

Project Manual for
Roof Replacement

BID DOCUMENT SET

Juvenile Court Building

616 Adams Avenue
Memphis, TN 38105

RFP # 17-008-08

Owner

Shelby County Government
Shelby County, Tennessee



August 29, 2016

john pruetts architects

1869 madison avenue
memphis, tn 38104
901.721.9062 phone
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pruettsarchitects@bellsouth.net

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APPENDIX 1 - Asbestos Inspection Survey Report

3 Refer also to Add Alternate #3 for the Kalwall Panels replacement.

4 Refer also to Add Alternate #2 for the Unit Skylights Replacement

SECTION 00 01 15
LIST OF DRAWINGS

SHEET #	DATE	SHEET TITLE
A0	AUGUST 29, 2016	COVER, MAPS, INDEX OF DRAWINGS, SYMBOL LEGEND
A1	AUGUST 29, 2016	OVERALL SITE LAYOUT WITH ROOF DEMOLITION PLAN, DEMOLITION KEYNOTES
A2	AUGUST 29, 2016	ROOF PLAN, ENLARGED ROOF PLANS, ROOF PLAN KEYNOTES, CONDENSATE LINE NOTES
A3	AUGUST 29, 2016	ROOF DETAILS
A4	AUGUST 29, 2016	ROOF DETAILS
MP-1	AUGUST 29, 2016	MECHANICAL AND PLUMBING ROOF PLAN, SCHEDULES, DETAILS AND NOTES

END OF SECTION

SECTION 00 01 20
PROJECT DIRECTORY

OWNER: Shelby County Government
584 Adams Avenue
Memphis, TN 38103
901.222.2410 phone
ahmad.nemati@shelbycountyttn.gov
ATTN: Ahmad Nemati, PE, Project Manager, Support 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, AIA

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: Tuesday, August 30, 2016

Due: Wednesday, September 28, 2016 no later than 2:00 pm

RFP # 17-008-08
ROOF REPLACEMENT, JUVENILE COURT BUILDING
616 ADAMS AVENUE



**Shelby County
Tennessee**

Mark Luttrell, Jr. Mayor

**Request for Proposal
Shelby County Government
Purchasing Department**

160 N. Main, Suite 900
Memphis, TN 38103

Issued: August 30, 2016

Due: September 28, 2016 no later than 2:00 P.M. (Central Standard Time)

RFP # 17-008-08

**JUVENILE COURT BUILDING 616 ADAMS AVE,
MEMPHIS, TN 38105**

Shelby County Government is soliciting written proposals on a competitive basis for Construction Services for Juvenile Roof Replacement, 616 Adams Ave., Memphis, Tennessee 38105. 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 9:00 AM, Friday, September 9, 2016 at 584 Adams, TN 38103.

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 2:00 p.m. on Wednesday, September 28, 2016**. Proposals should be addressed to:

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

The package containing one (1) original proposal (clearly identified as original), four (4) copies of your proposal must be sealed and marked with the Proposer's name and "JUVENILE COURT BUILDING AT 616 ADAMS AVE. MEMPHIS, TENNESSEE 38105 RFP # 17-008-08" noted on the outside.

Sincerely,

**Tosha Davenport, Purchasing Specialist
Shelby County Government
Purchasing Department**

**Cc: Ahmad Nemati, Shelby County Support Services
Cliff Norville, Shelby County Support Services**

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- 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 for Tower Roof Replacement, 616 Adams Ave., Memphis, Tennessee 38105 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. Must submit a Bid Bond in the amount of 5% of their bid. This bond must be submitted with your bid.
2. Have or obtain prior to the execution of the final contract all appropriate licenses and certifications required in the State of Tennessee for the performance of the Services in accordance with the provisions of this RFP.
3. The successful contractor must be able to submit a performance/labor material bond separate bonds each in the amount of 100% of the amount of the contract.
4. Firms located within the boundaries of Shelby County are required to have a current Shelby County Business License or be considered exempt from the license requirement by the Shelby County Office.
5. Also see Item # I, page 24 for forms to be submitted with your bid.
6. Prime and LOSB contractors must **apply** and **qualify** for an Equal Opportunity Compliance (EOC) certification number through our EOC Administration prior to submitting your response.
7. Independent contractors (sole proprietors) must adhere to State of Tennessee Public Chapter No. 436, known 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.

Because of the length of time required to receive an EOC number, vendors who submit EOC applications prior to 2:00 pm, Wednesday, September 28, 2016, bid will be accepted pending EOC approval.

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

Vendor Number (Purchasing Department)

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

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

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

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

III. CORRESPONDENCE

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

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

Respondents requesting additional information or clarification are to contact Tosha Davenport in writing at tosha.davenport@shelbycountyttn.gov or at the address listed above. Questions should reference the section of the RFP to which the question pertains and all contact information for the person submitting the questions. ***IN ORDER TO PREVENT AN UNFAIR ADVANTAGE TO ANY RESPONDENT, VERBAL QUESTIONS WILL NOT BE ANSWERED. The deadline for submitting questions will be Wednesday, September 21, 2016, 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 Wednesday, **September 28, 2016 @ 2:00 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	Tuesday August 30, 2016
Voluntary Pre-bid	Friday, September 9, 2016 at 9:00 AM
Proposal Due Date	Wednesday, September 28, 2016 at 2:00 PM
Notification of Award	October / November 2016
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.

**SHELBY COUNTY GOVERNMENT
LOCALLY OWNED SMALL BUSINESS (LOSB) PROGRAM
FOR CONSTRUCTION SERVICES
TOWER ROOF REPLACEMENT 616 ADAMS AVE.**

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 20% of the contract shall be contracted with LOSB's vendors. For assistance and information regarding LOSB participation, Bidders shall contact:

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

Definitions

The definitions used in this document are as follows:

1. **“Bidder”** or **“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 **LOS 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 **LOS Form "B."** This documentation must be submitted with the bid or negotiated proposal document.

c. Commercially Useful Functions

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

d. Unavailability

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

e. Pre-Work Conference

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

- f. Post-Award Change
Any Contractor who determines that a LOSB identified on **LOS Form “B”** cannot perform shall request approval from Shelby County to contract with an alternate subcontractor pursuant to this LOSB Program. Such request will be reviewed and approved only after adequate documentation for the proposed change is presented.
- g. LOSB Certification
Each month the Contractor shall submit **LOS Form “D”** certifying all payments made to LOSB’s.

3. LOSB Responsibilities

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

Written Agreement

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

Certification

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

Monitoring LOSB Utilization

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

Efforts to Achieve LOSB Participation

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

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

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

Substitution of LOSB's after Contract Award

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

Noncompliance with LOSB Program

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

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

Questions and Information

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

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

Construction

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

LOSB Program Forms Description

- **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.

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

A Contractor is required to submit **LOSB 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 **LOSB Form "B,"** if the entity is a legitimate LOSB. Additionally, if such entity will provide services, Contractors may only list LOSB's on **LOSB Form "B"** if the entity will perform a Commercially Useful Function. The Successful Contractor will be required to finalize and submit **LOSB Form "B"** prior to award of a contract. **LOSB Form "B"** will be incorporated into the contract and will become a contractual obligation of the Successful Contractor. **LOSB 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 **LOSB 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**

LOS B 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.

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

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

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

Principal Officer

STATE OF _____

COUNTY OF _____

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

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

Notary Public

My commission expires:

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.

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.

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

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

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

VIII. AWARD OF CONTRACT

- 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.
- e. **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.
- f. **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, SUITE 900, VASCO A. SMITH JR., ADMINISTRATION BUILDING, 160 NORTH MAIN, MEMPHIS, TENNESSEE 38103, at 2:00 P.M., Wednesday, September 28, 2016.**

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

Description of Work:

- a. The proposed work is officially known as: 616 Adams Ave. Roof Replacement.

Pre-Bid Meeting:

Bidders are encouraged to attend a **VOLUNTARY** pre-bid meeting to be held at 9:00 a.m., Friday, September 9, 2016 at 9:00 am, 584 Adams Ave., Memphis, Tennessee 38103.

Instruction to Bidders:

- (a) The RFP can be downloaded from The Shelby county Government website locates 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 (5) 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 sealed 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**

_____, 2016

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: Roof Replacement
Juvenile Court Building, 616 Adams Avenue

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.

ALLOWANCES

Allowance for Installation of replacement roof drains (\$1500 ea, maximum of \$57,000) **\$ 57,000**
Allowance for Selected brick veneer masonry wall joint tuckpointing (1000SF x \$8/SF): **\$ 8,000**

TOTAL BASE BID AMOUNT (Base Bid plus Contingency Allowance + Allowances)

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by John Pruet 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.

ADDITIVE ALTERNATE BID ITEM NO. 1

This Bid Item includes the removal of the Existing Communications Mast, guy lines, and related pitch pockets and misc. attachment hardware and repair/patching of deck openings (Reference Drawings for location). Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing communication mast and guy lines and related hardware.

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

CONTINGENCY ALLOWANCE

Ten percent (10%) of the Additive Alternate Bid Item No. 1 amount to the nearest whole dollar:

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

ADDITIVE ALTERNATE BID ITEM NO. 2

Unit Skylight Replacement, reference Section 08 62 00 “Unit Skylights”. This Bid Item shall include all labor and materials for a complete replacement of existing building unit skylights (Reference Drawings for locations). Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing skylight units and curbs, construction of new curbs, installation of new skylight units including all interior carpentry and modifications to existing skylight openings that may be required to accommodate the new unit, finished painting of interior surfaces associated with provision of a complete finished installation, and clean up.

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

CONTINGENCY ALLOWANCE

Ten percent (10%) of the Additive Alternate Bid Item No. 2 amount to the nearest whole dollar:

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

ADDITIVE ALTERNATE BID ITEM NO. 3

This Bid Item includes Kalwall Panel Replacement, reference Section 08 45 00 “Fiberglass-Sandwich-Panel Assemblies”. Additive Alternate Bid Item No. 3 shall include all labor and materials for a complete replacement of existing fiberglass sandwich panels in the existing gable skylight assembly (Reference Drawings for location). The existing structural framework is to remain and be reused. Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing fiberglass sandwich panels, installation of new fiberglass sandwich panels compatible with existing framework assembly to remain, roof flashing for existing framework curbs to remain, finished painting of interior surfaces associated with provision of a complete finished installation as may become

necessary, and clean up.

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

CONTINGENCY ALLOWANCE

Ten percent (10%) of the Additive Alternate Bid Item No. 3 amount to the nearest whole dollar:

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

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 TWO HUNDRED TEN (210) calendar days from Notice to Proceed. CONTRACTOR agrees to provide COUNTY an amount equal to FIVE HUNDRED DOLLARS (\$500.00) 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 _____

5. APPENDICES

The following documents are attached to and made a condition of the Bid:
LOS B 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 joint venture in the appropriate form or forms as above.

END OF DOCUMENT

SECTION 00 50 00
CONTRACTING FORMS AND SUPPLEMENTS

Attached herein:

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

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)

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A311

Performance Bond



KNOW ALL MEN BY THESE PRESENTS: that

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

as Principal, hereinafter called Contractor, and,

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

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

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

as Obligee, hereinafter called Owner, in the amount of

Dollars (\$ _____),

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

WHEREAS,

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

19 _____ entered into a contract with Owner for

in accordance with Drawings and Specifications prepared by

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

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

PERFORMANCE BOND

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

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

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

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

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

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

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

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

Signed and sealed this

day of

20

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA
Document
A311

Labor and Material Payment Bond

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

KNOW ALL MEN BY THESE PRESENTS: that

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

as Principal, hereinafter called Principal, and,

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

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

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

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

amount of

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

Dollars (\$

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

WHEREAS,

Principal has by written agreement dated

19

entered into a contract with Owner for

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

in accordance with Drawings and Specifications prepared by

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

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

LABOR AND MATERIAL PAYMENT BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the

AIA DOCUMENT A311 · PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND · AIA ®

FEBRUARY 1970 ED. · THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 N.Y. AVE., NW., WASHINGTON, D. C. 20006

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

- (Winc-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.

<i>(Principal)</i>	
<i>(Tilt)</i>	
<i>(Surt'ly)</i>	(Seal)

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

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.

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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

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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.

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

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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.

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3.3 Owner's Right to Stop the Work

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

3.4 Owner's Right to Carry Out the Work

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy it may have, make good and correct such deficiencies with its own forces or with the forces of

another contractor. In such case, an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect additional services made necessary by such default, neglect, or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

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

ARTICLE IV CONTRACTOR

4.1 Definition

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

4.2 Review of Contract Documents

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

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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:

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- .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 or 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.

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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,

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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.

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

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

4.16 Indemnification

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

(b) If any claim is made against the Owner for any damage, injury, death, or loss, whether such claim is based upon the Contractor 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.

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4.16.2 Labor Indemnity

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

4.16.3 Attorney's Fees

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

4.17 Progress Schedule

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

ARTICLE V
SUBCONTRACTORS

5.1 Definition

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

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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.

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

5.3 Subcontractual Relations

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

ARTICLE VI
WORK BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

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6.2 **Mutual Responsibility**

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

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

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

6.2.4 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the Owner on account of any damage

alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against Owner arises there from, the Contractor shall pay or satisfy it and shall reimburse the Owner for all Attorney's fees and Court costs which the Owner has incurred.

6.3 Owner's Right to Clean Up

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

ARTICLE VII MISCELLANEOUS PROVISIONS

7.1 GENERAL COMPLIANCE WITH LAWS

7.1.1 If required, the Contractor certifies that it is

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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.

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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

fee 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

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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.

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

8.2 Progress and Completion

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

8.2.2 The Contractor shall begin the Work on the date of

commencement as defined in Subparagraph 8.1.2. He shall carry the work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 Delays and Extensions of Time

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

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

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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.

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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.

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

9.4 Certificate for Payment

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

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

9.5 Progress Payments

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

9.6 Payments Withheld

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

9.4.2. The Architect may also decline to certify payment or,

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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

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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.

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

ARTICLE X
PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

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

10.2 Safety of Persons and Property

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

- .1 all employees on the Work and all other persons who may be affected thereby;
- .2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

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

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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's Liability Insurance

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

- .1 claims under workers= compensation, disability benefits, and other similar employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

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

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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 Contractor's 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:

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- .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.

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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.

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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.

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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

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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]

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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: _____

constcmd.doc

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
copy

be required to provide the County with a
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.

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
- E. Additive Alternates

1.2 PROJECT SUMMARY

A. The "Project," of which the "Work" of this Contract is a part, is titled the Roof Replacement of the Shelby County Library. It includes the complete removal to the existing roof deck and the disposal of the existing roofing system, inclusive of flashings, rooftop insulation, other related work as indicated in the drawings and specifications, and the installation of a new SBS hot mopped modified bitumen roofing system, and other related work.

The Project address is 7200 East Shelby Drive, Memphis, TN 38125.

B. The "Work" of this Contract is defined in the Contract Documents to include the entire Project, inclusive of any Owner Selected Additive Alternates. The General Conditions of the Contract for construction, AIA Document A201-2007 edition 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 General Conditions of the Contract for construction, AIA Document A201-2007 edition, other Administrative Sections included in Division 0 and Division 1 of these Specifications, together with all technical divisions of the Specifications and the Contract Document Drawings (Reference Section 00 01 10 Table of Contents and 00 01 15 List of Drawings).

It is the Contractors' responsibility to familiarize themselves with these documents prior to submitting a bid for the Work.

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.
- 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 roofing 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 chutes for loading and unloading materials to and from the roof.

C. Interior stairs or elevators may not be used for removing debris or delivering materials, except as authorized by the Architect.

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 ten 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 a licensed Roofing Contractor in the State of Tennessee with a B-21 license designation, or be a licensed General Contractor in the State of Tennessee with a BC or BC-B license designation who sub contracts with a Roofing Subcontractor with a B-21 license designation. In either case the Prime Contractor will be an organization that is approved, authorized, or licensed by the roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty and can provide evidence of having a minimum of five years successful experience installing SBS hot mopped modified bitumen roof system in accordance with these specifications and has installed at least one roofing application of similar size and complexity within the past year. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists the foreman for this project who is experienced in installing the roof as it is specified.

1.6 ADDITIVE ALTERNATES

There are no Additive Alternates.

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

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

Rev. 5/24/99

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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.

Initial _____

4.7 Permits, Fees, and Notices

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

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

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

4.8 Allowances and Owner Furnished Equipment, Fixtures or Labor

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

4.8.2 Unless otherwise provided in the Contract Documents:

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

Initial _____

4.8.3 The Owner may directly furnish any or all of the

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

4.9 Superintendent

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

4.10 Documents and Samples at the Site

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

4.11 Shop Drawings, Product Data, and Samples

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

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

Initial _____

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

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

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

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

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

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

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

4.12 Use of Site

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

4.13 Cutting and Patching of Work

4.13.1 The Contractor shall be responsible for all cutting,

Initial _____

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

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

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

4.14 Cleaning Up

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

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

4.15 Royalties, Patents, and Records

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

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

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

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

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

Initial _____

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

4.16 **Indemnification**

4.16.1 (a) By executing this Agreement, the Contractor assumes the entire responsibility and liability for any and all claims, damage or injury of any kind or nature (including death) to all persons, whether employees of the Contractor or otherwise, and to all property (including but not limited to the replacement cost and 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.

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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.

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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.

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

5.3 Subcontractual Relations

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

ARTICLE VI WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 Owner Right to Perform Work and to Award Separate Contracts

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

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

6.2 Mutual Responsibility

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

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

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

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

6.3 Owner Right to Clean Up

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

**ARTICLE VII
MISCELLANEOUS PROVISIONS**

7.1 GENERAL COMPLIANCE WITH LAWS

7.1.1 If required, the Contractor certifies that it is

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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.

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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

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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.

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

8.2 Progress and Completion

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

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

8.3 Delays and Extensions of Time

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

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

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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.

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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.

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

9.4 Certificate for Payment

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

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

9.5 Progress Payments

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

9.6 Payments Withheld

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

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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

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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 Initial _____

waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

ARTICLE X
PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

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

10.2 Safety of Persons and Property

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

- .1 all employees on the Work and all other persons who may be affected thereby;
- .2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

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

10.2.4 When the use or storage of explosives or other

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

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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 Contractor 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:

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- .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.

