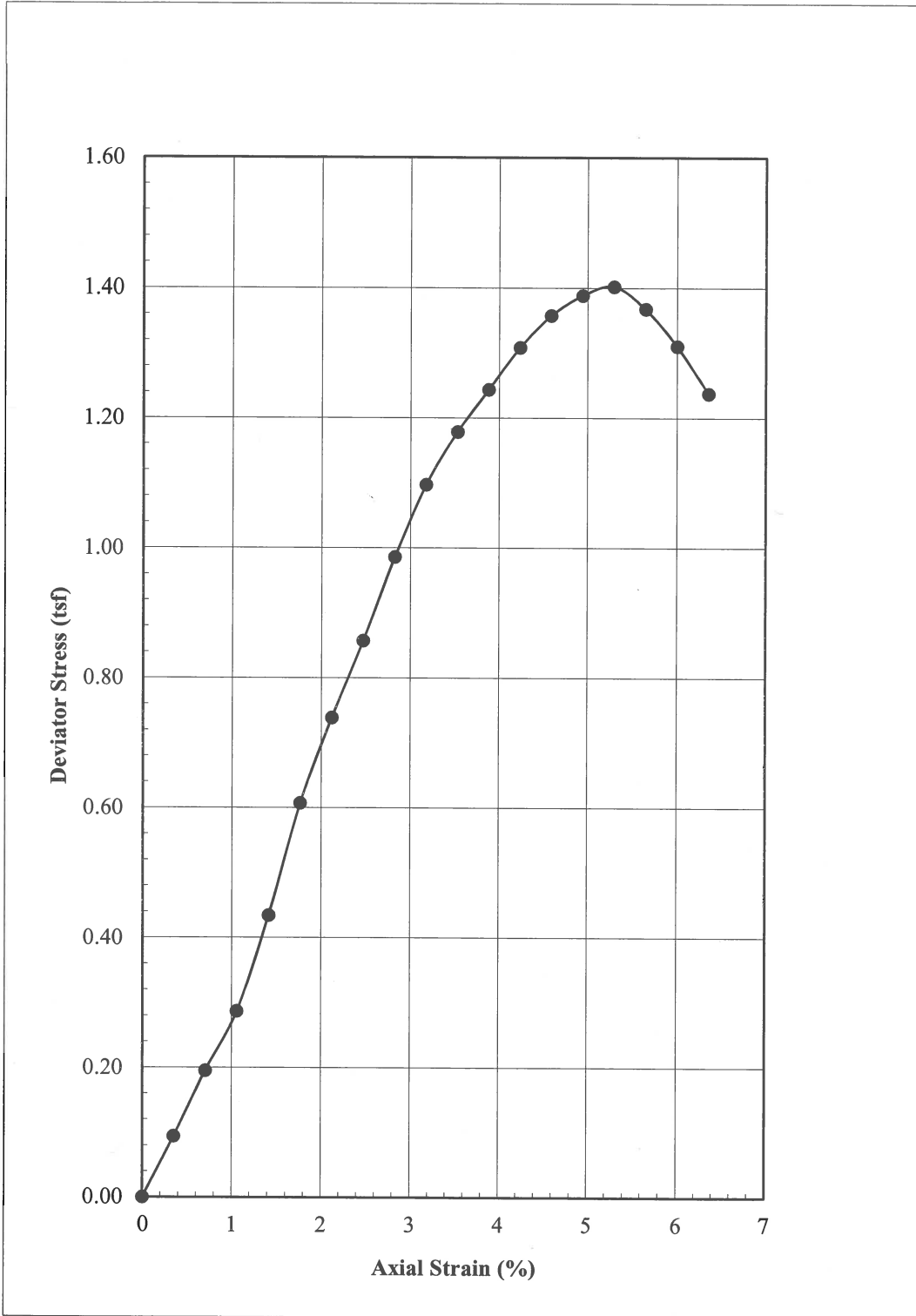
UNCONFINED COMPRESSION TEST

ASTM D 2166

Project No.: J023685.01

Boring: B-4

Sample: ST-1 - Depth: 10 ft.



UNCONFINED COMPRESSION TEST

ASTM D 2166

Project No.: J023685.01

Boring: B-6

Sample: ST-1 - Depth: 10 ft.

SECTION 02 41 19
SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Demolition of light pole standard bases above and below grade within footprint of walkway canopy and selective demolition of existing concrete sidewalks for drilled pier borings through existing concrete pavements and sidewalks. All demolition shall include the removal of those demolished materials from the site inclusive of excavated earth material from pier borings and their proper disposal with the exception of items that are to be retained and properly stored for return to the Owner. Work also includes removal of light pole standards within the footprint of the new walkway canopy and on site temporary storage of light pole standards for return to Owner in good working condition.

1.2 RELATED SECTIONS

A. Section 01 11 13 “Summary of Work”

1.3 QUALITY ASSURANCE

- A. Contractor Qualifications: Minimum of five years experience in this type of demolition.
- B. Meet the requirements of the local regulatory agencies.
- C. Permit for transporting and disposal of debris.

1.4 JOB CONDITIONS

- A. Protection:
 - 1. Erect barriers, fences, guard rails, enclosures, chutes, dust barriers and shoring to protect personnel, property, structures, and utilities remaining intact.
 - 2. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Except where noted otherwise, maintain possession of materials being demolished. Immediately remove these materials from site.
- B. Carefully remove, store, and protect for re-installation all materials and equipment that are noted on drawings to be relocated or re-used. Repair or replace using matching materials of equal quality, and at no cost to the Owner, all existing materials and construction not designated for removal that become damaged.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Demolish designated materials in an orderly and careful manner. Examine the site and building elements

shown to be removed and verify the demolition requirements with the Architect prior to beginning the work.

B. Carefully verify all dimensions, grades, subgrade utility locations and adjacent existing building footing locations prior to beginning any excavations. Once excavations are begun carefully monitor excavation and drilling procedures to limit potential damage to any underground utilities and adjacent building foundation walls to the maximum extent possible.

3.2 PREPARATION

A. The facility will be occupied during construction. Schedule times for operation of excessively loud or prolonged use of noisy or dust producing equipment with the Owner. Erect and maintain protective safety barriers at all times between building occupants and construction zones.

B. Erect and maintain dustproof partitions capable of preventing the spread of dust, fumes, and smoke to occupied portions of the building. Upon completion of the work, remove partitions and repair damaged surfaces to match adjacent existing surfaces.

3.3 DEMOLITION REQUIREMENTS

A. Perform demolition in accordance with the requirements of applicable authorities having jurisdiction.

B. Repair all demolition performed in excess of that required, at no cost to the Owner.

C. Remove only non-structural elements. Do not cut or alter structural elements without specific authorization from the Architect.