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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.

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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.

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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

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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

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

15.2 Corrections after Occupancy

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

15.3 Heating, Ventilating, and Air-Conditioning Systems

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

ARTICLE XVI **REGULATIONS**

16.1 Nondiscrimination in Employment

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

16.2 [RESERVED]

16.3 Maintenance and Records

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

16.4 Owner's Right of Inspection

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

ARTICLE XVII

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

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

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

**17.1 Installation, Removal, or Disturbance of
Fiberglass Insulation**

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

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

17.1.3 Handle carefully to minimize airborne dust.

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

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

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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: _____

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
- E. Additive Alternates

1.2 PROJECT SUMMARY

A. The "Project," of which the "Work" of this Contract is a part, is titled the Juvenile Court Building Roof Replacement. It includes the complete removal to the building roof deck and disposal of the existing single membrane, and bituminous multi-ply membrane roof systems, and related work, and the installation of a new 3-ply, cold adhesive applied SBS- Modified Bitumen roofing system, and other related work. The Project address is 616 Adams Avenue, Memphis, Tennessee 38103. The "Work" also includes the remediation and proper disposal of certain asbestos containing materials (Refer To Section 02 26 00 "Hazardous Material Assessment" of these specifications), as well as, certain Additive Alternate Bid Items identified in paragraph 1.6 "Additive Alternates" of this specification section.

B. The "Work" of this Contract is defined in the Contract Documents to include the entire Project, inclusive of Owner Selected Additive Alternates and Hazardous Material remediation and disposal. 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 Documents:

1. Documents affecting work of this Section include, but are not necessarily limited to, the Shelby County General Conditions of the Contract for Construction, non technical Sections in Division 0 and Division 1 of these Specifications, and the June 2016 Asbestos Inspection Report, Project No. 22712.03, prepared by Tioga Environmental Consultants, 357 North Main Street, Memphis, TN which is attached as an Exhibit to these Specifications.

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.
3. Unobstructed public paths of egress connecting the building to parking areas and public ways.
4. Unobstructed fire lanes, fire hydrants, and emergency vehicle access ways.

B. Before beginning work, the roofing 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 chutes for loading and unloading materials to and from the roof.

C. Interior stairs or elevators may not be used for removing debris or delivering materials.

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 ten 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 a qualified roofing company with a State of Tennessee BC-21 license in good standing that is approved, authorized, or licensed by the roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty and can provide evidence of having a minimum of five years successful experience installing cold adhered SBS-Modified Bitumen roofing systems and has installed at least one roofing application of similar size and complexity within the past year. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists the foreman for this project who has received training from the manufacturer along with the dates training was received.

1.6 ADDITIVE ALTERNATES

A. The Project scope includes Additive Alternate Bid Items. Each Additive Alternate Bid Item should be listed on the Bid Form as a separate line item and not included in the Base Bid amount. Each Additive Alternate Bid Item should also list a separate ten percent (10%) Construction Contingency amount. In addition to the Base Bid scope of work, the Owner may choose to include one, all, or none of the Additive Alternate Bid Items.

The Additive Alternate Bid Items are as follows: (Refer to specific sections of this Project Manual and the Contract Document Drawings for additional information pertaining to these items.)

1. Additive Alternate Bid Item No. 1:

This Bid Item includes the removal of the Existing Communications Mast, guy lines, and related pitch pockets and misc. attachment hardware (Reference Drawings for location). Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing communication mast and guy lines and related hardware.

2. Additive Alternate Bid Item No. 2:

Unit Skylight Replacement, reference Section 08 62 00 “Unit Skylights”. This Bid Item shall include all labor and materials for a complete replacement of existing building unit skylights (Reference Drawings for locations). Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing skylight units and curbs, construction of new curbs, installation of new skylight units including all interior carpentry and modifications to existing skylight openings that may be required to accommodate the new unit, finished painting of interior surfaces associated with provision of a complete finished installation, and clean up.

3. Additive Alternate Bid Item No. 3:

This Bid Item includes Kalwall Panel Replacement, reference Section 08 45 00 “Fiberglass-Sandwich-Panel Assemblies”. Additive Alternate Bid Item No. 3 shall include all labor and materials for a complete replacement of existing fiberglass sandwich panels in the existing gable skylight assembly (Reference Drawings for location). The existing structural framework is to remain and be reused. Work under the scope of this Additive Alternate shall include all demolition haul-off and disposal of existing fiberglass sandwich panels, installation of new fiberglass sandwich panels compatible with existing framework assembly to remain, roof flashing for existing framework curbs to remain, finished painting of interior surfaces associated with provision of a complete finished installation as may become necessary, and clean up.

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 00
ALLOWANCES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Dollar Amount Allowances for Work as described herein.

1.2 ALLOWANCES

A. Costs included in Allowances should Architect and Shelby County Government accept and approve Allowance(s) implementation: Cost of materials and labor to contractor or sub-contractors, less applicable trade discounts and taxes. These costs also include product handling, storage, protection, and cost of repairs for damages caused to any existing construction during the application of the Allowance Items.

1. Installation of replacement roof drains
2. Selected brick veneer masonry wall joint tuckpointing

B. Acknowledge Allowance Items and associated costs on the Bid Form.

C. Contractor(s) Responsibilities:

3. Provide Architect and Shelby County Government representative with sequences(s) of Contractor's Construction Schedules, items and materials to avoid dust and noise pollution, or other distractions to business as usual as may be determined by Court officials prior to, during, and following the construction and removal and haul-off and installation of materials for this project.
4. Obtain proposals from subcontractors and installers and offer recommendations to achieve intended design and regulatory agency requirements.
5. On notification of selection by Architect/Engineer execute purchase.
6. Process shop drawings, product data and samples.
7. Arrange for delivery of all equipment, products, materials, etc. and inspect for damage of same.

D. Funds will be drawn from Dollar Amount Allowance(s) only by Change Directives.

PART 2 PRODUCTS

A. The Contractor shall be compensated by the Owner for provision and installation of new roof drains necessary to replace existing roof drains for reasons including; drain or seating performance failure or damage incurred to existing roof drains or mechanical fasteners during disassembly or reassembly of drains for new roofing system installation.

1. Acceptable Roof Drain Products:

- a. JR Smith # 1015-C-R-CID
- b. Watts # RD-100-B-D-F-K
- c. Zurn # ZC-100-EA-C-R

B. The Contractor shall be compensated by the Owner for brick veneer masonry wall joint tuckpointing in locations as selected by the Architect. Reference Specification Section 04 01 20 Masonry Tuckpointing.

PART 3 EXECUTION

3.01 Examination

- A. Review with the Architect the site conditions of the selected locations for the implementation of the approved Allowance Items.

3.02 Installation

- A. Proceed with the Architect approved Allowance Item(s) installation only after submittal and acceptance of a written cost proposal by the Owner.
- B. Provide installation in accordance with the Drawings and Specifications associated with each Item.

3.03 Adjustment and Cleaning

- A. At final completion of Allowance Item installation, adjust and check each operating component and clean and restore to acceptable condition.

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, tested 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.

2.7 EMERGENCY SUPPLIES

A. Temporary Roof Patch: Seal-X t-r-p, American Colloid Company (312) 966-5720; Four (4) 25-pound sacks, or an approved equal.

B. All Weather Plastic Cement: Two (2) 5-gallon containers.

C. Night Seal: Two (2) FP-12 Froth-Pak Kit or larger by InstaFoam Products, Inc. - Joliet, IL., or an approved equal.

D. Tarps: Two (2) 20'x100' Plastic.

E. Water Pumps: Two (2) 30-gallon per minute capacity.

F. Water Diverter: Two (2) 6'x10' Water Diverters

G. Hoses: Two (2) 25'foot hoses.

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. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
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.

C. Roof: Daily pick up all scrap, debris, material which may become air borne, and nails and other material which may damage roof if stepped on. Remove such items to the place designated for their storage.

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. Roof: Remove all unused nails, scraps, debris, and other unused material.

E. 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
PROJECT 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. Installed Roof System
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 26 00
HAZARDOUS MATERIAL ASSESSMENT

The report listed below is attached as an appendix to this project manual:

Asbestos Inspection Survey Report
Juvenile Court Building Roof
616 Adams Avenue
Memphis, TN 38105

June 2016

Prepared for Shelby County Health Department
814 Jefferson Avenue
Memphis, TN 38105

by

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

SECTION 02 41 19
SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Demolition of designated roofing and roof deck materials, miscellaneous rooftop items and construction as indicated on the drawings including abandoned mechanical equipment, conduits, condensate lines and vtr pipes, skylights and curbs where indicated on the drawings. Demolition shall also include removal of miscellaneous interior construction and temporary disassembly of suspended systems and partial demolition of plaster ceilings required for the installation connections of new rooftop unit condensate lines and electrical service connections. All demolition shall include the removal of those demolished materials from the site and their proper disposal with the exception of items that are to be retained and properly stored for reinstallation by the Contractor.

1.2 RELATED SECTIONS

- A. Section 07 54 23 “Membrane Roofing Systems” , 2.4 Auxiliary Roofing Membrane Materials, for Moisture Barrier
- B. Section 04 01 20 “Masonry Tuckpointing” for Tuckpointing and masonry repair.
- C. Section 09 51 23 “Acoustical Ceilings” for acoustical ceiling demolition and temporary removal.

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 is 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.
- C. Refer to Limited Asbestos Assessment Report for information regarding, location, removal and disposal of asbestos containing materials.

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. Notify the Shelby County Health Department prior to removal of any hazardous materials. After removal, notify the Owner that all hazardous materials have been removed and the work space conditions are certified safe by the Contractor's Hazardous Materials Abatement SubContractor.
- C. Prior to the commencement of any demolition work all interior roof drains are to be inspected and tested for proper function. If required, the Owner is to be notified through the Architect of any roof drains which do not function properly.

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 temporary weatherproof closures for exterior building envelope openings.
- C. 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. Erect and maintain weatherproof closures for exterior openings. Skylights, mechanical equipment, and other items to be removed shall be put back in place, replaced, or their openings shall be made watertight by the end of each workday.
- J. No more roofing material may be removed than can be replaced the same day. The removal of the roofing material must be coordinated with sections of Section 07 54 23 "Membrane Roofing Systems" to maintain moisture protection for the building interior at all times. In addition, coordinate all demolition with Hazardous Materials Abatement Subcontractor (Reference Section 02 26 00 of these specifications). Upon Commencement of the tearoff operations the Contractor assumes full responsibility for moisture infiltration into the building envelope and ensuing damages. The existing roofing system and all attachments shall be completely removed,

leaving the exposed structural deck in a clean and uncluttered condition and ready for the installation of the new roof system.

K. Disconnect and reconnect plumbing, mechanical, and electrical items as required by properly licensed workers to prevent disruption of the operation of the facility. Provide for uninterrupted temporary utility services for 24/7 operations within the building or schedule disconnections for evenings and weekends to avoid disruption of operations within the building for standard work day schedule operations. Note that the activities of some of the building occupants operate on a 24/7 basis and may not be without utility service at any time. Schedule all work in advance with the Owner.

L. 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 04 01 20
MASONRY TUCKPOINTING

This section includes requirements for Section 01 21 00 Allowances

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies requirements for tuck pointing of existing masonry and stone work as follows:

1. Base Bid

a. Using methods and procedures indicated in this Section 04 01 20, tuckpoint masonry joints and/or relay masonry units in the following locations:

- 1) Existing Concrete and Stone Copings – Tuckpoint the mortar joint between the uppermost masonry unit and the concrete wall coping. Relay loose or unbonded masonry units in the uppermost course as may be required.
- 2) Tuckpoint full length of joints across (vertical and horizontal) existing concrete and stone copings, even if new roofing material is to be installed in that location.
- 3) New Membrane Roof System – All mortar joints in contact with any component of the new roofing system.

2. *Allowance for Selected brick veneer masonry wall joint tuckpointing

a. Using methods and procedures indicated in this Section 04 01 20, tuckpoint masonry joints and/or relay masonry units in the following locations:

- 1) Exterior Building Walls – All mortar joints where evidence of fissures, cracking, spalling, or lack of bonding with the brick masonry units is observed up to Allowance quantity limit. *Report all areas cited for repair to Architect before proceeding with the work.*

1.2 RELATED WORK

- A. Section 02 41 19 Selective Demolition
- B. Section 07 54 23 Membrane Roofing Systems
- C. Section 07 92 00 Sealants and Caulking

1.4 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.

B. American Society for Testing and Materials (ASTM):

C67 92.....Brick and Structural Clay Tile, Sampling and Testing

C216 92.....Facing Brick (Solid Masonry Units Made From Clay or Shale)

C. International Masonry Industry All Weather Council: Recommended Practices and Guide Specifications for Cold Weather Masonry Construction (Published 12/1/70 Copyright 1981).

PART 2 - PRODUCTS

2.1 TUCK POINTING MORTAR

A. Tuckpointing Mortar – ASTM C270-12a Type S, not less than 1800 psi at 28 days for load bearing and all exterior walls

2.2 REPLACEMENT MASONRY UNITS (AS NEEDED)

A. Face Brick

1. ASTM C216, Grade SW, Type FBS. Brick shall be classified slightly efflorescent or better when tested in accordance with ASTM C67.
2. Face brick shall match facing brick of the existing building(s) that is being tuck pointed.

B. Other Masonry Units to match existing

PART 3 - EXECUTION

3.1 CUT OUT OF EXISTING MORTAR JOINTS

- A. Cut out existing mortar joints (both bed and head joints) and removed by means of a toothing chisel or a special pointer's grinder, to a uniform depth of to 19 mm (3/4 inch), or until sound mortar is reached. Take care to not damage edges of existing masonry units to remain.
- B. Remove dust and debris from the joints by brushing, blowing with air or rinsing with water. Do not rinse when temperature is below freezing.

3.2 JOB CONDITIONS

- A. Protection: Protect newly pointed joints from rain, until pointed joints are sufficiently hard enough to prevent damage.
- B. Cold Weather Protection:
 1. Tuck pointing may be performed in freezing weather when methods of protection are utilized.
 2. Comply with applicable sections of "Recommended Practices for Cold Weather Construction" as published by International Masonry Industry All Weather Council.
 3. Existing surfaces at temperatures to prevent mortar from freezing or causing other damage to mortar.
- C. Perform masonry repair work prior to the installation of the new roof installation. If masonry repairs must be made over any portion of the new roof the Contractor is solely responsible for the protection of the new roof against any damage.

3.3 INSTALLATION OF TUCK POINTING MORTAR

- A. Immediately prior to application of mortar, dampen joints to be tuck pointed. Prior to application of pointing mortar, allow masonry units to absorb surface water.
- B. Tightly pack mortar into joints in thin layers, approximately 6.4 mm (1/4 inch) thick maximum.
- C. Allow layer to become "thumbprint hard" before applying next layer.
- D. Pack final layer flush with surfaces of masonry units. When mortar becomes "thumbprint hard", tool joints.

3.4 TOOLING OF JOINTS

A. Tool joints in patch work with a jointing tool to match the existing surrounding joints.

3.5 REPLACEMENT OF MASONRY UNITS

A. Cut out mortar joints surrounding masonry units that are to be removed and replaced.

1. Units removed may be broken and removed, providing surrounding units to remain are not damaged.
2. Once the units are removed, carefully chisel out the old mortar and remove dust and debris.
3. If units are located in exterior wythe of a cavity or veneer wall, exercise care to prevent debris falling into cavity.

B. Dampen surfaces of the surrounding units before new units are placed.

1. Allow existing masonry to absorb surface moisture prior to starting installation of the new replacement units.
2. Butter contact surfaces of existing masonry and new replacement masonry units with mortar.
3. Center replacement masonry units in opening and press into position.
4. Remove excess mortar with a trowel.
5. Point around replacement masonry units to ensure full head and bed joints.
6. When mortar becomes "thumbprint hard", tool joints.

3.6 CLEANING

A. Clean exposed masonry surfaces on completion.

B. Remove mortar droppings and other foreign substances from wall surfaces.

C. First wet surfaces with clean water then wash down with a solution of soapless detergent specially prepared for cleaning brick.

D. Brush with stiff fiber brushes while washing, and immediately thereafter hose down with clean water.

E. Free clean surfaces from traces of detergent, foreign streaks or stains. Protect materials during cleaning operations including adjoining construction.

F. Use of muratic acid for cleaning is prohibited.

END OF SECTION

SECTION 05 41 00
STRUCTURAL METAL STUD SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Load bearing formed steel stud joist framing for deck opening infills as required.

1.2 SYSTEM DESCRIPTION

A. Light gauge framing material for infill construction.

B. Size components to withstand design loads as follows:

1. Vertical assembly: 35psf

C. Maximum Allowable Deflection: 1/360 span

D. Design wall system to provide for movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.

E. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

1.3 QUALITY ASSURANCE

A. Manufacturer: Company specializing in structural framing components with three years minimum experience.

B. Calculate structural properties of framing members in accordance with AWCI requirements.

1.4 SUBMITTALS

A. Submit shop drawings and product data.

B. Indicating component details, framed openings, anchorage, welds, type and location of fasteners, and accessories or items required of other related work.

C. Provide stud and bracing layout.

D. Provide product data on standard framing members. Describe materials and finish product criteria, limitations, and section properties.

E. Submit manufacturer's installation instructions.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Harrison Manufacturing Co., Memphis, TN.

B. USG Building Systems, Chicago, IL.

C. Substitutions subject to Architect approval.

2.2 FRAMING MATERIALS

A. Studs: ASTM A446 sheet steel, galvanized 690 coating class, minimum yield of 40KSI, formed to channel, punched web, 3-5/8" x 1-5/8" x 1/2" and 5-5/8" x 1-5/8" x 1/2" return nominal size. Minimum section properties; a = 0.216 in.², I_x = 0.551 in.⁴, S_x = 0.304 in.³, R_x = 1.597 in.

1. Interior non-load bearing studs: 24 gage
2. Interior load bearing studs: 18 gage
3. Exterior non-load bearing studs: 20 gage
4. Exterior load bearing studs: 18 gage

B. Track: Formed steel; channel shaped; same width as studs, tight fit; 18 gage thick, solid web.

C. Joists: 18 gage thick, 30# felt between joists and APA rated fire treated plywood.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Verify that building components to be framed are ready to receive work.
- B. Beginning of installation means acceptance of existing conditions.

3.2 ERECTION OF STUDDING

- A. Install components in accordance with manufacturer's instructions.
- B. Align top and bottom tracks; locate to infill area layout. Secure in place with fasteners or welding at maximum 16 inches o.c. Coordinate installation of sealant with perimeter tracks.
- C. Place joists at 16 inches o.c.; not more than 2 inches from abutting walls and at each side of openings. Connect joists to tracks using fastener method.
- D. not used
- E. Erect joists one piece full length. Splicing of joists is not permitted.
- F. Erect joists, brace, and reinforce to develop full strength to meet design requirements.
- G. not used
- H. not used
- I. Touch-up field welds and damaged galvanized surfaces with primer.

3.3 TOLERANCES

- A. Maximum Variation from True Position: 1/8 inch.
- B. Maximum Variation of any Member from plane: 1/8 inch.

END OF SECTION

SECTION 06 10 53
MISCELLANEOUS ROUGH CARPENTRY

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Wood blocking, nailers, and miscellaneous wood rough carpentry.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 1” inch nominal or greater in thickness but not greater than 12 inches nominal in width.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. NeLMA: Northeastern Lumber Manufacturers' Association.
2. NHLA: National Hardwood Lumber Association.
3. NLGA: National Lumber Grades Authority.
4. SPIB: The Southern Pine Inspection Bureau.
5. WCLIB: West Coast Lumber Inspection Bureau.
6. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

1.5 QUALITY ASSURANCE

A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited (Forest stewardship Council) certification body to comply with FSC 1.2, "Principles and Criteria":

1. Miscellaneous lumber.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA C2.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, waterproofing, masonry, and concrete.

2.3 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Rooftop equipment bases and support curbs.

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 15 percent maximum moisture content and any of the following species:

1. Hem-fir (north); NLGA.
2. Mixed southern pine; SPIB.
3. Spruce-pine-fir; NLGA.
4. Hem-fir; WCLIB, or WWPA.

5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
6. Western woods; WCLIB or WWPA.
7. Northern species; NLGA.
8. Eastern softwoods; NeLMA.

C. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

F. Lag Bolts: ASME B18.2.1.

G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- C. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- D. Comply with AWP A M4 for applying field treatment to cut surfaces of preservative-treated lumber.
1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- E. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in ICBO's Uniform Building Code.
 4. Table 2305.2, "Fastening Schedule," in BOCA's BOCA National Building Code.
 5. Table 2306.1, "Fastening Schedule," in SBCCI's Standard Building Code.
- F. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading in accordance with applicable building codes and roofing manufacturers specifications. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.
- D. Secure shims simultaneously with overlying solid wood nailer. Shim material must be continuous. Spaced shims are not acceptable.

3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment.

Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA registered label.

END OF SECTION

SECTION 07 52 16
STYRENE-BUTADIENE-STYRENE (SBS)
MODIFIED BITUMINOUS COLD ADHESIVE APPLIED MEMBRANE ROOFING SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Drawings and the technical sections of the Project Manual, general provisions of the Contract for Construction; including the General Conditions of the Contract, Issued Addenda, Applicable Allowances and Bid Item Additive Alternates, Division 0 and Division 1 Sections of the Project Manual, and the Asbestos Inspection Survey Report (see Section 02 26 00).

1.2 SUMMARY

A. This Section includes the following:

1. Preparation of roof deck to receive roofing materials.
2. Three Ply SBS-modified bituminous cold adhesive applied membrane roofing system.
3. Cover board.
4. Roof insulation.
5. Incorporation of sheet metal flashing and auxiliary roof system components.
6. Replacement roof drain installation.

B. Related Sections include the following:

1. 02 26 00 - Hazardous Material Abatement
2. 04 01 20 - Masonry Tuckpointing
3. 06 10 53 - Miscellaneous Rough Carpentry
4. 07 62 00 - Sheet Metal Flashing and Trim
5. 08 45 23 - Fiberglas Sandwich Panel Assemblies
6. 08 62 00 - Unit Skylights

1.3 REFERENCES

A. Roofing Terminology: Refer to the following publications for definitions of roofing work related terms in this Section:

1. ASTM D 1079 "Terminology Relating to Roofing and Waterproofing."
2. Glossary of NRCA's "The NRCA Roofing and Waterproofing Manual."
3. Roof Consultants Institute "Glossary of Roofing Terms" for definition of terms related to roofing work in this Section.

B. Sheet Metal Terminology and Techniques: SMACNA Architectural Sheet Metal Manual.

1.4 DESIGN CRITERIA

A. General: Installed roofing membrane system shall remain watertight; and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.

B. Material Compatibility: Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.

C. Wind Uplift Performance: Roofing system shall be identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist wind uplift pressure calculated in accordance with ASCE-7.

1. Field-of-Roof Uplift Pressure: 44 lbf/sq. ft. (kN/sq. m).
2. Perimeter Uplift Pressure: 68 lbf/sq. ft. (kN/sq. m).
3. Corner Uplift Pressure: 93 lbf/sq. ft. (kN/sq. m).

1.5 SUBMITTALS

A. Product Data: Manufacturer's data sheets for each product to be provided.

B. Detail Drawings: Provide roofing system plans, elevations, sections, details, and details attachment to other Work, including:

1. Base flashings, cants, and membrane terminations.
2. Tapered insulation, including slopes.
3. Crickets, saddles, and tapered edge strips, including slopes.
4. Insulation fastening patterns (where required).

C. Verification Samples: Provide for each product specified.

D. Maintenance Data: Refer to manufacturer's latest published documents.

E. Manufacturer's Guarantees: Special guarantees specified in this Section.

F. Provide closeout documents, closeout manuals & owner training per Section 01 77 19 Close-out Requirements.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive the specified manufacturer's guarantee.

B. Manufacturer Qualifications: A qualified manufacturer that has UL listing for roofing system identical to that used for this Project.

C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

D. Test Reports:

1. Roof drain and leader test or submit plumber's verification.
2. Core cut (if requested).

E. Moisture Survey:

1. Submit prior to installation, results of a non-destructive moisture test of roof system completed by approved third party. Utilize one of the approved methods:

- a. Infrared Thermography
- b. Nuclear Backscatter

F. Source Limitations: Obtain all components from the single source roofing system manufacturer guaranteeing the roofing system. All products used in the system shall be labeled by the single source roofing manufacturer issuing the guarantee.

G. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.

1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.
2. Fire-Resistance Ratings: ASTM E 119, for fire-resistance-rated roof assemblies of which roofing system is a part.

H. Pre-Installation Notification:

1. Three weeks prior to commencement of roofing installation, contact manufacturer to verify fastener types/frequency and a secured approval of the system design to ensure that the roofing system is registered properly.
 - a. Utilize manufacturer's standard pre-installation notification form (PIN).
 - b. Form must be completed and submitted to manufacturer to obtain warranty.
- a. Pre-Installation Conference: Conduct conference at Project site.
 1. A minimum of two weeks prior to beginning roofing installation, conduct a pre-installation conference at the project site.
 2. Attendees to include (but not limited to): Owner, designer, roofing consultant, Contractor, Roofing installer, job superintendent and roof manufacturer's local technical representative.
3. Agenda:
 - a. Maintaining water tightness of the building during roof installation, including night seal procedures.
 - b. Roofing details and procedures.
 - c. Maintaining Owner's access to the facility.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and guarantee requirements.
- B. Coordinate removal of existing roofing materials by hazardous materials remediation subcontractor with installation of new roofing materials. Haz Mat remediation team shall not remove more existing roof material than the roofing prime contractor can cover in the same day.

1.9 WARRANTIES

- A. Provide manufacturer's system guarantee equal to Siplast, Inc. No Dollar Limit Roofing System Guarantee.
 1. Single-Source special guarantee includes roofing plies, base flashings, liquid applied flashing, roofing membrane accessories, granule surfaced roofing membrane, roof insulation, fasteners, cover board, vapor retarder, walkway products, manufacturer's expansion joints, manufacturer's edge metal products, and other single-source components of roofing system marketed by the manufacturer.
 2. Product Warranty: 20 years from date of Substantial Completion.
- B. Installer's Warranty: Submit roofing Installer's warranty, signed by Installer, covering Work of this Section,

including all components of roofing system, for the following period:

1. Warranty Period: Two Years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE ROOFING SYSTEMS

A. Manufacturers: All components of the warrantied system shall be provided by a single manufacturer or approved in writing by the primary roofing manufacturer. Subject to compliance with the requirements of this Project Manual, please provide SBS - Modified Bituminous Cold Adhesive Applied Roofing System products by one of the following:

1. Siplast, Inc.

P-20 Base

P-30FR Cap

Veral aluminum Flashing

2. Firestone Building Products Company.

SBS Premium Base

SBS Premium FR Cap

SBS Metal Flash-AL Flashing

3. GAF Materials Corporation.

Ruberoid SBS Dual Smooth Base

Ruberoid Mop FR Cap

UltraClad SBS Foil-Faced membrane Alum Flashing

4. Johns Manville International, Inc.

Dyna Ply Base

Dyna KapFR Cap

DynaKlad Aluminum Flashing

5. Soprema Roofing and Waterproofing Inc.

Sopralene 180 Base

Sopralene 250GRFR Cap

2.2 SBS-MODIFIED ASPHALT- SHEET MATERIALS

A. SBS Modified Bitumen Roofing Systems: A three-ply, cold adhesive, SBS modified bitumen roofing system
Roofing Membrane Assembly: A roof membrane assembly consisting of three plies of a prefabricated, reinforced, homogeneous Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane, applied over a prepared & primed substrate. Reinforcement mats shall be impregnated/saturated and coated each side with SBS modified bitumen blend. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen. The roof system shall pass 500 cycles of ASTM D 5849 Resistance to Cyclic Joint Displacement (fatigue) at 14°F (-10°C). Passing results shall show no signs of membrane cracking or interply delamination after 500 cycles. The roof system shall pass 200 cycles of ASTM D 5849 after heat conditioning performed in accordance with ASTM D 5147. The assembly shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved

for prolonged periods of time without detriment to the watertight integrity of the entire roof system.

Basis of Design:

Siplast Paradiene 20/30 FR roof system Color #93 Bone White as follows:

1. Modified Bitumen Base Ply (temporary roof),
Siplast Paradiene 20
2. Intermediate Ply, and Stripping Ply :
Siplast Paradiene 20
3. Modified Bitumen Granulated Finish Ply :
Siplast Paradiene 30 FR

B. Flashing Membrane Assembly: A flashing membrane assembly consisting of a prefabricated, reinforced, Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane with a continuous, channel-embossed metal-foil surfacing. The finish ply shall conform to ASTM D 6298 and the following physical and mechanical property requirements :

Siplast Veral flashing system, aluminum finish

1. Cant Backing Sheet and Flashing Reinforcing Ply:
Siplast Paradiene 20 SA
2. Metal-Clad Modified Bitumen Flashing Sheet :
Siplast Veral Aluminum

C. Catalyzed Acrylic Resin Flashing System: A specialty flashing system consisting of a PMMA-based, fully reinforced membrane installed over a prepared, primed substrate. The flashing system consists of a catalyzed acrylic resin primer, basecoat and topcoat, combined with a non-woven polyester fleece. The use of the specialty flashing system shall be specifically approved in advance by the membrane manufacturer for each application. Parapro 123 Flashing System by Siplast; Irving, TX

2.4 AUXILIARY ROOFING MEMBRANE – BITUMINOUS

A. Insulation Adhesives

1. Insulation Adhesive: A single component, moisture cured, polyurethane foam adhesive, dispensed from a portable, pre-pressurized container used to adhere insulation panels to the substrate, as well as to other insulation panels:

Para-Stik Insulation Adhesive by Siplast; Irving, TX

2. Insulation Adhesive: A dual component, polyurethane foam adhesive used to adhere insulation panels to the substrate, as well as to other insulation panels.

Parafast Insulation Adhesive by Siplast; Irving, TX

B. Roofing Adhesives

1. Membrane Cold Adhesive: An asphalt, solvent blend conforming to ASTM D 4479, Type II requirements:
Siplast PA-311 Adhesive by Siplast; Irving, TX

2. Membrane Cold Adhesive: An asphalt, solvent blend conforming to ASTM D 4479, Type II requirements.
Siplast PA-311 M Adhesive by Siplast; Irving, TX

3. Mastic: An asphalt cutback mastic, reinforced with non-asbestos fibers, used as a base for setting metal flanges conforming to ASTM D 4586 Type II requirements:

Siplast PA-1021 Plastic Cement by Siplast; Irving, TX

4. Flashing Adhesive: A slump resistant, asphalt cutback flashing adhesive, reinforced with non-asbestos fibers, conforming to ASTM D 4586 Type II requirements:

Siplast PA-828 Flashing Cement

5. Solvent-Free Membrane Adhesive: A single component, solvent-free modified asphalt adhesive designed for application of the specified roof membrane system.

Siplast SFT Adhesive by Siplast; Irving, TX

6. Solvent-Free Flashing Adhesive: A single-component, solvent-free modified adhesive. The adhesive blend shall be formulated in a grade for application of flashing materials.

Siplast SFT Cement by Siplast; Irving, TX

C. Primers

1. Primer: An asphalt/solvent blend meeting ASTM D 41, South Coast Air Quality District and Ozone Transport Commission requirements:

Siplast PA-917 LS Primer by Siplast; Irving, TX

2. Primer: An asphalt, solvent blend conforming to ASTM D 41 requirements:

Siplast PA-1125 Asphalt Primer by Siplast; Irving, TX

3. Primer for Self-Adhesive Sheets: A quick drying, low-VOC, water-based, high-tack primer specifically designed to promote adhesion of roofing and waterproofing sheets to approved substrates. Primer shall meet South Coast Air Quality District and Ozone Transport Commission requirements.

Siplast TA-119 Primer by Siplast; Irving, TX

D. Sealant: A moisture-curing, non-slump CA sealant designed for roofing applications. The sealant shall be approved by the roof membrane manufacturer for use in conjunction with the roof membrane materials.

Acceptable types are as follows:

Siplast PS-304 Elastomeric Sealant by Siplast; Irving, TX

E. Ceramic Granules: No. 11 grade specification ceramic granules of color scheme matching the granule surfacing of the finish ply.

F. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.5 AUXILIARY ROOFING SYSTEM COMPONENTS

A. Expansion Joints: Provide factory fabricated weatherproof, exterior covers for expansion joint openings consisting of flexible rubber membrane, supported by a closed cell foam to form flexible bellows, with two metal flanges, adhesively and mechanically combined to the bellows by a bifurcation process. Provide product manufactured and marketed by single-source membrane supplier that is included in the No Dollar Limit guarantee. Basis of Design: Expand-O-Flash.

B. Coping System: Manufacturer's factory fabricated coping consisting of a base piece and a snap-on cap. Provide product manufactured and marketed by single-source membrane supplier that is included in the No Dollar Limit guarantee. Basis of Design: Paraguard and Proform by Siplast

C. Fascia System: Manufacturer's factory fabricated fascia consisting of a base piece and a snap-on cover. Provide product manufactured and marketed by single-source membrane supplier that is included in the No Dollar Limit guarantee. Basis of Design: : Paraguard and Proform by Siplast

D. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim." Berridge Metals

E. Replacement Roof Drains

1. Replacement roof drains to be furnished with appropriate fasteners (min. S.S.) and neoprene gaskets. Include coated, cast iron collars and domes. Include all required hardware. Replacement drain model to be compatible

to concrete slab installation.

- a. JR Smith # 1015-C-R-CID
- b. Watts # RD -100-B-D-F-K
- c. Zurn #ZC - 100-EA-C-R

2.6 WALKWAY PADS

A. Walktread: A prefabricated, puncture resistant polyester core reinforced, polymer modified bitumen sheet material topped with a ceramic-coated granule wearing surface.

Paratread by Siplast; Irving, TX

2.7 COVER BOARD

A. SecureRock 5/8". Must be provided by Roofing Manufacturer

2.8 ROOF INSULATION

A. General: Preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated. See Drawings for thickness R Value and tapered slopes required.

B. Polyisocyanurate: A closed cell, rigid polyisocyanurate foam core material, integrally laminated between glass fiber reinforced organic facer, in full compliance with ASTM C 1289, Type II, Class 1, Grade 2 (20 psi). Panels shall have a nominal thickness of 1 inch. Acceptable types are as follows:

Paratherm by Siplast; Irving, TX

2.9 TAPERED INSULATION

A. Polyisocyanurate Tapered Roof Insulation: Tapered panels and standard fill panels composed of a closed cell, rigid polyisocyanurate foam core material, integrally laminated between glass fiber reinforced organic facers, in full compliance with ASTM C 1289, Type II, Class 1, Grade 2 (20 psi)]. The tapered system shall provide for a roof slope of 1/8 and 1/4 inch per foot (refer to drawings). Acceptable types are as follows.

Tapered Paratherm by Siplast; Irving, TX

2.10 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.

3 EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions for compliance with requirements affecting performance of roofing system:

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

C. Reference 01 21 3 Weather Delays for criteria that affects installation.

3.2 DECK PREPARATION

A. Clean and remove from substrate sharp projections, dust, debris, moisture, and other substances detrimental to roofing installation in accordance with roofing system manufacturer's written instructions.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.

C. Prime surface of concrete deck with asphalt primer at a rate recommended by roofing manufacturer and

allow primer to dry.

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

3.3 RE-ROOF MATERIAL PREPARATION

A. Remove all existing roofing membranes, surfacing, coverboards, insulation, fasteners, asphalt, pitch, adhesives, etc.

B. Remove an area no larger than can be re-roofed in one day. Coordinate existing roofing material demolition and removal with new roofing material installation in all areas where hazardous materials remediation is involved.