D. Perform all concrete and masonry cutting using power-driven saws to achieve straight, even surfaces. Power impact tools are prohibited from use.

E. Burning of materials on site is not permitted.

F. 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.

G. Carry out demolition work in a manner that will cause as little inconvenience as possible to adjacent occupied building areas and adjacent building construction.

H. Remove demolished materials, tools, and equipment from site upon completion of work. Leave site in a condition acceptable to the Owner.

I. Provide for uninterrupted temporary utility services if necessary to avoid disruption of operations at the facility (Interior and Exterior). Note that the activities of this facility operate on a 24/7 basis and may not be without utility service at any time. Schedule all work in advance with the Owner.

J. Prior to new construction, final completion of demolition work, all damaged conditions revealed after demolition materials are removed shall be repaired and made whole prior to installation of any new roofing construction materials.

3.4 CUTTING AND DRILLING

A. Perform cutting with hand tools or with small power-driven tools. Cut holes and slots neatly to size required with the minimum disturbance to adjacent work.

B. Where required, cut round holes in concrete slabs and masonry walls with core drills of required sizes. Saw cut rectangular holes with power-driven tools.

C. Cover openings temporarily when not in use and patch openings as soon as new work is in place.

END OF SECTION

Section 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

1. Footings.
2. Slabs-on-grade..

1.1 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.2 ACTION SUBMITTALS

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

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

1.1 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer, installer and testing agency.

B. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Form materials and form-release agents.
4. Steel reinforcement and accessories.
5. Curing compounds.
6. Bonding agents.
7. Semirigid joint filler.

8. Joint-filler strips.

9. Repair materials.

C. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

1. Aggregates.

D. Field quality-control reports.

1.1 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.

2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

D. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete,"

2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.1 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Steel Bar Mats: ASTM A 184/A 184M, fabricated from ASTM A 615/A 615M, Grade 60, deformed bars, assembled with clips.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

2.1 REINFORCEMENT ACCESSORIES

2.2 Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I, gray. Supplement with the following:

A.1.a. Fly Ash: ASTM C 618, Class F or C.

B. Normal-Weight Aggregates: ASTM C 33, coarse aggregate or better, graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 1 inch nominal for footings and foundations, 3/4 inch nominal for walls, slabs, beams and columns.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.1 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.1 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to

the following:

- D.1.a. [ChemMasters, Inc.](#)
- D.1.b. [L&M Construction Chemicals, Inc.](#)
- D.1.c. Symons by Dayton Superior.
- D.1.d. [W.R. Meadows, Inc.](#)

E. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A, certified by curing compound manufacturer to not interfere with bonding of floor covering.

1. [Manufacturers](#): Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- E.1.a. [ChemMasters, Inc.](#)
- E.1.b. [L&M Construction Chemicals, Inc.](#)
- E.1.c. [Symons by Dayton Superior.](#)
- E.1.d. [W.R. Meadows, Inc.](#)

2.1 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or [ASTM D 1752, cork or self-expanding cork].

2.1 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 30 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.

2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

2.1 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.

2. Maximum Water-Cementitious Materials Ratio: 0.48.
 3. Slump Limit: 4 inches, plus or minus 1 inch.
 4. Air Content: 2 to 4 percent, plus or minus 1 percent at point of delivery for 1 inch nominal maximum aggregate size.
- B. Slabs-on-Grade: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 3000 psi at 28 days.
 2. Maximum Water-Cementitious Materials Ratio: 0.45.
 3. Minimum Cementitious Materials Content: 490 lb/cu. yd..
 4. Slump Limit: 4 inches, plus or minus 1 inch.
 5. Air Content: Do not air entrain concrete for trowel-finished interior floors. Do not allow air content of trowel-finished floors to exceed 3 percent.

2.1 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.2 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.
1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1- 1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.1 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and

support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D.Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E.Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.1 JOINTS

A.General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B.Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

1.Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.

2.Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.

3.*Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.*

C.Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1.Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

2.Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D.Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1.Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.

2.Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

3.1 CONCRETE PLACEMENT

A.Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B.Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C.Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1.Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

E. Hot-Weather Placement: Comply with ACI 301 and as follows:

1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.1 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber- bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

3.1 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

3.1 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot

temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

D.1.a. Water.

D.1.b. Continuous water-fog spray.

D.1.c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

D.2.a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.

D.2.b. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

D.3.a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.1 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a special inspector to perform special inspections and prepare reports.

B. Contractor shall engage a qualified testing and inspecting agency to perform concrete tests and to submit reports.

C.Special Inspections:

- 1.Steel reinforcement placement.
- 2.Steel reinforcement welding.
- 3.Verification of use of required design mixture.
- 4.Concrete placement, including conveying and depositing.
- 5.Curing procedures and maintenance of curing temperature.
- 6.Verification of concrete strength before removal of shores and forms from beams and slabs.

D.Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

1.Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

D.1.a.When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2.Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.

3.Air Content: ASTM C 231, pressure method, for normal-weight concrete;one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

4.Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.

5.Compression Test Specimens: ASTM C 31/C 31M.

D.5.a.Cast and laboratory cure one set of five standard cylinder specimens for each composite sample.

6.Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.

D.6.a.A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

7.When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.

8.Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

9.Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

10. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

11. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.

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

13. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION

Section 05 12 00

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Structural steel.
2. Grout.

B. Related Requirements:

1. Section 05 31 00 "Steel Decking" for field installation of shear connectors through deck.
2. Section 09 90 00 "Painting and Coating" for surface-preparation and priming requirements.

1.1 DEFINITIONS

A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.2 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.1 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment Drawings.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts.

Identify pretensioned and slip-critical, high-strength bolted connections.

1.1 INFORMATIONAL SUBMITTALS

A. Qualification Data: For installer and fabricator.

B. Welding certificates.

C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.

D. Mill test reports for structural steel, including chemical and physical properties.

E. Product Test Reports: For the following:

1. Bolts, nuts, and washers including mechanical properties and chemical analysis.

2. Shop primers.

3. Nonshrink grout.

F. Source quality-control reports.

1.1 QUALITY ASSURANCE

A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD, or is accredited by the IAS Fabricator Inspection Program for Structural Steel (AC 172).

B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category ACSE or Category CSE.

C. Welding Qualifications: Qualify procedures and personnel according to AWS

D1.1/D1.1M, "Structural Welding Code - Steel."

• Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8/D1.8M. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.

D. Comply with applicable provisions of the following specifications and documents:

• AISC 303.

• AISC 360.

• RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.1 DELIVERY, STORAGE, AND HANDLING

2 Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

2.1 Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

3 Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

3.1 Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.