C. Tear out all base flashings, counterflashings, pitch pans, pipe flashings, vents and like components necessary for application of new membrane.

D. Remove abandoned equipment curbs, skylights, smoke hatches, and penetrations. Remove curbs that are to be replaced and/or reoriented for equipment to remain.

1. Install decking to match existing as directed by Owner's Representative.

E. Raise (disconnect by licensed craftsmen, if necessary) all HVAC units and other equipment supported by curbs to conform with the following:

1. Modify curbs as required to provide a minimum 8" base flashing height measured from the surface of the new membrane to the top of the flashing membrane.

2. Nail top of flashing and install new metal counterflashing prior to re-installation of unit.

3. Perimeter nailers must be elevated to match elevation of new roof insulation.

F. Immediately remove all debris from roof surface. Demolished roof system may not be stored on the roof surface.

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

3.4 INSULATION INSTALLATION

A. Coordinate installation of roof system components so insulation and cover board is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system manufacturer's written instructions for installation of roof insulation and cover board.

C. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes greater than 45 degrees per manufacturer's instruction.

D. Install tapered insulation under area of roofing to conform to slopes indicated.

E. Install insulation boards with long joints in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with like material.

F. Install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

G. Trim surface of insulation boards where necessary at roof drains so completed surface is flush and does not restrict flow of water.

H. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

I. Adhered Insulation: Install each layer of insulation and cover board and adhere to substrate as follows:

1. Install each layer in a two-part urethane adhesive according to roofing system manufacturer's instruction.

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

3.5 COVER BOARD INSULATION

A. Coordinate installing membrane roofing system components so cover board is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with membrane roofing system manufacturer's written instructions for installing roof cover board.

- C. Install cover board with long joints of cover board in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with cover board.
 - 1. Cut and fit cover board within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- D. Trim surface of cover board where necessary at roof drains so completed surface is flush and does not restrict flow of water.
 - 1. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- E. Adhered Cover Board: Adhere cover board to substrate as follows:
 - 1. Install in a two-part urethane adhesive according to roofing system manufacturer's instruction.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.6 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane in accordance with roofing system manufacturer's written instructions, applicable recommendations of the roofing manufacturer and requirements in this Section.
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Where roof slope exceeds 1/2 inch per 12 inches (1:24), contact the membrane manufacturer for installation instructions regarding installation direction and back-nailing.
- D. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.
- E. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- F. Substrate-Joint Penetrations: Prevent roofing asphalt from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.

3.7 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install one layer modified bituminous roofing membrane base sheet directly onto the primed and prepared roof deck for waterproofing protection during and after demolition procedures, one intermediate ply sheet over the insulation and cover board, and one granulated cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
 - 1. Adhere to substrate in cold-applied adhesive according to roofing system manufacturer's instruction.
 - 2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids by **HOT AIR WELDING ONLY**
 - 1. Repair tears and voids in laps and lapped seams not completely sealed.
 - 2. Apply roofing granules to cover exuded bead at laps while bead is hot.
- C. Install roofing membrane sheets so side and end laps shed water.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.
- E. All work to be coordinated with hazardous materials removal procedures.

3.8 FLASHING AND STRIPPING INSTALLATION

A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:

1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 2. Backer Sheet Application: Install backer sheet and adhere to substrate in approved adhesive applied at rate required by roofing system manufacturer.
 3. Flashing Sheet Application: Adhere flashing sheet to substrate in approved adhesive applied at rate required by roofing system manufacturer.
- B. Extend base flashing up walls or parapets a minimum of 8 inches (200 mm) above roofing membrane and 4 inches (100 mm) onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
1. Seal top termination of base flashing with a strip of glass-fiber fabric set in Siplast Flashing cement.
- D. Roof Drains: Set a 30-by-30-inch, 4 lb. lead flashing sheet in a bed of Siplast Flashing Cement on completed roofing membrane. Cover metal flashing with roofing membrane cap-sheet stripping and extend a minimum of 4 inches (100 mm) beyond edge of metal flashing onto field of roofing membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
- E. Roof Drains: Flash drain using manufacturers approved system. Clamp roofing membrane, flashing, and stripping into roof-drain clamping ring.
1. Install stripping according to roofing system manufacturer's written instructions.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.9 WALKWAY INSTALLATION

- A. Walkway Pads: Install walkway pads using units of size indicated or, if not indicated, of manufacturer's standard size according to walkway pad manufacturer's written instructions.
- B. Walkway Cap Sheet Strips: Install roofing membrane walkway cap sheet strips over roofing membrane in cold-applied adhesive.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.10 FIELD QUALITY CONTROL

- A. Not used.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's Registered Roof Observer (RRO) to inspect roofing installation on completion and submit report to Architect.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.11 PROTECTION AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- C. Remove all debris, misc. canisters, tools, materials, roofing fasteners, plates etc. from roof and site prior to demobilization. Debris to be disposed of in proper, licensed containers. Utilization of owner refuse containers is prohibited (unless provided permission from owner in writing).

END OF SECTION 07 52 16

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Coping/Wall Caps.
- B. Counterflashings over base flashings.
- C. Counterflashings for roof hatches.
- D. Counterflashings at roof mounted equipment and vent stacks.

1.2 RELATED SECTIONS

- A. Related Sections include the following:
 - 1. Section 07 54 23 “Membrane Roofing Systems” for thermal and moisture protection.
 - 2. Section 06 10 53 “Miscellaneous Rough Carpentry”

1.3 SUBMITTALS

- A. Submit under provisions of Section 0130 00.
- B. Product Data: Color chart and information about factory coating.
- C. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with standard details and requirements.

1.5 QUALIFICATIONS

- A. Fabricator and Installer: Company specializing in sheet metal flashing work with 5 years experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack performed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials which may cause discoloration or staining.

1.7 WARRANTY

- A. Provide a warranty against defects in workmanship and material for a period of 2 years.

PART 2 - PRODUCTS

2.1 SHEET MATERIALS

A. Galvanized Steel: ASTM A653/A653M; structural steel sheet, G90 (Z275) zinc coating; 24 gauge, or as otherwise indicated on drawings.

B. Pre-Finished Galvanized Steel: ASTM A446, Grade A, G90 zinc coating; minimum thickness 24 gage core steel, shop pre-coated with fluoropolymer coating color as selected from manufacturer's standard, equal to PAC-CLAD by Petersen Aluminum; color as selected from manufacturer's standard.

2.2 ACCESSORIES

A. Fasteners: Same material and finish as flashing metal.

B. Slip Sheet: Rosin sized building paper.

C. Primer: Compatible with TPO roofing membrane.

D. Protective Backing Paint: Compatible with TPO roofing membrane.

E. Sealant: Elastomeric Sealant as approved by selected TPO system roofing manufacturer for use in sealing metal roof edge flashing joints in contact with TPO membrane. Material shall meet ASTM C-920-87, Type S Grade NS, Class 25 testing standards.

2.3 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects. Coated metal shall be formed in accordance with construction details and SMACNA guidelines.

B. Fabricate cleats of same material as sheet, minimum 1.25 inches wide, interlockable with sheet.

C. Form pieces in longest possible lengths.

D. Hem exposed edges on underside ½ inch; miter and seam corners.

E. Form material with standing seams.

F. Pre-tin edges of sheets to be soldered. Solder shop formed metal joints. After soldering, remove flux. Wipe and wash solder joints clean. Weather seal joints.

G. Fabricate corners from one piece with minimum 18 inch long legs; seam solder for rigidity, seal with sealant.

H. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

I. Fabricate flashings to allow toe to extend minimum 4 inches over roofing. Return and brake edges. Coated metal base flashings must be formed with a 1" cant.

J. Form sheet metal pans (pitch pockets) 2 inches wider than item penetrating roof with 3 inch upstand, and 4 inch flanges.

2.4 FINISH

A. Back paint concealed metal surfaces with protective backing paint compatible with TPO membrane to a minimum dry film thickness of 15 mil.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, reglets in place, and nailing strips located.

B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.2 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.

3.3 INSTALLATION

- A. Conform to the drawing details of the SMACNA manual.
- B. Insert wall flashings into exposed wall surfaces (not covered by TPO membrane) into reglets to form tight fit. Secure in place with lead wedges. Pack remaining spaces with lead wool. Seal flashings into reglets with sealant.
- C. Apply plastic cement compound between metal flashings and felt flashings where applicable.
- D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal joints watertight for aluminum and prefinished galvanized metal.
- F. For copper, galvanized steel, and stainless steel solder metal joints for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.
- G. Not used.
- H. Seal metal joints watertight.
- I. Sheet metal flashing sections used for counterflashings and copings shall be butted together with a 1/4" gap to allow for expansion and contraction. Strip to both sides of the joint, with approximately 1" on either side of the joint left unwelded to allow for expansion and contraction. 2" wide aluminum tape can be installed over the joint as a bond-breaker to prevent welding in this area.
- J. Sheet metal used for counterflashings and copings shall be overlapped or provided with separate metal pieces to create a continuous flange condition, and pop-riveted securely.
- K. Sheet metal flashings are nailed to treated wood nailers or otherwise mechanically attached to the roof deck, or to the wall or curb substrate, in accordance with construction detail requirements.

END OF SECTION

SECTION 07 92 00
SEALANTS AND CAULKING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Substrata surface preparation.
- B. Sealant and Caulking backing.
- C. Sealant and Caulking for general construction. Reference Section 07 54 23 “Membrane Roofing Systems” for sealants specified for use with TPO membrane roofing system.

1.2 RELATED SECTIONS

- A. Related Sections include the following:
 - 1. Section 07 71 23 “Manufactured Gutters and Downspouts”
 - 2. Section 09 51 23 “Acoustical Ceilings” for temporary removal and replacement of acoustical ceilings, for ceiling repairs, and for new ceiling installations.
 - 3. Section 09 90 00 “Painting” for painting and finishing.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Manufacturers literature describing materials and application recommendations including requirements for joint preparation and primers.
- C. Samples:
 - 1. Submit color samples.

1.4 WARRANTY

- A. Warranty period for this work is for two years for cracking, spalling, leaching, delamination, disintegration, and durability by the manufacturer and applicator for material and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Tremco Incorporated, Beachwood, OH.
- B. Pecora Corporation, Harleysville, PA.
- C. Sonneborn Building Products, Chem Res Inc., Minneapolis, MN.
- D. Firestone, Carmel, IN.

2.2 MATERIALS

- A. Exterior and interior joints subject to movement gun-grade polyurethane sealant shall be one of the following types:

1. Tremco "Vulkem 921".
2. Pecora "Dynatrol I-XL".
3. Sonneborn "Sonolastic NP 2".

B. Interior/Exterior self-leveling polyurethane for horizontal joints shall be one of the following types:

1. Firestone "Pourable Sealant".
2. Tremco "Vulkem 45".
3. Pecora "NR-201 Urexpan".
4. Sonneborn "Sonolastic SL1".

C. Joint Filler: Shall be ethafoam backer rod extruded polyurethane foam as manufactured by Dow Chemical Corporation. In joints too small to use rod type backing material, architectural release tape shall be substituted.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify joint dimensions, physical, and environmental conditions are acceptable to receive work of this section.
- B. Beginning of installation means acceptance.

3.2 PREPARATION

- A. Clean, prepare, and size joints in accordance with manufacturers instructions. Remove any loose materials and other foreign matter which might impair adhesion of sealant.
- B. Verify that joint shaping materials and release tapes are compatible with sealant.
- C. Examine joint dimensions and size materials to achieve required width/depth ratios.
- D. Use joint filler to achieve required joint depths, to allow sealants to perform properly.
- E. Use bond breaker where required.

3.3 INSTALLATION

- A. Perform work in accordance with ASTM C804 for solvent release and C790 for latex base sealants.
- B. Install sealant in accordance with manufacturers instructions.
 1. Remove all loose, deteriorated, or non-pliable caulking and sealants at window and door heads, jambs and sills and replace using methods and procedures indicated in this Section 07 92 00 Sealants and Caulking of these specifications.
 2. Remove all loose, deteriorated, or non-pliable caulking sealants and expansion joint filler material at vertical wall offsets. Replace with new pre-molded foam expansion joint filler and reseal using proceeding and foam methods appropriate for the location and as indicated in this Section 07 92 00 Sealants and Caulking.
- C. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.
- D. Tool joints concave or as indicated.
- E. Joints: Free of air pockets, foreign embedded matter, ridges, and sags.

END OF SECTION

SECTION 084523
FIBERGLASS-SANDWICH-PANEL ASSEMBLIES
This section is applicable to the Add Alternate No. 3

PART 1 - GENERAL

1.1.1.1 SUMMARY

1.1.1.A. Section includes the replacement insulated sandwich panel system that are to be installed in the existing structural frame. Replacement panels must be compatible with the existing frame in place. Work includes providing and installing:

1.1.1.B. Related Sections:

1.1.1.2 SUBMITTALS

1.1.2.A. Submit manufacturer's product data. Include construction details, material descriptions, profiles and finishes of components.

1.1.2.B. not used

1.1.2.C. Submit shop drawings. Include plans, elevations and details.

1.1.2.D. Submit manufacturer's color charts showing the full range of colors available for factory finished aluminum.

1.1.2.D.1. When requested, submit samples for each exposed finish required, in same thickness and material indicated for the work and in size indicated below. If finishes involve normal color variations, include sample sets consisting of two or more units showing the full range of variations expected.

1.1.2.D.1.a. Sandwich panels: size to coordinate with existing framework.

1.1.2.E. Submit Installer Certificate, signed by installer, certifying compliance with project qualification requirements.

1.1.2.F. Submit product reports from a qualified independent testing agency indicating that the replacement panels comply with the project performance requirements, based on comprehensive testing of current products. Previously completed reports will be acceptable if for current manufacturer and indicative of products used on this project.

1.1.2.F.1. Reports required (if applicable) are:

1.1.2.F.1.a. International Building Code Evaluation Report (AC 177)

1.1.2.F.1.b. Flame Spread and Smoke Developed (UL 723) – Submit UL Card

1.1.2.F.1.c. Burn Extent (ASTM D 635)

1.1.2.F.1.d. Color Difference (ASTM D 2244)

1.1.2.F.1.e. Impact Strength (UL 972)

1.1.2.F.1.f. Bond Tensile Strength (ASTM C 297 after aging by ASTM D 1037)

1.1.2.F.1.g. Bond Shear Strength (ASTM D 1002)

1.1.2.F.1.h. not used

1.1.2.F.1.i. Insulation U-Factor (NFRC 100)

1.1.2.F.1.j. NFRC System U-Factor Certification (NFRC 700)

1.1.2.F.1.k. Solar Heat Gain Coefficient (NFRC or Calculations)

1.1.2.F.1.l. Condensation Resistance Factor (AAMA 1503) (Thermally Broken only)

1.1.2.F.1.m. Air Leakage (ASTM E 283)

1.1.2.F.1.n. Structural Performance (ASTM E 330)

1.1.2.F.1.o. Water Penetration (ASTM E 331)

1.1.2.F.1.p. 1200°F Fire Resistance (SWRI)

- 1.1.2.F.1.q. ASTM E1886/1996 or TAS 201, 202 and 203 (Optional-Windborne Debris)
- 1.1.2.F.1.r. not used.
- 1.1.2.F.1.s. Fall Through Resistance (ASTM E 661) (Optional)
- 1.1.2.F.1.t. Class A Roof Covering Burning Brand (ASTM E 108) (Roof/Skylight only)
- 1.1.2.F.1.u. UL Listed Class A Roof System (UL 790) (Optional) – Submit UL Card
- 1.1.2.F.1.v. not used
- 1.1.2.F.1.w. not used

1.1.1.3 CLOSEOUT SUBMITTALS

- 1.1.3.A. Provide field maintenance manual to include in project maintenance manuals.

1.1.1.4 QUALITY ASSURANCE

1.1.4.A. Manufacturer's Qualifications:

1.1.4.A.1. Material and products shall be manufactured by a company continuously and regularly employed in the manufacture of specified materials for a period of at least ten consecutive years and which can show evidence of those materials being satisfactorily used on at least six projects of similar size, scope and location. At least three of the projects shall have been in successful use for ten years or longer.

1.1.4.A.2. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an accredited agency.

1.1.4.A.3. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components and production sandwich panels for conformance with AC177 "Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems" as issued by the ICC-ES.

1.1.4.B. Installer's Qualifications: Installation shall be by an experienced installer, which has been in the business of installing specified panel systems for at least two consecutive years and can show evidence of satisfactory completion of projects of similar size, scope and type.

1.1.1.5 PERFORMANCE REQUIREMENTS

1.1.5.A. The manufacturer shall be responsible for the configuration and fabrication of the replacement panels system.

1.1.5.A.1. When requested, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.1.5.A.2. Standard panel system shall have less than 0.01 cfm/ft² air leakage by ASTM E 283 at 6.24 PSF (50 mph) and no water penetration by ASTM E 331 at 15 PSF; and structural testing by ASTM E 330.

Insert structural loads, as determined by project's structural engineer in subparagraphs below.

Insert all loads in PSF, not wind speed.

1.1.5.C. Deflection Limits:

Based on project conditions or requirements of authorities having jurisdiction, more stringent deflection criteria than those specified in options in subparagraphs below may be required. Building codes include different deflection criteria depending on whether panel assemblies are classified as components and cladding or as part of the main wind-force-resisting system (for example, where a panel assembly is the structural roof). For discussion of deflection criteria, see "Deflection" Article in the Evaluations in Section 084500 "Translucent Wall and Roof Assemblies."

1.1.5.C.1. Wall Panel Assemblies: not used

1.1.5.C.2. Roof/Skylight Panel Assemblies: Limited to L/60 of clear span for each assembly component.

1.1.1.6 DELIVERY, STORAGE AND HANDLING

1.1.6.A. Deliver panel, components and materials in manufacturer's standard protective packaging.

1.1.6.B. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.

1.1.1.7 WARRANTY

1. Up to 5 years Materials and Workmanship.

2. Up to 10 years Limited Warranty covering separation of faces from grid core affecting structural strength, reinforcing fiberbloom and/or abnormal color change of the exterior face sheet.