3.2 Clean and relubricate bolts and nuts that become dry or rusty before use.

3.3 Comply with manufacturers' written recommendations for cleaning and

lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

PART 2 - PRODUCTS

1. STRUCTURAL-STEEL MATERIALS

A. Channels, Angles, M, S-Shapes: ASTM A 36/A 36M.

B. Plate and Bar: ASTM A 36/A 36M.

C. Cold-Formed Hollow Structural Sections: ASTM A 500/A 500M, Grade B, structural tubing.

D. Corrosion-Resisting, Cold-Formed Hollow Structural Sections: ASTM A 847/A 847M, structural tubing.

E. Steel Pipe: ASTM A 53/A 53M, Type E or Type S, Grade B.

- Weight Class: Standard, Extra strong, Double-extra strong.

- Finish: Black except where indicated to be galvanized.

F. Welding Electrodes: Comply with AWS requirements.

1. BOLTS, CONNECTORS, AND ANCHORS

A. Zinc-Coated High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade DH heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers.

1. Finish: Hot-dip or mechanically deposited zinc coating.

2. Direct-Tension Indicators: ASTM F 959, Type 325, compressible-washer type with mechanically deposited zinc coating finish.

B. Headed Anchor Rods: ASTM F 1554, Grade 36, straight.

1. Nuts: ASTM A 563 heavy-hex carbon steel.

2. Plate Washers: ASTM A 36/A 36M carbon steel.

3. Washers: ASTM F 436, Type 1, hardened carbon steel.

4. Finish: Plain.

1. PRIMER

A. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.

2. GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

3.FABRICATION

A.Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.

- 1.Mark and match-mark materials for field assembly.
- 2.Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.

B.Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.

- 1.Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.

C.Bolt Holes: Cut, drill or punch standard bolt holes perpendicular to metal surfaces.

D.Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

E.Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 1, "Solvent Cleaning," SSPC-SP 2, "Hand Tool Cleaning," or SSPC-SP 3, "Power Tool Cleaning."

F.Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.

- 1.Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
- 2.Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
- 3.Weld threaded nuts to framing and other specialty items indicated to receive other work.

1.SHOP CONNECTIONS

A.Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

- 1.Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

1.SHOP PRIMING

A.Shop prime steel surfaces except the following:

- 1.Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
- 2.Surfaces to be field welded.
- 3.Surfaces of high-strength bolted, slip-critical connections.
- 4.Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
- 5.Galvanized surfaces.

B.Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:

- 1.SSPC-SP 2, "Hand Tool Cleaning."
- 2.SSPC-SP 3, "Power Tool Cleaning."

C.Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

D.Painting (Where indicated): Prepare steel and apply a one-coat, nonasphaltic primer complying with SSPC-PS Guide 7.00, "Painting System Guide 7.00: Guide for Selecting One-Coat Shop Painting Systems," to provide a dry film thickness of not less than 1.5 mils.

1.GALVANIZING

A.Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.

- Fill vent and drain holes that are exposed in the finished Work unless they function as weep holes, by plugging with zinc solder and filing off smooth.
- Galvanize lintels and shelf angles attached to structural-steel frame and located in exterior walls.

1.SOURCE QUALITY CONTROL

A.Testing Agency: Owner will engage a qualified testing agency to perform shop tests and inspections.

- 1.Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.

B.Bolted Connections: Inspect and test shop-bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

C.Welded Connections: Visually inspect shop-welded connections according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:

- 1.Liquid Penetrant Inspection: ASTM E 165.
- 2.Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
- 3.Ultrasonic Inspection: ASTM E 164.
- 4.Radiographic Inspection: ASTM E 94.

D.In addition to visual inspection, test and inspect shop-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:

- 1.Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
- 2.Conduct tests according to requirements in AWS D1.1/D1.1M on additional shear connectors if weld fracture occurs on shear connectors already tested.

PART 3 - EXECUTION

1.EXAMINATION

A.Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.

- 1.Prepare a certified survey of existing conditions. Include bearing surfaces, anchor

rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.

B.Proceed with installation only after unsatisfactory conditions have been corrected.

1.PREPARATION

A.Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

1.ERECTION

A.Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.

B.Baseplates, Bearing Plates and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1.Set plates for structural members on wedges, shims, or setting nuts as required.

2.Weld plate washers to top of baseplate.

3.Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.

4.Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

C.Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

D.Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1.Level and plumb individual members of structure.

2.Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.

E.Splice members only where indicated.

F.Do not use thermal cutting during erection unless approved by Engineer. Finish thermally cut sections within smoothness limits in AWS D1.1/D1.1M.

G.Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

1.FIELD CONNECTIONS

A.Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

1.Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

2.Remove backing bars or runoff tabs, back gouge, and grind steel smooth.

3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," for mill material.

1.FIELD QUALITY CONTROL

A.Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:

1. Verify structural-steel materials and inspect steel frame joint details.
2. Verify weld materials and inspect welds.

B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

C. Bolted Connections: Inspect and test bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

D. Welded Connections: Visually inspect field welds according to AWS D1.1/D1.1M.

1. In addition to visual inspection, test and inspect field welds according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:

- Liquid Penetrant Inspection: ASTM E 165.
- Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
- Ultrasonic Inspection: ASTM E 164.
- Radiographic Inspection: ASTM E 94.

1.REPAIRS AND PROTECTION

3 Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780/A 780M.

4 Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

- 4.1 Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.

5 Touchup Painting: Cleaning and touchup painting are specified in Section 09 90 00 "Painting and Coating."

END OF SECTION

Section 05 31 00
STEEL DECKING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Canopy roof deck.

1.1 ACTION SUBMITTALS

A. Product Data: For each type of deck, accessory, and product indicated.

B. Shop Drawings:

1. Submit panel placement drawings showing profiles, material thicknesses, finishes, layout, anchorage, and attachments to structural steel beams.

1.1 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of steel deck.

1.1 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."

B. FM Global Listing: Provide steel roof deck evaluated by FM Global and listed in its "Approval Guide, Building Materials" for Class 1 fire rating and Class 1-90 windstorm ratings.

1.1 DELIVERY, STORAGE, AND HANDLING

A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 ROOF DECK

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. EPIC Metals Corp., Rankine, PA

B. Roof Deck: Before forming, the steel coils shall have received a hot-dip protective coating of zinc conforming to ASTM A924, class G90, as defined in ASTM A653.

C. Type WP Wideck panels shall have interlocking and vertically self-aligning sidelaps that present a flush appearance with tight fitting joints from the underside.

D. The entire bottom plate area of type WP Wideck panels shall be embossed to enhance appearance and to disguise spot welds that connect the plates to the hat sections.