3. Up to 20 years Limited Warranty against reinforcing fiberbloom.

1.1.7.A. Provide manufacturer's and installer's written warranty agreeing to repair or replace panel system work, which fails in materials or workmanship within one year from the date of delivery. Failure of materials or workmanship shall include excessive deflection, deterioration of finish on metal in excess of normal weathering, defects in accessories, insulated translucent sandwich panels and other components of the work.

PART 2 - PRODUCTS

2.1.1.1 MANUFACTURER

1.1.1.A. The basis for this specification is for products manufactured by Kalwall Corporation. Other manufacturers may bid this project subject to compliance with the performance requirements of this specification and submission of evidence thereof. Listing other manufacturers' names in this specification does not constitute approval of their products or relieve them of compliance with all the performance requirements contained herein.

1.1.1.B. Kalwall Corporation, Tel: (800) 258-9777 – Fax: (603) 627-7905 – Email: info@kalwall.com

2.1.1.2 PANEL COMPONENTS

1.1.2.A. Face Sheets:

1.1.2.A.1. Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.

1.1.2.A.1.a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.

1.1.2.A.1.b. Face sheets shall not deform, deflect or drip when subjected to fire or flame.

1.1.2.A.2. Interior face sheets:

1.1.2.A.2.a. Flame spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 25 and smoke developed no greater than 250 when tested in accordance with UL 723.

1.1.2.A.2.b. Burn extent by ASTM D 635 shall be no greater than 1”.

1.1.2.A.3. Exterior face sheets:

1.1.2.A.3.a. Color stability: Full thickness of the exterior face sheet shall not change color more than 3 CIE Units DELTA E by ASTM D 2244 after 5 years outdoor South Florida weathering at 5° facing south, determined by the average of at least three white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.

Hi-Impact color is available in white only.

1.1.2.A.3.c. Strength: Exterior face sheet shall be uniform in strength, with panel meeting ASTM E1996 and ASTM E1886 or TAS 201, 202 and 203.

1.1.2.A.3.d. Erosion Protection: Integral, embedded-glass erosion barrier.

1.1.2.A.4. Appearance:

CAUTION: Face sheet colors affect solar properties. Refer to Light Transmission/SGHC chart.

Exterior face sheets:

Standard exterior face sheet is .070" thick and is available in standard White or Crystal (Match original panel finish).

Standard interior face sheet, either flame spread, is .045" thick and is available in White or Crystal (Match original panel finish).

1.1.2.B.1. Aluminum I-beam grid core shall be of 6063-T6 or 6005-T5 alloy and temper with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of I-beam shall be no less than 7/16".

1.1.2.B.2. I-beam Thermal break: Minimum 1", thermoset fiberglass composite.

1.1.2.C. Laminate Adhesive:

1.1.2.C.1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council "Acceptance Criteria for Sandwich Panel Adhesives".

1.1.2.C.2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C 297 after two exposures to six cycles each of the aging conditions prescribed by ASTM D 1037.

1.1.2.C.3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:

1.1.2.C.3.a. 50% Relative Humidity at 68° F: 540 PSI

1.1.2.C.3.b. 182° F: 100 PSI

1.1.2.C.3.c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI

1.1.2.C.3.d. Accelerated Aging by ASTM D 1037 at 182° F: 250 PSI

2.1.1.3 PANEL CONSTRUCTION

1.1.3.A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.

1. Panel thickness to be compatible with existing frame.

2.1.1.4 BATTENS AND PERIMETER CLOSURE SYSTEM

Note: Wall closure system - There are several alternative system designs with varying structural, thermal and aesthetic properties available including back-fasten closure system, wide battens, structural battens and concealed fasteners.

Delete one of the following two paragraphs if not applicable.

Select Standard or Thermally Broken for wall closure system.

1.1.4.A. Closure system (Roof/Skylight):

1.1.4.A.1. Extruded aluminum 6063-T6 and 6063-T5 alloy and temper clamp-tite screw type closure system.

1.1.4.A.2. not used.

1.1.4.A.3. Skylight perimeter closures at curbs shall be factory sealed to panels.

1.1.4.B. not used.

1.1.4.C. Sealing tape: Manufacturer's standard, pre-applied to closure system at the factory under controlled conditions.

1.1.4.D. Fasteners: 300 series stainless steel screws for aluminum closures, excluding final fasteners to the building.

1.1.4.E. Finish: Match existing system.

PART 3 - EXECUTION

3.1.1.1 EXAMINATION

1.1.1.A. Installer shall examine substrates, supporting structure and installation conditions.

1.1.1.B. Do not proceed with panel installation until unsatisfactory conditions have been corrected.

3.1.1.2 PREPARATION

1.1.2.A. Metal Protection:

1.1.2.A.1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.

1.1.2.A.2. Where aluminum will contact concrete, masonry or pressure treated wood, protect against corrosion by painting contact surfaces with bituminous paint or method recommended by manufacturer.

3.1.1.3 INSTALLATION

1.1.3.A. Install the panel system in accordance with the manufacturer's suggested installation recommendations and approved shop drawings.

1.1.3.A.1. Anchor component parts securely in place by permanent mechanical attachment system.

1.1.3.A.2. Accommodate thermal and mechanical movements.

1.1.3.A.3. Reseal existing perimeter framing in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction as required. Flash new roof system to perimeter framing.

1.1.3.B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturers suggested installation instructions.

3.1.1.4 FIELD QUALITY CONTROL (Roof/Skylight)

1.1.4.A. Water Test: Installer to test skylights according to procedures in AAMA 501.2.

1.1.4.B. Repair or replace work that does not pass testing or that is damaged by testing and retest work.

3.1.1.5 CLEANING

1.1.5.A. Clean the panel system interior and exterior, immediately after installation.

1.1.5.B. Refer to manufacturer's written recommendations.

END OF SECTION 084523

SECTION 08 62 00
UNIT SKYLIGHTS

This section is applicable to the Add Alternate No. 2

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes preformed plastic skylights for use as replacement units for existing building skylights (7) Total units.

B. Related Sections include:

1. Section 02 41 19 "Selective Demolition"
2. Section 06 10 53 "Miscellaneous Rough Carpentry"
3. Section 07 54 23 "Membrane Roofing Systems"
4. Section 07 62 00 "Sheet Metal Flashing & Trim"
5. Section 07 92 00 "Sealants and Caulking"
6. 09 90 00 "Painting"

1.2 SUBMITTALS

A. Product Data: Submit information on configurations, fastening methods, installation details, and structural, thermal, and daylighting performance values.

1.3 QUALITY ASSURANCE

A. Test and label unit skylights in accordance with AAMA 101, including performance grade for positive and negative wind pressure.

B. Light Transmitting Plastics: Class CC1 defined by applicable code when tested in accordance with ASTM D635 in thickness for intended use.

1. Self Ignition Temperature: Minimum 650 degrees F when tested in accordance with ASTM D1929.
2. Smoke Developed Index: Maximum 450 when tested in accordance with ASTM E84 or maximum 75 when tested in accordance with ASTM D2843 in thickness for intended use.

PART 2 - PRODUCTS

2.1 PLASTIC UNIT SKYLIGHTS

A. Product Description: Factory-assembled glazing in aluminum frame; double dome; set in aluminum frame; without curb, size to fit new contractor provided curb. Minimum U-factor 0.43. Minimum SHGC range .15-.30.

2.2 COMPONENTS

A. Double Glazing: Acrylic plastic; factory sealed; rectangular domedshape.

1. Outer Glazing: White translucent.
2. Inner Glazing: Clear transparent.

B. Frame: ASTM B221 Extruded aluminum and welded corner joints, integral curb frame mounting flange to receive roofing flashing system, with integral condensation drainage gutter, glazing retainer; clear anodized finish.

2.3 ACCESSORIES

- A. Anchorage Devices: Type recommended by manufacturer, exposed to view.
- B. Integral Sealants: Manufacturer's recommended sealants integral with unit skylight installation; nonhardening, nonskinning, nondrying, nonmigrating butyl based sealants.

2.4 FABRICATION

- A. Fabricate free of visual distortion and defects.
- B. Fabricate to achieve leakproof, weathertight assembly.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify openings and substrate conditions are ready to receive work of this section.

3.2 INSTALLATION

- A. Coordinate with installation of roofing system and related flashings.
- B. Apply backing paint on aluminum surfaces of units in contact with cementitious materials or dissimilar metals.
- C. Final installation to be weathertight.
- D. Provide new skylight unit curbs minimum 8" high above new finished roof surface.

END OF SECTION

SECTION 09 51 23
ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.01 SCOPE:

A. Furnish all labor, materials, tools and equipment necessary to install and finish all acoustical ceilings shown on the drawings and as specified herein.

1.02 RELATED SECTIONS INCLUDE THE FOLLOWING:

A. Section 02 41 19 "Selective Demolition"

B. not used

C. Section 07 92 00 "Sealants and Caulking"

D. Division 15 - Mechanical: Coordination of ceiling installation with mechanical apparatus installed in ceiling.

E. Division 16 - Electrical: Coordination of ceiling installation with light fixture installation and other electrical apparatus.

1.03 SUBMITTALS:

A. Make submittals of acoustical system in accordance with Section 01 33 23 - Submittals.

1. Submit manufacturer's recommendations for installation of the suspension system.

2. Submit manufactured components of the system.

3. Submit samples of the acoustical tile for approval.

1.04 MAINTENANCE MATERIALS:

Contractor must leave one [1] unopened carton of ceiling tile for future use by the Owner.

1.05 ENVIRONMENTAL CONDITIONS:

A. Do not install acoustical ceilings until skylights have been removed, roof deck openings have been sealed, closed and roofing system is installed and dust generating activities have terminated.

B. Maintain uniform temperatures of minimum 61° F and humidity of twenty to forty [20% to 40%] percent prior to, during, and after installation.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING:

A. Deliver materials in original, unopened, protective packaging with manufacturer's labels indicating brand name, pattern, size, thickness and fire-rating as applicable, legible and intact.

B. Store materials in original protective packaging to prevent soiling, physical damage or wetting.

C. Store cartons open at each end to stabilize moisture content and temperature.

D. Do not begin installation until sufficient materials to complete a room are received.

PART 2 - PRODUCTS

Acoustical ceilings shall be non-directional, non-regular fissured design lay-in panels equal to Armstrong, fine fissured white finish.

A. Suspended Acoustic Ceiling Tiles: Match existing ceiling in areas disturbed or use the following replacement system:

1. Armstrong Fine Fissured #1729 with Humiguard Plus Performance and BioBlock paint on front and back of tile.

- a. 24" x 48" x 5/8" square lay in
- b. 15 Year Systems Warranty
- c. Fine Fissured Visual non directional
- d. Humiguard Plus Performance
- e. ASTM E84, Flame Spread 25 or less
- f. Must have mold and mildew inhibitor
- g. Light Reflectance Avg. .85
- h. Installed on Armstrong Prelude XL 15/16" grid

2.02 MATERIALS:

Acoustical material shall be wet-formed mineral fiber with factory applied latex paint finish.

2.03 SUSPENSION SYSTEMS:

A. Suspension Systems:

Typical acoustical lay-in ceilings will have an exposed grid system of white baked enamel metal equal to Armstrong, 15/16" Prelude XL. Main tees shall be spaced 48" O.C. Cross-tees must be spaced 24" O.C., unless detailed otherwise. Acoustical units must be placed on flanges of the suspended members. Provide a baked white enamel angle support at wall edge, anchored to suspension system and wall. Hanger wire shall be double strand, 18-gauge, galvanized tie-wire, saddle tied. Provide extruded aluminum with white painted finish in moist locations. Provide hold-down clips at exterior installations. Space hangers at 3'-0" o.c.min. Space carrying channels at 4'-0" o.c.min.

B. See ASTM E 580-78 for seismic restraint for all suspended ceilings.

C. Suspension system components, hangers and fastening devices supporting lighting fixtures, ceiling grilles and acoustical units will have a maximum deflection of 1/360 of the span.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Install acoustical ceiling system in accordance with the manufacturer's recommendations to produce finished ceiling true to lines and levels, and free of warps, soiled areas and damage to grid and/or lay-in panels.

B. Install ceiling systems in a manner capable of supporting all superimposed loads.

C. Install only after major above-ceiling work is complete. Coordinate the location of the hangers with other work.

D. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest adjacent hangers and related carrying channels, as required, to span the requisite distance.

E. Supply hangers or inserts for installation to the respective section in ample time, and with clear instructions for their correct placement. Provide additional hangers and inserts as required.

- F. Hang independently of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of the longitudinal axis or face plane of adjacent members.
- G. Center ceiling systems on room axis, leaving equal border pieces, unless otherwise indicated.
- H. Do not support fixtures from or on main runners or cross-runners if weight of the fixture causes the total dead load to exceed the deflection capability. In such cases, support fixture loads by supplementary hangers located within six [6"] inches on each corner, or support the fixtures independently.
- I. Do not install fixtures so that main runners and cross-runners will be eccentrically loaded. Provide stabilizer bars where fixture installation would produce rotation of runners.
- J. Install edge mouldings at intersection of ceiling and vertical surfaces, using maximum lengths, straight, true to line, and level. Miter corners. Provide edge mouldings at junctions with other ceiling finishes. Where bullnose concrete block corners occur, provide pre-formed closers to match edge moulding.
- K. Fit acoustic lay-in panels in place, free from damaged edges or other defects detrimental to appearance and function. Lay directionally patterned tile one way with pattern parallel to longest room axis. Fit border units neatly against abutting surfaces.
- L. Install lay-in panels level, in uniform plane and free from twists, warps or dents.

3.02 ADJUSTMENTS:

- A. Adjust any sags or twists which develop in the ceiling system and replace any part which is damaged or faulty.
- B. Clean soiled or discolored unit surfaces after installation.
- C. Touch up scratches, abrasions, voids and any other defect in the painted surfaces.

END OF SECTION

SECTION 09 90 00
PAINTING

PART 1 - GENERAL

1.01 SCOPE:

Furnish all labor, materials, tools and equipment necessary to complete priming, painting, and touch up of new material surfaces that are installed without a factory finish or existing construction that has been damaged or soiled as a result of new construction.

A. Refer to article 3.05 for scope of painting.

B. Exercise care and use adequate drop cloths and other measures to protect existing adjacent building finishes and building occupants property.

C. Minor Repairs

The Contractor is expected to make minor repairs in the execution of this work. Minor repairs are defined as those items less than ½ square foot in areas that must be patched before the surface can be properly coated.

1.02 SUBMITTALS:

A. Make submittals in accordance with Section 01 33 23 - "Submittals"

B. Materials List:

1. Product Data: Before any paint materials are delivered to the job site, for each paint material proposed to be furnished and installed under this portion of the work, submit a complete list of all materials.

C. Manufacturer's Recommendations:

In each case where material proposed is not the material specified or specifically described as an acceptable alternative in this section of these specifications, submit for review the current recommended method of application published by the manufacturer of the proposed material.

D. Color Samples:

1. Prepare at the project site, on material, whenever possible, the same as that on which the coating will be applied in the work.

2. Make samples not less than twelve [12"] inches square.

3. Submit two [2] samples for each color and material.

4. Colors as selected by Architect.

E. Paint Record

Upon completion of this paintwork, the Contractor shall supply the Owner with a dry sample for each color of field paint applied and a dry sample for each color of paint applied. This requirement does not apply to white, black, or aluminum colors nor to standard safety / information colors; e.g., fire red, warning yellow, etc. The Contractor is also responsible for supplying the Owner with the locations, color, description, and formula of the paint on a written or typed 3" x 5" index card for record purposes.

1.03 QUALITY ASSURANCE:

A. All areas of completed work must be inspected and approved by the Architect.

B. Any warranties on products or finished work shall be included in the close-out documents provided by the contractor.

C. Field Quality Control:

1. Request review by the Architect of first finished room, space and item of each color scheme for color, texture and workmanship.
2. Use first acceptable room, space and item as project standard for each color scheme.
- c) The Owner's Representative will verify this experience through references and interviews of the spray operator prior to the painting.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING:

A. Delivery of Materials:

1. Deliver all paint materials to the job site in their original, unopened containers with all labels intact and legible at time of use.

B. Storage of Materials:

1. Store only acceptable project materials on project site.
2. Store in a suitable location.
3. Restrict storage to paint materials and related equipment only.
4. Comply with health and fire regulations.

1.05 JOB CONDITIONS:

A. Environmental Requirements:

1. Comply with manufacturer's recommendations as to environmental conditions under which coating and coating systems can be applied.
2. Do not apply finish in areas where dust is being generated.

B. Protection:

Cover or otherwise protect finished work of other trades and surfaces not being painted concurrently or not to be painted.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Manufacturer:

1. Subject to compliance with requirements, paint materials listed herein, unless otherwise designated in the Room Finish Schedule or other sections of this specification shall be:
 - a) Farrell Calhoun Paint Company
 - b) PPG Industries, Pittsburgh Paints/ Porter Paints.
 - c) The Sherwin-Williams Company
 - d) Benjamin Moore & Company
 - e) Pratt and Lambert

f) Burk-Hall

2.02 COLORS:

The colors of the paint product to be used will be selected by the Architect.

2.03 MANUFACTURER'S INSTRUCTIONS

Notwithstanding the requirements of this specification, the manufacturer's instructions concerning the application/use of their product shall be adhered to. In cases where there is an apparent conflict in these instructions, the Contractor shall stop work until a resolution to the problem is determined.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into an acceptable condition through preparatory work as included in paragraph 3.02, "Preparation of Surfaces."
- B. Do not proceed with surface preparation or coating application until conditions are suitable.

3.02 PREPARATION OF SURFACES:

A. Gypsum Wallboard & Plaster:

- 1. Fill narrow, shallow cracks and small holes with spackling compound.
- 2. Rake deep, wide cracks and deep holes.
 - a. Dampen with clear water.
 - b. Fill with thin layer of drywall joint cement.
- 3. Allow to dry.
- 4. Sand smooth. Do not raise nap of paper on wallboard.

B. Ferrous Metal Surfaces:

- 1. Prepare surface in accordance with recommendations of directions of manufacturer of rust inhibitive primer.
- 2. Feather edges of sound paint by grinding if necessary.