E. After forming and welding, the bottom surfaces of type WP Wideck panels shall be prime painted at the factory. Before painting, the galvanized steel shall be chemically cleaned and coated with an acid wash pretreatment primer followed by a coat of manufacturer's standard prime paint and then oven-cured. Compatibility of field-applied finish paint with factory-applied prime paint shall be the responsibility of the painting contractor.

2.1 ACCESSORIES

A. Manufacturer's standard closures shall be provided at all canopy edges.

B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.

C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 minimum diameter.

D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.

E.Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi, not less than 0.0359-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.

F.Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck unless otherwise indicated.

G.Piercing Hanger Tabs: Piercing steel sheet hanger attachment devices for use with floor deck.

H.Galvanizing Repair Paint: ASTM A 780.

I.Repair Paint: Manufacturer's standard rust-inhibitive primer of same color as primer.

PART 3 - EXECUTION

1.EXAMINATION

A.Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

B.Proceed with installation only after unsatisfactory conditions have been corrected.

1.INSTALLATION, GENERAL

A.Before being permanently fastened, Wideck panels shall be placed on the supporting frame and adjusted to final position with ends accurately aligned and adequately bearing on the supporting frame. Consistent coverage shall be maintained so that panels located in adjacent bays will be properly aligned.

B.Cutting of Wideck panels to suit jobsite conditions shall be performed in a neat and workmanlike manner. Note there are no deck openings on this job.

C. Type WP Wideck panels shall be fastened to all supporting members with three $\frac{3}{4}$ " diameter puddle welds per 36" wide panel or alternate fasteners as indicated on the manufacturer's erection drawings.

D.The sidelaps of type WP Wideck panels shall be fastened together by 1 $\frac{1}{2}$ " long seam welds or #12 screws at a maximum of 36" on center or less as indicated on the manufacturer's erection drawings.

E.Construction loads shall not be applied to Wideck panels until after they are permanently fastened to supporting members and sidelaps are attached, and shall not exceed the load-carrying capacity of the panels.

F. Items such as ceilings, light fixtures, conduit, pipe, and ductwork shall not be suspended from Wideck panels without specific approval of the structural engineer.

1.FIELD QUALITY CONTROL

A.Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B.Field welds will be subject to inspection.

C.Testing agency will report inspection results promptly and in writing to Contractor and Architect.

D.Remove and replace work that does not comply with specified requirements.

E.Additional inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

1.PROTECTION

A.Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B.Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on top surface of prime- painted deck immediately after installation, and apply repair paint.

1.Apply repair paint, of same color as adjacent shop-primed deck, to bottom surfaces of deck exposed to view.

2.Wire brushing, cleaning, and repair painting of bottom deck surfaces are included in Section 09 90 00 "Painting and Coating."

C.Repair Painting: Wire brushing, cleaning, and repair painting of rust spots, welds, and abraded areas of both deck surfaces are included in Section 09 90 00 "Painting and Coating."

D.Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

END OF SECTION

Section 07 54 23

MEMBRANE ROOFING SYSTEM

1.0 GENERAL

1.1 REQUIREMENTS

- A. Furnish and install a new weather and watertight --- High Performance KEE Thermoplastic Roofing System on the following:
1045 Mullins Station Road Walkway Canopy Roof Deck
- B. This project application consists of installing approximately 17,500 sq. ft. of a protective membrane roofing system over a structural steel canopy roof deck using an Adhered FiberTite 036 membrane or approved equal as follows: **Ecology Roof Systems-ERS 8000 Membrane** or **Commercial Innovations Inc.- Super Brite KEE membrane**
- C. This specification is constructed around FiberTite Roofing Systems and Seaman Corporation's General Guide Specification as the standard of performance and quality and shall be considered part of these specifications.

1.2 PROJECT SCOPE

- A. Roofing Contractor shall furnish all labor, materials, tools, equipment, supervision and permits necessary to install the new Roof System, including the specified Roof Board material to be installed over the structural roof deck.
- B. The roofing contractor shall inspect the structural roof deck for any defects or workmanship installation anomalies that would prevent the successful installation of the new high performance membrane roof system.
- C. The roofing contractor shall include a unit price in his proposal for the installation of the new Roof System.
- D. Upon the inspection and approval for application of the new Roof System, the roofing contractor shall install a new High Performance Adhered FiberTite 036 including roof related cover/protection boards, special edge flashings, expansion joints, accessories and related metalwork in strict accordance with the contract, drawings and High Performance Membrane Roof System Manufacturer's most current specifications and details.
- E. The roofing contractor shall be an "Authorized Roofing Contractor" of the MRSM in good standing and be fully knowledgeable of all the requirements within the contract documents as well as all job site conditions that could affect their work.
- F. The roofing contractor shall confirm all given information and notify the building owner / owner's representative, prior to bid, of any conflicts that will affect the quality or cost of the proposal.
- G. Any contractor wishing to submit a proposal using an alternative "High Performance"

- roofing system other than the approved manufacturer(s) must submit a pre-qualification request in writing at least fourteen (14) days prior to the bid date justifying in writing that the alternate is of equal quality and performance in ALL RESPECTS to the high performance selected foundation of this specification.
- H. Failure to submit a timely pre-qualification proposal will be grounds for total rejection of the contractor's proposal.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The High Performance Membrane Manufacturer shall be an American owned company with no less than 25 years experience as a commercial roofing manufacturer.
- B. Installer Qualifications: A licensed roofing contractor, authorized by the MRSM with a minimum of five (5) years experience installing the type of roof system specified for this project.
- C. Source Limitations: Obtain all components including roof insulation and/or cover-board, fasteners adhesives and other accessories as required, from the approved MRSM.
- D. The specified membrane roofing system must consist of the materials required and be installed under the following criteria.
1. UL Listing; provide materials bearing Underwriters Laboratories (UL) marking / label on the packaging or containers indicating materials have been produced under UL classification and follow-up services.
 2. FM Listing; provide membrane roofing system and materials that have been evaluated by FM Global (FM) for spread of flame, seam leakage, hail resistance and wind uplift. Identify materials with FM Approved marking / label.
 - i Fire/Windstorm Classification: FM 1-60
 - ii Hail Resistance: SH
- E. Project requiring or subject to FMG Approval shall be defined by a specific RoofNav Assembly Number.
- F. The roofing contractor shall maintain an adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and methods necessary for the proper performance of the work. No allowance will be made for lack of skill on the part of the workers.
- G. Any deviations from contract, drawings and/or specifications must be submitted in writing for approval prior to implementation to the design professional representing the owner and the MRSM for acceptance / approval by both parties.
- H. Upon completion of the roof installation the roofing contractor shall arrange for a quality assurance / warranty inspection by the Technical Service Department of the approved MRSM. Notice of the inspection date and time will be given to the owner /

owner's representative at least 72 hours prior to the inspection taking place.

1.4 REFERENCES

- A. ASTM D6754 Standard Specification for Ketone Ethylene Ester Based Sheet Roofing
- B. ASTM D 751 Test Methods for Coated Fabrics
- C. Seaman Corporation / FiberTite General Guide Specification FTR GS04/08
- D. UL 790 Underwriters Laboratories (UL) - Fire Hazard Classifications
- E. FM 4470 GM Global (FM) - Roof Assembly Classifications
- F. National Roofing Contractors Association (NRCA) - Roofing and Waterproofing Manual

1.5 PERFORMANCE REQUIREMENTS

- A. General Performance: completed high performance membrane roof system and edge flashing shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation or other defects in construction.
- B. Material Compatibility: provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by the MRSM based upon insitu field evidence of the roofing membrane/systems service life cycle greater than 20-years.
- C. Roofing System Design: provide high performance membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist wind uplift pressure calculated according to ASCE-7.
- D. Energy Performance: provide high performance membrane roofing system that is listed on the EPA website as ENERGY STAR qualified and has an initial Solar Reflective Index equal to or greater than 78.

1.6 SUBMITTAL REQUIREMENTS

- A. Prior to mobilization and commencement of work, the roofing contractor shall submit the following:
- B. Shop drawings showing roof layout, construction details to be implemented and identifying materials to be used
- C. Sample of MRSM Commercial Roofing Warranty
- D. Submit a letter from MRSM attesting that the roofing contractor is an authorized roofing contractor of the prescribed roofing material in good standing.
- E. If pre-finished metal is called for, submit a color chart for the pre-finished metal in order for a color selection to be made. Coordinate the installation of the specified structural roof deck edge flashing with the installation subcontractor and

manufacturer of the structural roof deck.

- F. Submit an assembly letter and/or an approved Pre-Installation Notice / Request for Warranty from the high performance membrane roof system manufacturer certifying compliance with the system requirements described in the Quality Assurance section of this specification.

1.7 **PRODUCTS AND/OR WORK NOT INCLUDED IN THIS SPECIFICATION**

- A. Rough Carpentry, misc. wood nailers.
- B. Structural Steel Roof Deck and related accessories.

1.8 **PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Deliver all materials to the job site in manufacturer's original, unopened containers, with legible labels and in sufficient quantity to allow for continuity of work.
- B. Select and operate material handling equipment in a safe manner, guarding against damage to existing construction or newly applied roofing and conforming to manufacturer's recommendations of handling and storage.
- C. All rolls of membrane shall be stored, lying down, elevated above the roof deck and completely protected from moisture with tarpaulins. (Manufacturer's packaging is not considered adequate for outdoor storage.)
- D. Cover board materials shall be elevated on pallets and fully protected from moisture with tarpaulins. (Manufacturer's packaging is not considered adequate protection from moisture.)
- E. Adhesives and sealants shall be safely stored between 50° F and 80°F prior to use.
- F. Flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow all precautions as outlined in manufacturer's Material Safety Data Sheets.
- G. Materials, having been determined by the owner/owner's representative to be damaged, shall be immediately removed from the construction site and replaced at no cost to the owner.

1.9 **COORDINATION**

- A. Prior to installation of materials, a pre-roofing conference shall be held with the roofing contractor, general contractor, owner/owner's representative(s) and representatives of all trades that may be working on the roof / completed membrane to discuss the specified roofing system, coordinate its proper application and the expectations of all parties involved. The authorized roofing contractor and the owner/owner's representative shall notify all parties a minimum of fourteen days prior to the meeting.

- B. Plan and coordinate the installation of the roofing system with other trades in such a manner to avoid membrane damage, keeping the complete installation weather tight and in accordance with all approved details and warranty requirements.
- C. A Technical Representative of the MRSM shall be available to make recommendations necessary to ensure compliance with project specifications and specification alternatives due to unforeseen job conditions.
- D. Topics of discussion at the pre-construction meeting may include the following:
 - 1. Utility Usage
 - 2. Sanitary Facilities
 - 3. Material Storage Areas
 - 4. Roof loading areas
 - 5. Site Access
 - 6. Roof Access
 - 7. Project security
 - 8. Temporary removal and replacement and/or modification by Owner of all existing obstacles and hazards that prevent the safe installation of the roofing system.
 - 9. Completed Roof Protection
 - 10. Employee parking

1.10 **JOB CONDITIONS**

A. Safety

- 1. Take all necessary precautions regarding worker health and safety when using solvents and adhesives.
- 2. Store flammable liquid and materials away from open sparks, flames and extreme heat.
- 3. Take necessary precautions when using solvents and adhesives near fresh air intakes.
- 4. Comply with all OSHA requirements for construction. It is the roofing contractor's responsibility to comply with all state, federal and local codes, guidelines and safety requirements.
- 5. Daily site cleanup shall be performed to minimize debris and hazardous congestion.
- 6. Roof work involves handling combustible and heavy materials at height, on some occasions directly over other trades working below the roof deck or in cases of occupied buildings, over building occupants. Extreme caution will be utilized

when installing the roof to prevent injury to roofing personnel, other trades, building occupants and to property. Listed below is a partial list of safety requirements, additional requirements exist in order to comply with OSHA and jobsite regulations.

7. Material Safety Data Sheets (MSDS) shall be maintained on the jobsite for any and all roofing materials being stored or installed on the project.
8. Fire suppression equipment will be readily available on the roof top whenever combustible roofing material is being handled. Protect against fire and flame spread at all times.
9. Roofing contractor will establish a safety plan and rooftop evacuation procedures and brief his personnel on appropriate emergency actions.

B. Protection

1. Schedule installation sequence to limit access and utilization of the newly installed membrane for material storage, construction staging, mechanical and/or excessive foot traffic.
2. Provide proper protection on all newly completed roofing to avoid damage to the new roofing system.
3. Traffic should be minimized on a freshly laid roof.
4. Protect building walls, rooftop units, windows and other components during installation.

C. Additional Precautions

1. Adverse weather conditions e.g. extreme temperature, high winds, high humidity and moisture, could have a detrimental effect on adhesives, general production efforts and/or the quality of the finished installation. Contact FTCS for recommendations and acceptable tolerances.
2. Daily production schedules of new roofing shall be limited to only that which can be made 100% watertight at the end of the day, including all flashing and night seals.
3. All surfaces to receive new roof system, including insulation and flashing, shall be free from all dirt, debris and be thoroughly dry.
4. Comply with local EPA requirements as published by Local, State and Federal authorities.
5. All construction debris shall be removed from the construction site and legally dispose of off site.
6. If a condition is discovered that is not covered by the project drawings and specifications notify the general contractor and owner's representative immediately and resolve the conflict. Take appropriate steps to prevent water

intrusion into the roof system until such conflict is resolved and roofing operations are continued.