C. Galvanized Metal:

- 1. Clean surface with mineral spirits to remove oily residue.
- 2. Dry with clean cloth.

D. Wood surfaces shall be sanded smooth and dust clean.

E. Interior Concrete Block and Concrete

- 1. Remove excess mortar from surfaces to be painted.
- 2. Fill voids with latex block filler.

3.03 APPLICATION:

A. General Requirements:

- 1. Do not apply initial coating until moisture content of surface is within limitations recommended by paint manufacturer.
- 2. Paint materials shall be applied in even coats without streaks, runs, sags or holidays. Previous coats of paint shall be thoroughly dry before applying succeeding coats and inspected by the Owner prior to re-coating.

3. Thinning of paint products will not be allowed, except as specifically recommended by the manufacturer for certain application procedures; i.e., spraying, and as approved by the Owner's representative.
4. Apply paint products only when the surface and air temperatures are between 50 and 90 deg. F., unless otherwise permitted by the manufacturer's printed instructions. Paint products shall not be applied when the relative humidity is more than 85%. Paint shall not be applied to damp surfaces or to wood surfaces containing more than 12% moisture.
 - a. Test with moisture meter.
5. Apply paint with suitable brushes, rollers, or spraying equipment. Coating of surfaces may be by brush, roller, or spray or dry fall.
 - a. Rate of application must not exceed that as recommended by paint manufacturer for the surface involved.
 - b. Keep brushes, rollers and spraying equipment, clean, dry, free from contaminants and suitable for the finish required.
 - c. Apply stain will be by brush or spray.
6. Number of Coats: The intent of this specification is that all surfaces mentioned shall have one primer and two finish coats of paint or varnish. All bare spots, spackling, and newly repaired areas shall be spot primed and receive two coats of paint or varnish.

Note: If the final coat of finish fails to retain gloss and coverage, the work shall be covered by additional coats or reworked entirely until the finish is uniform in appearance, and coverage is satisfactory to the Architect.
7. Comply with recommendations of product manufacturer for drying time between succeeding coats.
8. Slightly vary the color of successive coats.
9. Sand and dust between each coat to remove visible defects.
10. Finish coats must be smooth, free of brush marks, streaks, laps or pile up of paints, and skipped or missed areas.
 - a. Finished metal surfaces shall be free of skips, voids and pinholes in any coat when tested with a low voltage detector.
11. All necessary puttying of nail holes, cracks and blemishes in wood must be done after priming coat has become hard and dry. Putty shall match the shade of the finish coat.
12. Leave all parts of mouldings and ornaments clean and true to details with no undue amount of paint in corners and depressions.
13. Make edges of paint adjoining other materials and colors clean and sharp with no overlapping.
14. Apply primer on all work before glazing.
15. Refinish whole wall where portion of finish has been damaged or finish is not acceptable.

3.04 CLEAN-UP:

- A. Touch-up and restore finish where damaged.
- B. Remove spilled, splashed, or splattered paint from all surfaces.
- C. Do not mar surface finish of item being cleaned.
- D. Leave storage space clean and in condition required for equivalent spaces in project.

3.05 SCOPE OF PAINTING:

- A. Surfaces to be Painted:
 1. Interior and exterior surfaces added, soiled or damaged as a result of work associated with the Project Scope of Work including Add Alternates.
 2. Exterior ferrous or other corrosive metals, such as pipe rails, Steel stairs, ladders and ramps, and exposed on the roof steel fabrications.

3. Exposed Interior side of new exterior wall infill construction.

3.06 PAINTING SCHEDULE

Apply paint to surfaces as recommended by approved paint supplier. Furnish manufacturer's painting schedule for approval. Manufacturer Products listed below are basis of design specifications for all manufacturers:

A. EXTERIOR FERROUS METALS:

Prime Coat: PPG Speedhide Int/Ext Rust Inhibitive Primer, 6-208 Series.

Finish Coats: Two coats PPG Advantage 900

B. EXTERIOR CONCRETE:

Prime Coat: PPG PermaCrete Pigmented Masonry Primer 4-809

Finish Coats: Two coats PPG SunProof Exterior Satin Acrylic House & Trim Paint 76-45 Series.

All exterior concrete surfaces shall be pressured washed before prime coat is applied.

C. INTERIOR PLASTERBOARD (Including Gypsum Board and Plaster Surfaces):

Prime Coat: PPG Speedhide Interior Latex Primer Sealer, 6-208.

Finish Coats: Two coats PPG Speedhide Interior Eggshell Latex Enamel, 6-411 Series.

D. PAINT FINISH No. 11 - INTERIOR CONCRETE BLOCK and CONCRETE:

Prime Coat: Concrete Block - PPG Speedhide Int/Ext Latex Block Filler, 6-15 Speedhide Block filler. Concrete - PPG Speedhide Int/Ext Acrylic Alkali Resistant Primer, 6-603.

Finish Coats: Two coats PPG Speedhide Interior Lo-Sheen Alkyd, 6-90 Series.

E. PAINTED INTERIOR WOOD:

Prime Coat: PPG Speedhide Interior Alkyd Enamel Undercoater, 6-6.

Finish Coat: 2 coats PPG Advantage 900.

END OF SECTION



July 14, 2016

Mr. Steve Graves
Shelby County Health Department
814 Jefferson Ave.
Memphis, TN 38105

**RE: Asbestos Survey
Juvenile Court Building Roof
616 Adams Ave.
Memphis, TN 38105**

Dear Mr. Graves,

Enclosed please find the Asbestos Inspection Survey Report for the roof of the Juvenile Court Building located at 616 Adams Avenue in Memphis, Tennessee.

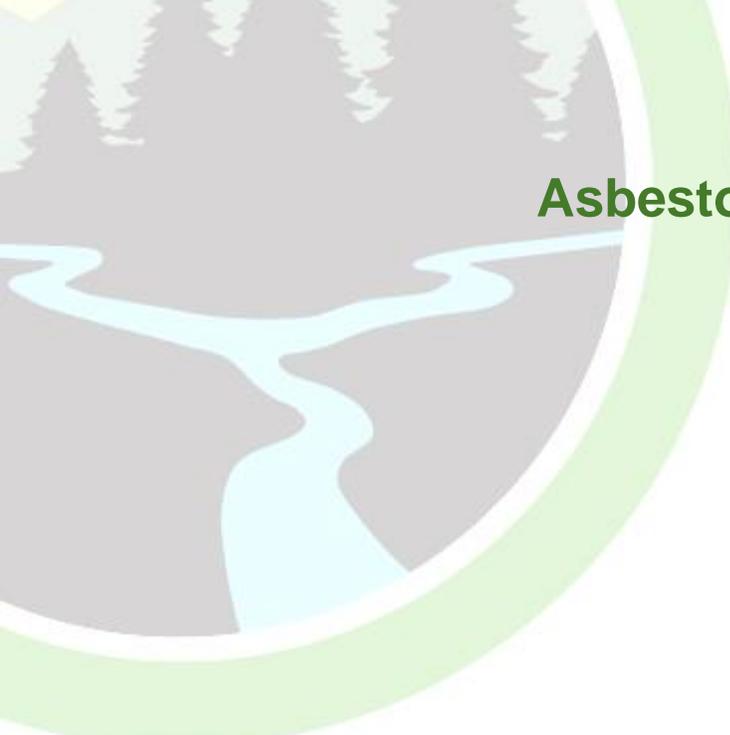
If you have any questions or if additional information is needed, please contact me at (662) 288-9569

Sincerely,
TIOGA ENVIRONMENTAL CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read "Phillip Gardner", is written over a horizontal line.

Phillip Gardner
Project Coordinator

cc: 22712.03



Asbestos Inspection Survey Report

**Juvenile Court Building Roof
616 Adams Avenue
Memphis, Tennessee 38105
June 2016
Project No. 22712.03**

Prepared For:

**Shelby County Health Department
814 Jefferson Avenue
Memphis, Tennessee 38105**

Prepared By:



357 North Main Street
Memphis, Tennessee 38103

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1.0 EXECUTIVE SUMMARY

The Juvenile Court Building is located at 616 Adams Avenue in Memphis, Tennessee. According to the Shelby County Health Department, the Property was likely constructed in the 1950's. As a result, it is assumed that this building has the potential to include asbestos containing materials (ACM).

This survey was requested by the Shelby County Health Department for the purpose of having a comprehensive document that identifies and lists all potential asbestos containing materials on and around the roof that may be disturbed as part of a roof replacement project. Additionally, completing this survey provides necessary documentation ensuring compliance with the U.S. Environmental Protection Agency (EPA), Tennessee Department of Environment & Conservation (TDEC), and Occupational Safety and Health Administration (OSHA) regulations.

The primary objective in undertaking and completing this survey is to identify and document the presence and estimate the quantities of any asbestos-containing materials (ACM) impacting a roof replacement project at 616 Adams Avenue in Memphis, Tennessee. This information is critical in minimizing asbestos fiber exposure to building occupants during any renovation or demolition activities in areas with identified ACM to ensure compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) and OSHA regulations.

During the inspection, the inspector collected 62 individual samples from 20 distinct materials and received a result for each individual material sampled. This report documents the findings of this comprehensive asbestos survey. The details regarding this survey and sampled materials are contained in Section 4.0 of this Report. There were ACM identified, and the following summary provides an overview of the findings, including the estimated quantity of ACM expected to be disturbed as part of the renovation.

616 Adams Avenue Memphis, Tennessee ASBESTOS-CONTAINING MATERIALS SUMMARY				
Building Identifier	# Materials Sampled	# Positive	ACM Materials	Estimated Quantity
SH RU	20	3	<ul style="list-style-type: none">• Roof Flashing• Silver Duct Wrap• Black Pipe Mastic	<ul style="list-style-type: none">• 16,000 s.f.• 100 s.f.• 100 l.f.

In the event of a renovation or demolition in areas containing ACM, the State of Tennessee and Federal NESHAP Regulations require that all friable ACM and non-friable ACM that will become friable during renovation or demolition activities must be removed by a certified Asbestos Abatement Contractor prior to disturbance. In all instances, non-certified personnel should not disturb or attempt removal of any of the asbestos-containing materials identified in this report.

2.0 INTRODUCTION

2.1 FACILITY DESCRIPTION

This survey was performed on the roof of the Juvenile Court Building located at 616 Adams Avenue in Memphis, Tennessee. The property is a court building and is comprised of court rooms, office spaces, conference rooms, and restrooms. The building has a brick exterior, a flat roof, and wood framed windows. The building's interior walls are built out with plaster and drywall.

Representative floor plans are included in Section 8.1.

2.2 PROJECT BACKGROUND

Asbestos has been a widely used component of building materials throughout history due to its unique physical properties: poor heat and electrical conductance, fire resistance, high tensile strength and low cost. Unfortunately, asbestos also poses potentially serious health concerns for people exposed to the material. Knowing where and how much ACM is located in a building allows for proper managing of site activities and providing appropriate protection for building occupants and workers involved in maintenance, renovation, or demolition of asbestos containing materials.

This survey was conducted in general conformance with Asbestos Hazard Emergency Response Act (AHERA) and ASTM Standard E2356-04. It included a walkthrough of the proposed renovation areas to identify suspect asbestos-containing materials, quantification of material amounts, collection of samples from each homogenous area, and assessment per functional space.

This inspection was performed on June 27, 2016 by Mr. Phillip Gardner, a State of Tennessee Certified Asbestos Inspector, of Tioga Environmental Consultants, Inc.

2.3 SCOPE OF SERVICES

In accordance with the contract between the Shelby County Health Department and Tioga Environmental Consultants, Inc., the asbestos inspection of 616 Adams Avenue in Memphis, TN included:

- A visual examination of all accessible roof materials and sampling of suspect ACM following a modified AHERA protocol for lab analysis. All homogeneous suspect materials were sampled a minimum of three (3) times.
- Analysis of all suspect ACM was submitted under chain-of-custody to CEI Labs, Inc., a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory for analysis by Polarized Light Microscopy–Dispersion Staining (PLM-DS).
- Preparation of a written report indicating the location, condition, and estimated quantity of any ACM identified.

2.4 SIGNIFICANT ASSUMPTIONS

No other significant assumptions were made regarding materials or conditions in completing this asbestos survey.

2.5 DEVIATIONS

No deviations from the agreed upon scope of services occurred during the performance of this asbestos survey.

2.6 LIMITATIONS AND EXCEPTIONS OF SURVEY

The scope of this survey was limited to accessible materials on the roof only. Non-destructive sampling methods were utilized at 616 Adams Avenue in Memphis, TN. The survey area was limited to areas expected to be disturbed as part of a roof replacement project to ensure that no more than 72 samples were analyzed.

Asbestos inspections are limited in that conclusions are drawn from and recommendations developed upon factual information obtained from date-specific research, site assessment, and owner/client provided information. The extent of this survey may be limited by the scope of services requested by the client, information provided by the client/owner, access provided at the site, and limitation on destructive investigation.

This report is not a bidding document. Contractors or consultants may not use the information in this report for any purpose other than as background information for their independent verification of the location, condition and/or estimated quantities of ACM as a component of their preparation of remediation bid documents.

2.7 SPECIAL TERMS AND CONDITIONS

The Client requested no special terms or conditions regarding this survey.

3.0 PROJECT METHODOLOGY

3.1 VISUAL OBSERVATIONS

Tioga personnel conducted a comprehensive examination of all accessible spaces on and around the roof at 616 Adams Avenue in Memphis, TN to identify suspect ACM. Observations included the type, condition, location, and estimated quantity of any suspect ACM that could be disturbed as part of this project.

Additionally, field observations included evaluating all suspect materials for condition including friability, the ease with which the materials can be crushed with hand pressure. Asbestos materials determined to be friable, or that could be rendered friable during demolition activities are considered Regulated Asbestos Containing Materials (RACM) that must be removed prior to any renovation or demolition.

3.2 ENVIRONMENTAL SAMPLING

For this facility, homogeneous areas (HA) of suspect Asbestos-Containing Materials (ACM) were defined for each material type sampled. In each HA, Tioga identified, differentiated and sampled suspect materials based on color (i.e. color of tile), texture, and apparent application date. For samples with multiple layers (i.e. floor tile and mastic, thermal system insulations, sheetrock w/ joint compound, etc.), the laboratory assigns unique sample numbers designated with an A, B, C, and D to identify each layer.

Table 4-1 in Section 4.0 lists each homogeneous area and includes material type and sample number, location, and presence of asbestos. Drawings in Section 8.1 show the sample locations and drawings in Section 8.2 show the locations of ACM at 616 Adams Avenue in Memphis, TN. Photos were taken of each homogenous area and arranged in a Photographic Log contained in Section 8.3 of this report.

All samples were transported under chain of custody via FedEx to CEI Labs, Inc., a NVLAP certified laboratory, for PLM-DS analysis. Samples analyzed by PLM-DS containing one percent (1%) or greater asbestos by weight are considered asbestos-containing. "First Positive Stop" analysis was used in the analysis of the samples taken during this survey. The chain of custody and laboratory analysis report is included as Appendix 8.4.

4.0 ASBESTOS SAMPLING AND RESULTS

All asbestos samples were analyzed by PLM-DS and results were received on June 30, 2016. Materials identified containing one percent (1%) or greater asbestos by weight are considered asbestos-containing.

The table below lists each material type sampled, the homogeneous area number, the sample identifying number and whether the material contains asbestos. If any one sample of a single homogenous material is determined to be positive, all building materials of that homogenous material are considered (and identified on the tables below with a green shading) positive.

A copy of the laboratory analysis report is included in Section 8.4.

**Table 4-1
Laboratory Results**

616 Adams Avenue Memphis, TN ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area number	Sample Numbers	Results
Roof Flashing	SH-1-	A	None Detected
		B	None Detected
		C	None Detected
		D	Chrysotile <1%
		E	Chrysotile 3%
Roof Shingles	SH-2-	A	None Detected
		B	None Detected
		C	None Detected
White Duct Wrap	SH-3-	A	None Detected
		B	None Detected
		C	None Detected
Black Duct Wrap	SH-4-	A	None Detected
		B	None Detected
		C	None Detected
Silver Duct Wrap	SH-5-	A	Chrysotile 2%
		B	Sample Not Analyzed per COC
		C	Sample Not Analyzed per COC
Black Caulk	SH-6-	A	None Detected
		B	None Detected
		C	None Detected
White Caulk	SH-7-	A	None Detected
		B	None Detected
		C	None Detected
Black Pipe Mastic	SH-8-	A	Chrysotile 10%
		B	Sample Not Analyzed per COC
		C	Sample Not Analyzed per COC
Black Shingle Patch	SH-9-	A	None Detected
		B	None Detected
		C	None Detected
Black Foam Insulation	SH-10-	A	None Detected
		B	None Detected
		C	None Detected
Roof Gasket	SH-11-	A	None Detected
		B	None Detected
		C	None Detected

616 Adams Avenue Memphis, TN ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area number	Sample Numbers	Results
Black Caulk	RU-1-	A	None Detected
		B	None Detected
		C	None Detected
White Caulk	RU-2-	A	None Detected
		B	None Detected
		C	None Detected
Black Roof Flashing	RU-3-	A	None Detected
		B	None Detected
		C	None Detected
Black Shingle Patch	RU-4-	A	None Detected
		B	None Detected
		C	None Detected
Roof Gasket	RU-5-	A	None Detected
		B	None Detected
		C	None Detected
Rubber Roofing	RU-6-	A	None Detected
		B	None Detected
		C	None Detected
Black Foam Insulation	RU-7-	A	None Detected
		B	None Detected
		C	None Detected
Black Pipe Mastic	RU-8-	A	None Detected
		B	None Detected
		C	None Detected
Rubber Roof Patch	RU-9-	A	None Detected
		B	None Detected
		C	None Detected

Drawings in Section 8.1 show the sample locations. Drawings in Section 8.2 show the locations of ACM at the property.

5.0 FINDINGS

Table 5-1 identifies homogenous areas within the roof of the Juvenile Court Building located at 616 Adams Avenue in Memphis, TN that are positive for asbestos.