1.11 WARRANTY

- A. Provide manufacturer's 20 Year System NDL..
- B. Provide contractor's warranty covering leaks caused by material defects and or installation workmanship for a period of two years.

2.0 PRODUCTS

2.1 GENERAL

- A. All roofing system components shall be manufactured or supplied by approved MRSM.
- B. Unless approved otherwise prior to project bid, all roofing components are to be manufactured or supplied through approved MRSM and be included in the warranty coverage.
- C. For purposes of designating type and quality, drawings and specifications are based upon FiberTite Roofing Systems as manufactured and supplied by Seaman Corporation of Wooster, Ohio. For additional information, the roofing contractor shall refer to FiberTite General Guide Specifications.

2.2 FIBERTITE MEMBRANE-KEE-ASTM D 6754-02

- a. FiberTite - nominal 36-mil ketone ethylene ester (KEE) membrane, reinforced with a 5.0-oz yd² knitted polyester fabric as manufactured by Seaman Corporation, under the trade name FiberTite, conforming to the physical properties as outlined in the associated data sheet. FiberTite exceeds all requirements outlined in ASTM D 6754 -02 Standard Specification for Ketone Ethylene Ester (KEE) Sheet Roofing. Membrane color shall be DC196 Off-White
- B. **Ecology Roof Systems-** ERS 8000 membrane
- C. **Commercial Innovations Inc.-**Solar Brite KEE membrane

PHYSICAL PROPERTIES

<u>ASTM D 6754-02</u> <u>Test</u> <u>Method(s)</u>	<u>ASTM D6754</u> <u>Min. Req.</u>	<u>FiberTite</u> <u>Typ. Values</u>
Thickness, mm (in.) <i>ASTM D 751</i>	0.79 (0.031)	.91 (0.036) nom.

Thickness over Fiber mm (in) <i>Optical method (inches)</i>	0.15 (0.006)	0.23 (0.09)
Breaking Strength N (lbf) <i>ASTM D 751 proc. B – strip</i>	1175 (265)	1557 (350)
Elongation at Break % <i>ASTM D 751 - strip</i>	15	18
Tear Strength N (lbf) <i>ASTM D 751 proc. B. tongue tear</i>	335 (75)	445 (100)
Linear Dimensional Change % <i>ASTM D 1204 max %</i>	1.3	0.63
Fabric Adhesion N/m (lbf/in) <i>ASTM D 751</i>	225 (13)	No Peel
Low Temperature Bend <i>ASTM D 2136 (°F)</i>	-30	-30
Retention of Properties after Heat Aging <i>ASTM D 3045 – 176°F/156 days</i>	90 90	90 90
Breaking Strength Strip % Original: Elongation at Break Strip % Original:		
Low Temperature Bend after Heat Aging	-30	-30
Change in Weight after Exposure in Water <i>ASTM D 471 158°F, 166h, one side only, max %</i>	0.0 +6.0	0.0, +3.7
Factory Seam Strength N (lbf) <i>ASTM D 751 Grab Method</i>	1780 (400)	> Fabric Strength
Hydrostatic Resistance Mpa (psi) <i>ASTM D 751</i>	3.5 (500)	4.8 (700)

Static Puncture Resistance <i>ASTM D 5602 (99lbf)</i>	Pass	Pass
Dynamic Puncture Resistance (J) <i>ASTM D 5635</i>	10	20
Accelerated Weathering <i>Practice G 155 / xenon</i>	5,000 hr.	10,000 hr.
Cracking or Crazing at 7x magnification	None	None
Accelerated Weathering <i>Practice G 154 / UVA</i>	5,000 hr.	10,000 hr.
Cracking or Crazing at 7x magnification	None	None
Fungi Resistance: <i>Practice G 21, 28 days</i>		
Sustained Growth	None	None
Fungi Resistance: Discoloration	None	None
Abrasion Test Cycles <i>ASTM D 3389 H-18 wheel / 1,000 g load</i>	1,500	> 1,500
Solar Reflective Index (SRI) <i>Color: DC 196 off white</i>	n/a	98.54

2.3 FLASHING MEMBRANE

A. DC196 Off-White Nominal 36-mil FiberTite membrane shall be used for all flashing requirements to match the field membrane and warranty expectations selected for the roofing system.

2.4 INSULATION

Not Applicable

2.5 APPROVED INSULATION

Not Applicable

2.6 COVER BOARD

A. Cover-board (insulation overlayment) shall be a water resistant gypsum core substrate conforming to the following:

1. FM approved meeting Class A 1-60, for fire and wind.
2. UL Classification: Class A Assembly.
3. Meet requirements of ASTM C 473

B. Approved Cover Board

1. 1/4 in. Securock Gypsum Fiber Roof Board

2.7 VAPOR RETARDER

Not applicable

2.8 ROOF ACCESSORIES

A. Furnish accessories manufactured, marketed or approved by MRSM required to complete the roof installation to manufacturer's specification including (as applicable) but not limited to the items listed below.

1. ADHESIVES; application technique and coverage rates will vary according to substrate and environmental conditions.
 - i FTR-190e Bonding Adhesive - A VOC compliant solvent borne, contact (two sided) bonding adhesive, designed for bonding non-fleece back FiberTite membranes to properly prepared and pre-authorized horizontal and vertical substrates.
2. Not Applicable
3. FTR-101 Sealant; a one-component gun-grade polyurethane sealant to seal flashing termination.
4. Not Applicable
5. Fiber Clad Metal; to fabricate metal flashing, 4' x 10' sheets of 24 gauge hot dipped G-90 steel, or 0.040 thick 3003H14 aluminum, laminated with a 0.020 mil polymeric coating.
6. Not Applicable

7. FTR Non-Reinforced Membrane; field fabrication membrane, 0.060 mil non-reinforced KEE membrane.
8. Not Applicable
9. FTR-Fasteners
 - i FiberTite MAGNUM Series; to secure FiberTite to steel, wood and structural concrete decks.
 - ii FiberTite HD; to secure insulation to steel, wood and structural concrete decks.
10. FTR-MAGNUM Series Barbed Stress Plates; used to anchor membrane
11. FTR-Sand Dollar Insulation Stress Plates; used to secure insulation and/or cover-board to steel, wood and structural concrete decking. Manufactured from high density polyethylene, 3 inch in diameter, designed with a self locking mechanism to secure the head of the FTR fasteners into the plate.
12. FTR-Termination Bar; membrane flashing(s) restraint/termination seals, nominal 1/8 inch x 1 inch x 10' 6060-T5 extruded aluminum bar with pre-punched slots, 8 inch on center.
13. FiberTite Metal Fascia System; two piece "snap-on" pre-formed, architectural metal edge system.

2.9 **WOOD NAILERS**

- A. Wood shall be No. 2 or better construction grade lumber.
- B. Creosote or asphaltic type preservatives are not acceptable.
- C. Minimum top nailer thickness shall be 1 ½ inches nominal.

3.0 **EXECUTION**

3.1 **GENERAL**

- A. The latest manufacturer specifications and installation techniques are to be followed along with the following additional requirements. These specific minimum requirements must be accounted for in the contractors bid / proposal and shall not be altered.
- B. The roofing contractor is responsible for providing a suitable substrate surface for the proper installation of the Membrane Roofing System, roof insulation and specified components.
- C. The roofing contractor shall examine all areas and conditions where by work in this section is to be installed.

- D. Notify the Building Owner / Owner Representative of any and all conditions detrimental to the proper and timely execution of the work. Do not proceed until such conditions have been corrected to the satisfaction of the owner / owner's representative.
- E. Commencement of roofing operations indicates the roofing contractor's acceptance of the roofing substrate for roof application.

3.2 SUBSTRATE PREPARATION

- A. Surfaces scheduled to receive new membrane roofing shall be free of any standing water, dew, ice, loose debris or any other contaminate that could impair the quality of the installation.
- B. Substrate shall be smooth, clean and free of sharp edges and or projections and obvious depressions that would interfere with the installation of a high quality high performance
- C. Examine all the areas and conditions where by work in this section is to be installed. Correct any and all conditions detrimental to the proper and timely execution of the work. Do not proceed until such conditions have been corrected to the satisfaction of the owner / owner's representative.
- D. Remove all waste materials and legally dispose off-site.
- E. Install only enough roofing to accommodate the days work and ensure the exposed area can be made 100% watertight at the end of the day or first sign of inclement weather.
- F. Damaged or unsatisfactory decking shall be repaired and/or replaced with appropriate materials according to standard industry regulations and practices.
- G. Repair any depressions and/or areas where reinforcing has become exposed
- H. Cracks and or camber differentials greater than 3/16 inch shall be repaired using an appropriate cementitious grout or fill, and feathered to promote a smooth transition.
- I. Joints between pre-stressed panel units and over bulb-tees shall be taped, stripped or grouted with an appropriate cementitious fill.
- J. All surface irregularities shall be leveled to ensure complete contact with the decking for insulation bonded in hot asphalt or approved adhesives.

3.3 INSTALLATION - GENERAL

- A. Perform all related work specified in other sections of the contract documents necessary for the proper installation of the high performance high performance.
- B. Ensure mechanical fasteners do not penetrate items located within or secured to the bottom of the deck: i.e. electrical conduit, post tension cables or other miscellaneous items.

- C. Outside ambient air temperatures must be 40°F and rising during the use of any and all adhesives.

3.4 **INSTALLATION OF WOOD NAILERS**

- A. Install treated lumber at the same heights as insulation layer or adjacent construction ± 1/4 inch Continuous treated wood nailers are to be installed at all perimeters, around roof projections and penetrations as shown in approved details.
- B. Where wood nailers are installed directly on the substrate, the substrate shall be carefully examined to confirm that the entire area provides a suitable fastening surface. All defects shall be repaired by the appropriate trade prior to installation.
- C. Nailers shall be at least 3½ inches wide and 1 1/2 inches high and installed and anchored in such a manner to resist a force of 250 lbs. per linear foot of wood blocking in any direction.

3.5 **INSTALLATION OF INSULATION AND/OR COVERBOARD**

- A. Roof insulation and/or coverboard shall be installed where by the long dimension of the board(s) run in parallel alignment and the short dimensions are staggered.
- B. Insulation and/or coverboard shall be installed with minimum joint dimensions and shall be tightly butted where possible. Maximum joint widths shall be 3/8 inch. Damaged corners shall be cut out and replaced with an insulation piece a minimum of 12 inch x 12 inch pieces which are cut from larger panels and are smaller than one square foot are not acceptable.
- C. Install no more than can be covered during the same working day.
- D. When a cover board and/or multiple layers of installation are installed each layer shall be offset from the previous layer a minimum of 12 inch on center.
- E. At the end of each working day, provide a watertight cover on all unused insulation as to avoid moisture penetration

3.6 **INSULATION SECUREMENT**

Not Applicable

3.7 **COVER BOARD SECUREMENT**

- A. Coverboard shall be applied to and installed over properly prepared and pre-approved substrates, free of any debris, dirt, grease, oil or moisture.
- B. FTR-601
 - 1. FTR-601 adhesive shall be applied only to properly prepared and pre-approved

substrates, free of any debris, dirt, grease, oil or moisture.

2. The minimum product temperature at time of application shall be 70°F.
3. FTR-601 adhesive shall not be applied when surface or ambient temperatures are below 40° or above 110° F.
4. Coverboard shall be fully bonded to the substrate with a maximum board size of 4 feet x 8 feet.
5. Coverboard shall be set into a continuous 1/2 inch bead of adhesive at a minimum rate of one linear foot of adhesive for every one square foot of coverboard.
6. FTR-601 adhesive rates are to be increased in roof perimeter and corner zones according to specific project requirements and manufacturer's design recommendations.
7. Place the coverboards onto the adhesive beads and walk on the boards, spreading the adhesive for maximum contact.
8. A second walking will be required after ten (10) minutes to ensure maximum contact and bond strength.

3.8 MEMBRANE INSTALLATION

A. Quality Control

1. It will be the responsibility of the roofing contractor to initiate and maintain a QC program to govern all aspects of the installation of the Membrane Roofing System.
2. The project foreman and or supervisor will be responsible for the daily execution of the QC program which will include but is not limited to the supervision, inspection and probing of all heat welding incorporated within the Membrane Roofing System.
3. If inconsistencies in the quality of the application of the composite, membrane and/or welds are found, all work shall cease until corrective actions are taken to ensure the continuity the installation.

B. General

1. Work shall be coordinated to ensure that sequencing of the installation promotes a 100% watertight installation at the end of each day.
2. Restrictions regarding outside ambient air temperature are relative only to the exposure limits of the workers and/or adhesives.
3. When using adhesives outside ambient air temperature shall be above 40°. Curing or drying time of the adhesive will be affected by ambient temperatures and must

be taken into consideration when determining flashing lengths.

4. Humidity can effect the drying time of solvent borne adhesives and/or cause condensation to form on the newly applied adhesive.
5. Moisture may not be present on the adhesive prior to mating or application of Membrane Roofing System.
6. New Membrane Roofing Systems shall only be installed over properly prepared and sound substrates, free from excessive surface roughness, dirt, debris and moisture.

3.9 MEMBRANE SECUREMENT

- A. Position the KEE Roofing Membrane and fold the sheet to allow a workable exposure of the underside of the sheet.
- B. Apply a 100% continuous coat of bonding adhesive to the exposed bottom side of the membrane and a mirrored area of the substrate.
- C. The amount of membrane and substrate that can be coated with adhesive will be determined by application method, ambient temperature, humidity and available manpower.
- D. Adhesive may be applied by spraying and "back" rolling or just rolling. (Do not "dump" adhesive or pour from the cans)
- E. Roller applied adhesive shall utilize a solvent resistant 3/8 inch nap roller, spreading the adhesive to ensure a smooth, even 100% coverage of the substrate and membrane.
- F. Spray applied adhesive must be spread out by roller to ensure a smooth, even 100% coverage of the substrate and membrane with no voids, skips, globs, puddles or similar irregularities. Note: a squeegee can be used to "flatten" or spread globs and puddles of adhesive.
- G. Adhesive coverage should average 100 sq. ft. per gallon of applied adhesive with a 50 sq. ft. per gallon net coverage ($\pm 10\%$) for the membrane and substrate combined.
- H. Allow the adhesive to dry or "cure" to a point of being tacky, but not stringy to the touch on both surfaces. Do not allow adhesive to completely "dry out" on either surface.
- I. When sufficiently cured, carefully maneuver the glued portion of the membrane onto the glued substrate surface, avoiding any wrinkles or air pockets.
- J. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.
- K. Repeat the process for the remaining un-bonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches, ensuring proper shingling of the membrane to shed water along the laps.
- L. No adhesive shall be applied to the lap "seam" areas of the membrane. Contaminated

- areas will inhibit proper welding of the seams requiring a membrane patch
- M. Do not use bad or marginal adhesives.

3.10 **HOT AIR WELDING**

A. General

1. All field seams exceeding 10 feet in length shall be welded with an approved automatic welder.
2. All field seams must be clean and dry prior to initiating any field welding.
3. All welding shall be performed only by qualified personnel to ensure the quality and continuity of the weld.

B. Hand Welding

1. The lap or seam area of the membrane should be intermittently tack welded to hold the membrane in place.
2. Properly hand welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a nominal 1-1/2 inches in width.

C. Automatic Machine Welding

1. Follow all manufacturers' instructions for the safe operation of the automatic welder.
2. Follow local code requirements for electric supply, grounding and surge protection.
3. Properly Automatic Machine welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a nominal 1-1/2 inches in width.

3.11 **INSPECTION**

- A. The job foreman and/or supervisor shall initiate daily inspections of all completed work which shall include, but is not limited to the probing of all field welding with a dull pointed instrument to assure the quality of the application and ensure that any equipment or operator deficiencies are immediately resolved.
- B. Ensure that all aspects of the installation (sheet layout, attachment, welding, flashing details, etc.) are in strict accordance with the most current MRSM Specifications and Details.
- C. Excessive patching of field seams because of inexperienced or poor workmanship will not be accepted at time of FINAL INSPECTION FOR WARRANTY ACCEPTANCE.

3.12 FLASHING

- A. Clean all vents, pipes, conduits, tubes, walls, and stacks to bare metal. All protrusions must be properly secured to the roof deck with approved fasteners.
- B. Flash all curbs, parapets and interior walls in strict accordance with approved MRSM details.
- C. The base flange of all membrane flashing shall extend out on to the plane of the deck, beyond the wood nailers to a maximum width of 8 inches.
- D. Vertical flashing shall be terminated no less than 8 inch above the plane of the deck with approved termination bar and counter-flashing or metal cap flashing.
- E. Complete all inside and outside corner flashing details with MRSM pre-formed corners or an approved field fabrication detail.
- F. Probe all seams with a dull, pointed probe to ensure the weld has created a homogeneous bond.

3.13 METAL FLASHING

- A. All perimeter edge details are to be fabricated from Polymeric-Clad Metal or utilize a prefabricated Fascia System.
- B. Fasten all metal flashing to wood nailers or approved substrate with approved fasteners 8 inches on center.
- C. Install metal flashing in accordance with MRSM Published Specifications and Construction Details.

3.14 ROOF DRAINS

Not Applicable

3.15 PITCH PANS

Not Applicable

3.16 EXPANSION JOINTS

- A. Flash all expansion joints in accordance with authorized/approved details. Fasten all expansion joint material according to MRSM specifications. Ensure the expansion material has sufficient material to expand to the widest point in expansion without causing undue stress on the expansion joint material.
- B. If the expansion joint is a "pre-formed" system, the manufacturer, description and a drawing illustrating the method of installation must be included in the contractor's submittals.

3.17 SEALANTS

- A. Apply authorized sealant(s) to all surface mounted reglets and per project requirements. Sealant(s) are to shed water. Follow all manufacturer's instructions and installation guides.
- B. Use primer when recommended by the manufacturer.
- C. Sealants will require periodic maintenance by the building owner's maintenance personnel.

3.18 **TEMPORARY SEALS**

- A. At the end of each working day or at the sign of rain, install temporary, 100% watertight seal(s) where the completed new roofing adjoins the uncovered deck.
- B. If water is allowed to enter beneath the newly completed roofing, the affected area(s) shall be removed and replaced at no additional expense to the building owner.
- C. Prior to the commencement of work, cut out and remove all contaminated membrane, insulation, roof cement or sealant and properly dispose off site.

3.19 **WALKWAYS**

Not applicable

3.20 **LIGHTNING PROTECTION**

- A. The installation of lightning protection must be coordinated with the authorized roofing contractor, certified lightning contractor and the building owner.
- B. The lightning protection must be installed in such a manner that base plates, air terminals and cables do not penetrate the roofing membrane without the use of pre-approved flashing details.

3.21 **COMPLETION**

- A. Remove any and all debris, excess materials and scrap of any kind from the roof and surrounding premises prior to demobilization.
- B. Inspect all field welds, detailing and terminations to ensure a 100% the watertight installation.

3.22 **WARRANTY INSPECTION**

- A. Upon completion of the project, the authorized roofing contractor shall complete and submit the MRSM Project Completion Notice.
- B. Upon receipt of the notice of completion, a Technical Representative of the MRSM shall schedule an inspection with a representative of the authorized roofing contractor to thoroughly review the installation and verify compliance with MRSM specifications.
- C. Any corrections or modifications necessary for compliance with the specifications

- and acceptance for warranty (punch list) will be noted on the Final Inspection for Warranty Form.
- D. Upon completion of all punch list items and final acceptance of the installation, a warranty as authorized by the MRSM will be issued.