There are three major categories used to classify asbestos-containing materials (ACM) found in buildings: Surfacing Materials, Thermal System Insulation (TSI), and Miscellaneous Materials. Materials in these broad categories are further classified as either friable or non-friable. Friable materials are materials that can be reduced to powder from hand pressure and may become an inhalation hazard.

**Table 5-1
Survey Findings**

616 Adams Avenue Memphis, TN CONFIRMED ASBESTOS CONTAINING MATERIALS				
Homogeneous Area Number	Material/ Observed Estimated Quantity	Category/ Friable	Location/Condition	Drawing ID
SH-1	Roof Flashing 16,000 s.f.	Surfacing Non-Friable	Shingled Roof/Good	8.2
SH-5	Silver Duct Wrap 100 s.f.	Miscellaneous Friable	Shingled Roof/Poor	8.2
SH-8	Black Pipe Mastic 100 l.f.	Miscellaneous Non-Friable	Shingled Roof/Poor	8.2

6.0 RECOMMENDATIONS

All materials identified as asbestos-containing should be maintained in good condition to avoid potential fiber release due to disturbance. In the event of renovation or demolition, the State of Tennessee and NESHAP require that all friable ACM and non-friable ACM that could become friable during renovation or demolition activities must be removed by a certified Asbestos Abatement Contractor prior to disturbance.

The following recommendations are based on the findings as identified in Section 4.0 and are in general conformance with the State of Tennessee, EPA, NESHAP and OSHA requirements.

Due to the condition of asbestos-containing Roof Flashing, Silver Duct Wrap and Black Pipe Mastic it is our recommendation that these materials be abated prior to renovation.

In all instances, non-certified personnel should not disturb or attempt removal of any of the asbestos-containing materials identified in this survey. OSHA regulation 29 CFR 1926.1101 requires that a qualified, certified Asbestos Abatement Contractor must be retained to perform abatement of the referenced materials prior to demolition or renovation activities at the facility. At no time are non-certified personnel allowed to disturb or remove these materials.

It is recommended that any Asbestos Abatement Contractor retained to perform abatement activities at the facility should be required to maintain proper engineering control measures prior to and during the disturbance of all ACM to ensure protection of human health and safety for personnel involved with this project. These control measures are also required for the protection of the surrounding environment by preventing the possibility of contamination outside of the abatement areas. Appropriate area air and personnel monitoring during the removal of these materials must be conducted as per federal, state, and local regulations.

Non-friable asbestos containing materials identified in this report in good condition can be maintained in good condition and managed in place through a comprehensive Asbestos O&M Plan. When implemented, this program will have provisions for occupant/employee notifications, routine maintenance, training, required inspections, and recordkeeping associated with the ACM. If an Operations and Maintenance Plan is already in place the information in this report should be incorporated to ensure proper procedures are followed.

7.0 REFERENCES

American Society for Testing and Materials (ASTM)

ASTM Standard E 2356 -10

Standard Practice for Comprehensive Building Asbestos Surveys

United States Environmental Protection Agency (EPA)

40 CFR 61.140 -157 Subpart M National Emission Standard for Asbestos

Occupational Safety and Health Administration (OSHA)

Occupational Safety and Health Standards

29 CFR 1910.1001, Subpart Z Toxic and Hazardous Substances; Asbestos

Safety and Health Regulations for Construction

29 CFR 1926.1101, Subpart Z Toxic and Hazardous Substances; Asbestos

National Institute of Occupational Safety and Health (NIOSH)

Revised Recommended Asbestos Standard

Publication 77-169

Tennessee Department of Environment & Conservation (TDEC)

USEPA 40CFR 61.140-157

8.0 SUPPORTING DOCUMENTS

8.1 SAMPLE LOCATION DRAWINGS

8.2 ACM LOCATION DRAWINGS

8.3 PHOTOGRPHIC LOG

8.4 LABORATORY RESULTS AND CHAINS OF CUSTODY

8.1 SAMPLE LOCATION DRAWINGS

NOT TO SCALE

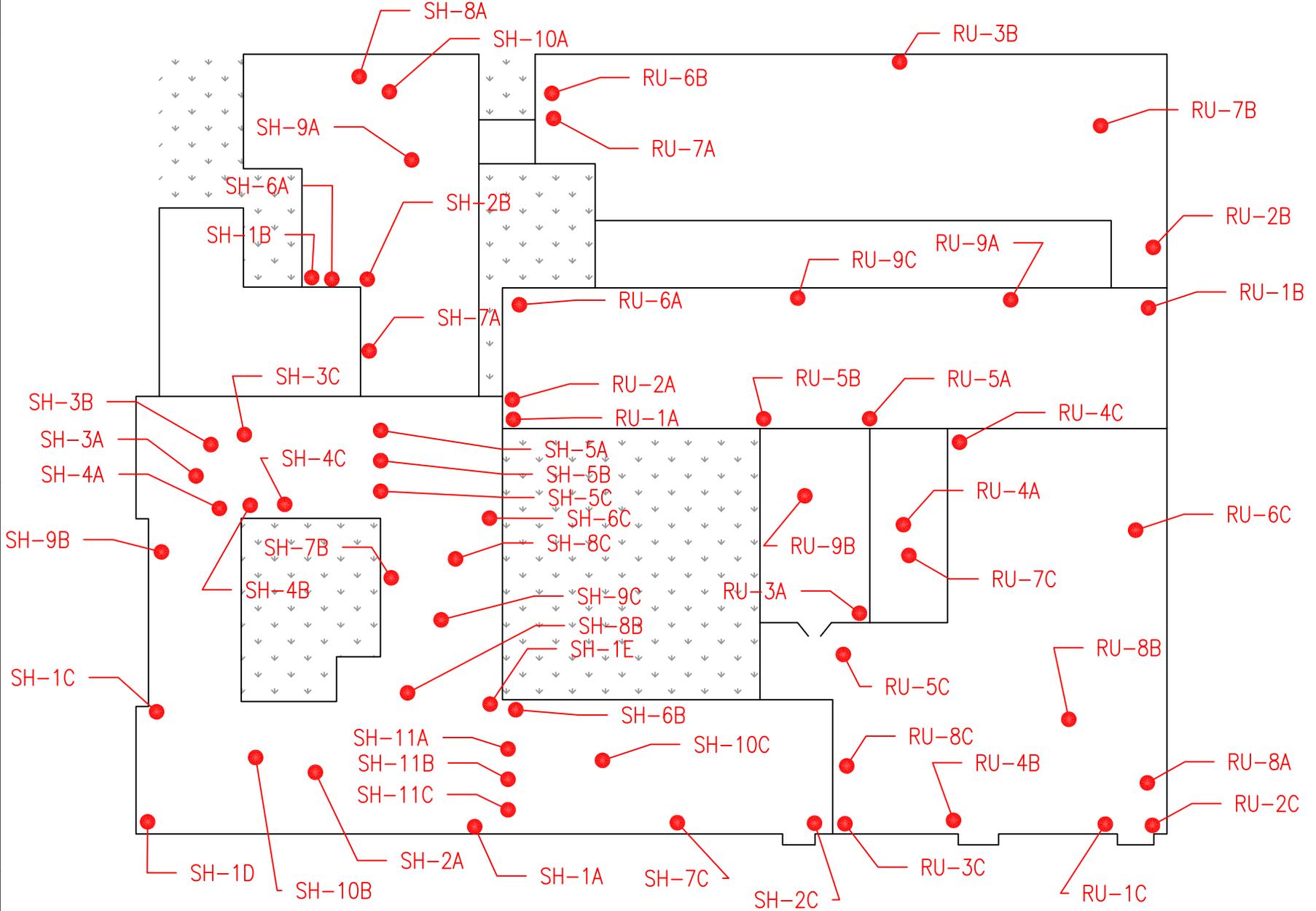


Tioga
ENVIRONMENTAL CONSULTANTS

DATE:
JUNE 2016
PROJECT #:
22712.03

LOCATION:
616 ADAMS AVE, MEMPHIS, TN
DESCRIPTION:
SAMPLE LOCATIONS

JUVENILE COURT BUILDING ROOF
ASBESTOS INSPECTION



NOT TO SCALE

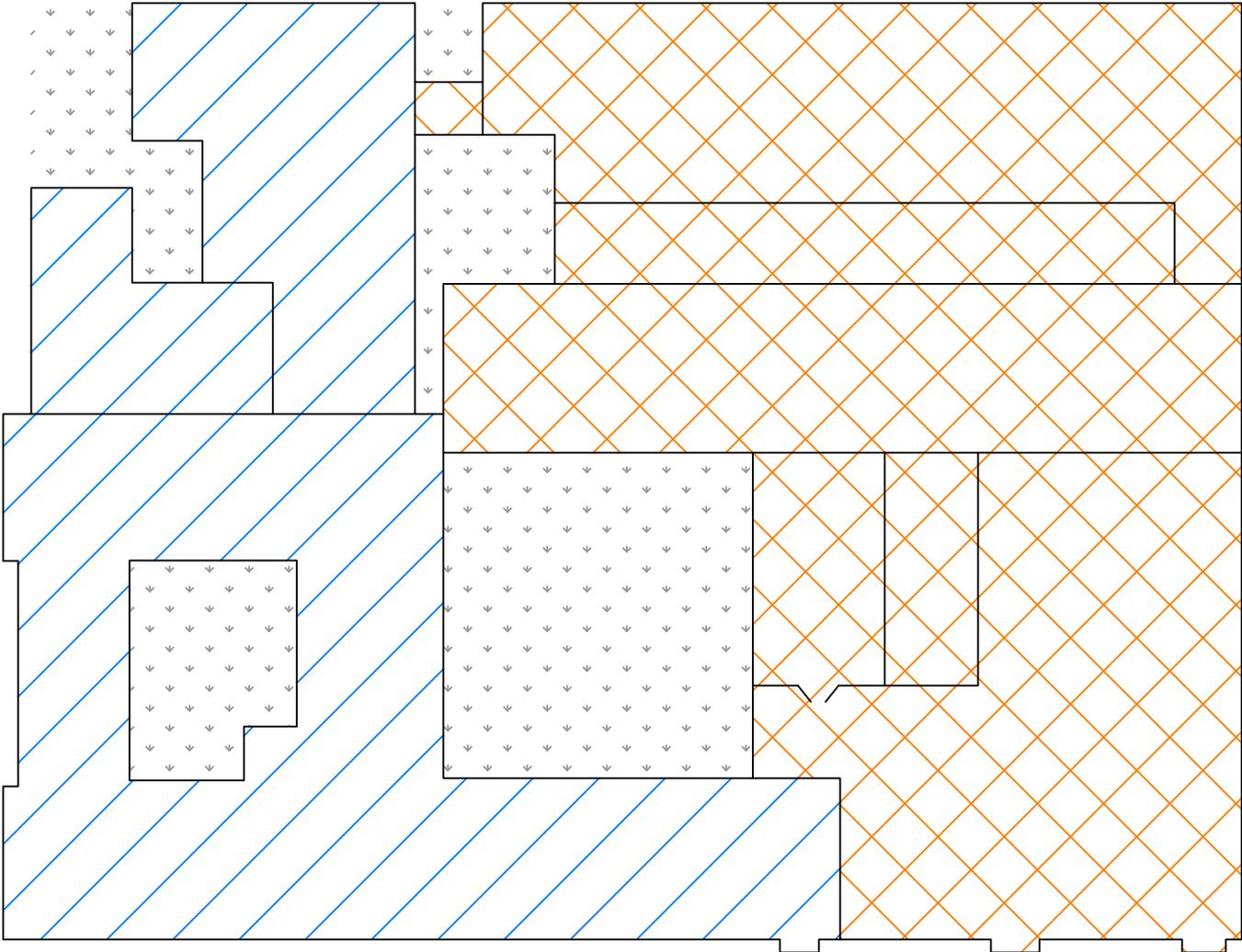


Tioga
ENVIRONMENTAL CONSULTANTS

DATE:
JUNE 2016
PROJECT #:
22712.03

LOCATION:
616 ADAMS AVE, MEMPHIS, TN
DESCRIPTION:
ASBESTOS CONTAINING MATERIALS

JUVENILE COURT BUILDING ROOF
ASBESTOS INSPECTION



LEGEND

-  SHINGLED ROOF
-  RUBBER ROOF

8.2 ACM LOCATION DRAWINGS

NOT TO SCALE

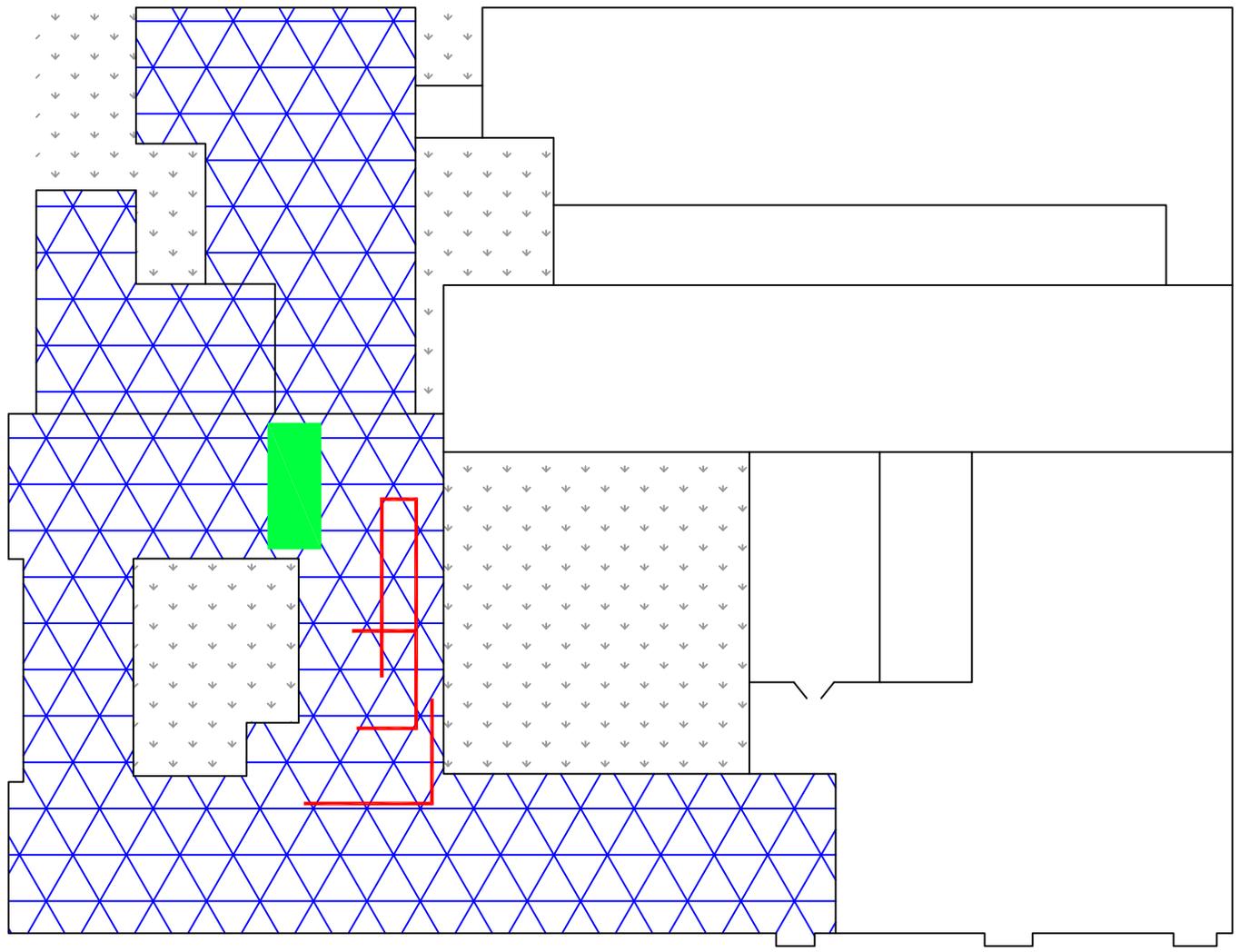


Tioga
ENVIRONMENTAL CONSULTANTS

DATE:
JUNE 2016
PROJECT #:
22712.03

LOCATION:
616 ADAMS AVE, MEMPHIS, TN
DESCRIPTION:
ASBESTOS CONTAINING MATERIALS

JUVENILE COURT BUILDING ROOF
ASBESTOS INSPECTION



LEGEND

-  SILVER DUCT WRAP
-  BLACK PIPE MASTIC
-  ROOF FLASHING

8.3 PHOTOGRAPHIC LOG



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PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
1

Date:
6/27/2016

Description:

North Side Exterior – Main Entrance



Photo #
2

Date:
6/27/2016

Description:

North Side Exterior – Main Entrance





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
3

Date:
6/27/2016

Description:

Shingled Roof – South Side



Photo #
4

Date:
6/27/2016

Description:

Shingled Roof – West Side





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
5

Date:
6/27/2016

Description:

Shingled Roof –
Northwest Side



Photo #
6

Date:
6/27/2016

Description:

Shingled Roof –
Southwest Side





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
7

Date:
6/27/2016

Description:

Asbestos Sample #
SH-1

Black Roof Flashing



Photo #
8

Date:
6/27/2016

Description:

Asbestos Sample #
SH-2

Roof Shingles





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
9

Date:
6/27/2016

Description:

Asbestos Sample #
SH-3

White Duct Wrap



Photo #
10

Date:
6/27/2016

Description:

Asbestos Sample #
SH-4

Black Duct Wrap





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
11

Date:
6/27/2016

Description:

Asbestos Sample #
SH-5

Silver Duct Wrap



Photo #
12

Date:
6/27/2016

Description:

Asbestos Sample #
SH-6

Black Caulk





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
13

Date:
6/27/2016

Description:

Asbestos Sample #
SH-7

White Caulk



Photo #
14

Date:
6/27/2016

Description:

Asbestos Sample #
SH-8

Black Pipe Mastic





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
15

Date:
6/27/2016

Description:

Asbestos Sample #
SH-9

Black Shingle Patch



Photo #
16

Date:
6/27/2016

Description:

Asbestos Sample #
SH-10

Black Foam Insulation





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
17

Date:
6/27/2016

Description:

Asbestos Sample #
SH-11

Roof Gasket

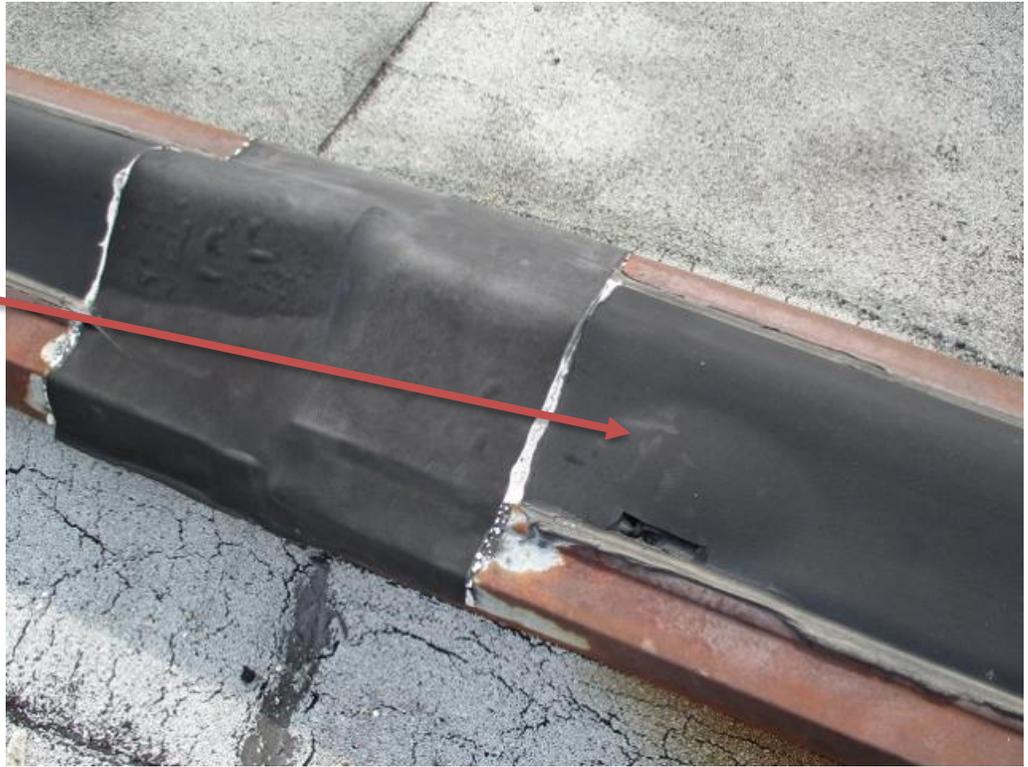


Photo #
18

Date:
6/27/2016

Description:

Rubber Roof – Mid-section





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
19

Date:
6/27/2016

Description:

Rubber Roof – North Side



Photo #
20

Date:
6/27/2016

Description:

Rubber Roof – Mid-section





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
21

Date:
6/27/2016

Description:

Rubber Roof – Southeast Side



Photo #
22

Date:
6/27/2016

Description:

Asbestos Sample #
RU-1

Black Caulk





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
23

Date:
6/27/2016

Description:

Asbestos Sample #
RU-2

White Caulk

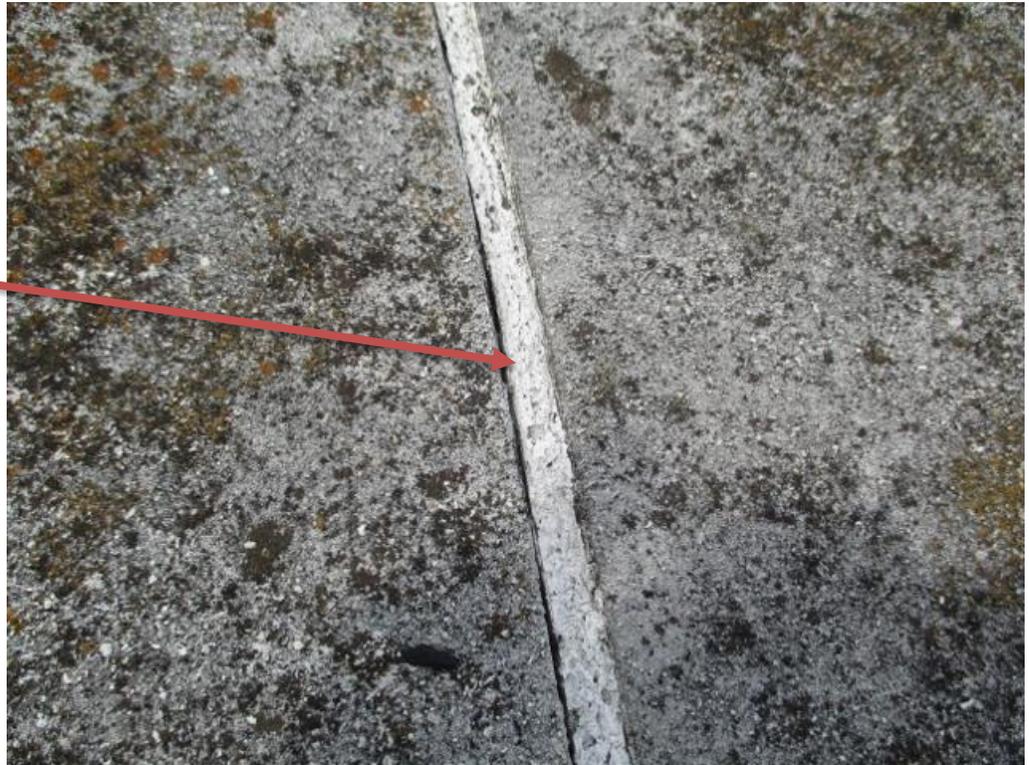


Photo #
24

Date:
6/27/2016

Description:

Asbestos Sample #
RU-3

Black Roof Flashing





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
25

Date:
6/27/2016

Description:

Asbestos Sample #
RU-4

Black Shingle Patch



Photo #
26

Date:
6/27/2016

Description:

Asbestos Sample #
RU-5

Roof Gasket





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
27

Date:
6/27/2016

Description:

Asbestos Sample #
RU-6

Rubber Roofing Material



Photo #
28

Date:
6/27/2016

Description:

Asbestos Sample #
RU-7

Black Foam Insulation





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ENVIRONMENTAL CONSULTANTS

PHOTOGRAPHIC LOG

Client Name:
Shelby County Government

Site Location: Juvenile Court Building Roof
616 Adams Ave. Memphis, TN

Project No.
22712.03

Photo #
29

Date:
6/27/2016

Description:

Asbestos Sample #
RU-8

Black Pipe Mastic



Photo #
30

Date:
6/27/2016

Description:

Asbestos Sample #
RU-9

Rubber Roof Patch



8.4 LABORATORY RESULTS AND CHAINS OF CUSTODY



June 30, 2016

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: Juvenile Court Bldg. Roof; 22712.03
CEI LAB CODE: B16-4825

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on June 28, 2016. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations. If you have any questions, please feel free to call our office at 919-481-1413.

Kind Regards,

A handwritten signature in black ink, appearing to read "Tianbao Bai".

Tianbao Bai, Ph.D., CIH
Laboratory Director





ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: Juvenile Court Bldg. Roof; 22712.03

CEI LAB CODE: B16-4825

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 06/30/16

TOTAL SAMPLES ANALYZED: 58

SAMPLES >1% ASBESTOS: 3

TEL: 866-481-1412

www.ceilabs.com



Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Juvenile Court Bldg. Roof; 22712.03

CEI LAB CODE: B16-4825

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
SH-1A		B186005	Black	Roof Flashing	None Detected
SH-1B		B186006	Black	Roof Flashing	None Detected
SH-1C		B186007	Black	Roof Flashing	None Detected
SH-1D		B186008	Black	Roof Flashing	Chrysotile <1%
SH-1E		B186009	Black	Roof Flashing	Chrysotile 3%
SH-2A		B186010	Black	Roof Shingle	None Detected
SH-2B		B186011	Black	Roof Shingle	None Detected
SH-2C		B186012	Black	Roof Shingle	None Detected
SH-3A		B186013	White	Duct Wrap	None Detected
SH-3B		B186014	White	Duct Wrap	None Detected
SH-3C		B186015	White	Duct Wrap	None Detected
SH-4A		B186016	Black	Duct Wrap	None Detected
SH-4B		B186017	Black	Duct Wrap	None Detected
SH-4C		B186018	Black	Duct Wrap	None Detected
SH-5A		B186019	Silver	Duct Wrap	Chrysotile 2%
SH-5B		B186020		Sample Not Analyzed per COC	
SH-5C		B186021		Sample Not Analyzed per COC	
SH-6A		B186022	Black	Caulk	None Detected
SH-6B		B186023	Black	Caulk	None Detected
SH-6C		B186024	Black	Caulk	None Detected
SH-7A		B186025	White	Caulk	None Detected
SH-7B		B186026	White	Caulk	None Detected
SH-7C		B186027	White	Caulk	None Detected
SH-8A		B186028	Black	Pipe Mastic	Chrysotile 10%
SH-8B		B186029		Sample Not Analyzed per COC	
SH-8C		B186030		Sample Not Analyzed per COC	
SH-9A		B186031	Black	Shingle Patch	None Detected
SH-9B		B186032	Black	Shingle Patch	None Detected
SH-9C		B186033	Black	Shingle Patch	None Detected
SH-10A		B186034	Black	Foam Insulation	None Detected
SH-10B		B186035	Black	Foam Insulation	None Detected



Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Juvenile Court Bldg. Roof; 22712.03

CEI LAB CODE: B16-4825

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
SH-10C		B186036	Black	Foam Insulation	None Detected
SH-11A		B186037	Black	Roof Gasket	None Detected
SH-11B		B186038	Black	Roof Gasket	None Detected
SH-11C		B186039	Black	Roof Gasket	None Detected
RU-1A		B186040	Black	Caulk	None Detected
RU-1B		B186041	Black	Caulk	None Detected
RU-1C		B186042	Black	Caulk	None Detected
RU-2A		B186043	White	Caulk	None Detected
RU-2B		B186044	White	Caulk	None Detected
RU-2C		B186045	White	Caulk	None Detected
RU-3A		B186046	Black	Roof Flashing	None Detected
RU-3B		B186047	Black	Roof Flashing	None Detected
RU-3C		B186048	Black	Roof Flashing	None Detected
RU-4A		B186049	Black	Shingle Patch	None Detected
RU-4B		B186050	Black	Shingle Patch	None Detected
RU-4C		B186051	Black	Shingle Patch	None Detected
RU-5A		B186052	Black	Roof Gasket	None Detected
RU-5B		B186053	Black	Roof Gasket	None Detected
RU-5C		B186054	Black	Roof Gasket	None Detected
RU-6A		B186055	Black	Roofing	None Detected
RU-6B		B186056	Black	Roofing	None Detected
RU-6C		B186057	Black	Roofing	None Detected
RU-7A		B186058	Black	Foam Insulation	None Detected
RU-7B		B186059	Black	Foam Insulation	None Detected
RU-7C		B186060	Black	Foam Insulation	None Detected
RU-8A		B186061	Black	Pipe Mastic	None Detected
RU-8B		B186062	Black	Pipe Mastic	None Detected
RU-8C		B186063	Black	Pipe Mastic	None Detected
RU-9A		B186064	Black	Roof Patch	None Detected
RU-9B		B186065	Black	Roof Patch	None Detected
RU-9C		B186066	Black	Roof Patch	None Detected



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
SH-1A B186005	Roof Flashing	Heterogeneous Black Fibrous Bound	15% 10%	Cellulose Fiberglass	60% 15%	Tar Silicates	None Detected
SH-1B B186006	Roof Flashing	Heterogeneous Black Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Tar	None Detected
SH-1C B186007	Roof Flashing	Heterogeneous Black Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Tar	None Detected
SH-1D B186008	Roof Flashing	Heterogeneous Black Fibrous Bound	5% 5%	Cellulose Fiberglass	80% 10%	Tar Binder	<1% Chrysotile
SH-1E B186009	Roof Flashing	Heterogeneous Black Fibrous Bound	5% 5%	Cellulose Fiberglass	77% 10%	Tar Binder	3% Chrysotile
SH-2A B186010	Roof Shingle	Heterogeneous Black Fibrous Bound	10% 10%	Cellulose Fiberglass	50% 10% 20%	Tar Gravel Silicates	None Detected
SH-2B B186011	Roof Shingle	Heterogeneous Black Fibrous Bound	10% 10%	Cellulose Fiberglass	50% 10% 20%	Tar Gravel Silicates	None Detected



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
SH-2C B186012	Roof Shingle	Heterogeneous	10%	Cellulose	50%	Tar	None Detected
		Black	10%	Fiberglass	10%	Gravel	
		Fibrous			20%	Silicates	
		Bound					
SH-3A B186013	Duct Wrap	Heterogeneous	15%	Cellulose	5%	Metal Foil	None Detected
		White	50%	Fiberglass	5%	Mastic	
		Fibrous			25%	Binder	
		Loosely Bound					
SH-3B B186014	Duct Wrap	Heterogeneous	15%	Cellulose	5%	Metal Foil	None Detected
		White	50%	Fiberglass	5%	Mastic	
		Fibrous			25%	Binder	
		Loosely Bound					
SH-3C B186015	Duct Wrap	Heterogeneous	15%	Cellulose	5%	Metal Foil	None Detected
		White	50%	Fiberglass	5%	Mastic	
		Fibrous			25%	Binder	
		Loosely Bound					
SH-4A B186016	Duct Wrap	Heterogeneous	30%	Cellulose	5%	Metal Foil	None Detected
		Black	25%	Fiberglass	40%	Tar	
		Fibrous					
		Loosely Bound					
SH-4B B186017	Duct Wrap	Heterogeneous	30%	Cellulose	5%	Metal Foil	None Detected
		Black	25%	Fiberglass	40%	Tar	
		Fibrous					
		Loosely Bound					
SH-4C B186018	Duct Wrap	Heterogeneous	30%	Cellulose	5%	Metal Foil	None Detected
		Black	25%	Fiberglass	40%	Tar	
		Fibrous					
		Loosely Bound					



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
SH-5A B186019	Duct Wrap	Heterogeneous	30%	Cellulose	5%	Metal Foil	2% Chrysotile
		Silver	25%	Fiberglass	28%	Binder	
		Fibrous			10%	Paint	
		Loosely Bound					
SH-5B B186020	Sample Not Analyzed per COC						
SH-5C B186021	Sample Not Analyzed per COC						
SH-6A B186022	Caulk	Heterogeneous	10%	Fiberglass	10%	Silicates	None Detected
		Black			80%	Binder	
		Fibrous Bound					
SH-6B B186023	Caulk	Heterogeneous	10%	Fiberglass	10%	Silicates	None Detected
		Black			80%	Binder	
		Fibrous Bound					
SH-6C B186024	Caulk	Heterogeneous	10%	Fiberglass	10%	Silicates	None Detected
		Black			80%	Binder	
		Fibrous Bound					
SH-7A B186025	Caulk	Heterogeneous	5%	Fiberglass	10%	Silicates	None Detected
		White			85%	Binder	
		Fibrous Bound					
SH-7B B186026	Caulk	Heterogeneous	5%	Fiberglass	10%	Silicates	None Detected
		White			75%	Binder	
		Fibrous			10%	Foam	
		Bound					



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
SH-7C B186027	Caulk	Heterogeneous White Fibrous Bound	5%	Fiberglass	10%	Silicates 85% Binder	None Detected
SH-8A B186028	Pipe Mastic	Heterogeneous Black Fibrous Bound			20%	Silicates 60% Tar 10% Foam	10% Chrysotile
SH-8B B186029	Sample Not Analyzed per COC						
SH-8C B186030	Sample Not Analyzed per COC						
SH-9A B186031	Shingle Patch	Heterogeneous Black Fibrous Bound	10%	Cellulose 10% Fiberglass	70%	Silicates 10% Tar	None Detected
SH-9B B186032	Shingle Patch	Heterogeneous Black Fibrous Bound	10%	Cellulose 10% Fiberglass	70%	Silicates 10% Tar	None Detected
SH-9C B186033	Shingle Patch	Heterogeneous Black Fibrous Bound	10%	Cellulose 10% Fiberglass	70%	Silicates 10% Tar	None Detected
SH-10A B186034	Foam Insulation	Heterogeneous Black Fibrous Bound	5%	Cellulose 5% Fiberglass	5%	Silicates 85% Foam	None Detected



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
SH-10B B186035	Foam Insulation	Heterogeneous	5%	Cellulose	5%	Silicates	None Detected
		Black	5%	Fiberglass	85%	Foam	
		Fibrous Bound					
SH-10C B186036	Foam Insulation	Heterogeneous	5%	Cellulose	5%	Silicates	None Detected
		Black	5%	Fiberglass	85%	Foam	
		Fibrous Bound					
SH-11A B186037	Roof Gasket	Heterogeneous	5%	Cellulose	50%	Foam	None Detected
		Black			45%	Vinyl	
		Fibrous Bound					
SH-11B B186038	Roof Gasket	Heterogeneous	5%	Cellulose	50%	Foam	None Detected
		Black			45%	Vinyl	
		Fibrous Bound					
SH-11C B186039	Roof Gasket	Heterogeneous			100%	Vinyl	None Detected
		Black					
		Non-fibrous Bound					
RU-1A B186040	Caulk	Heterogeneous			90%	Binder	None Detected
		Black			10%	Silicates	
		Non-fibrous Bound					
RU-1B B186041	Caulk	Heterogeneous			90%	Binder	None Detected
		Black			10%	Silicates	
		Non-fibrous Bound					



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
RU-1C B186042	Caulk	Heterogeneous Black Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
RU-2A B186043	Caulk	Heterogeneous White Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
RU-2B B186044	Caulk	Heterogeneous White Non-fibrous Bound	85% 10% 5%	Binder Silicates Foam	None Detected
RU-2C B186045	Caulk	Heterogeneous White Non-fibrous Bound	85% 10% 5%	Binder Silicates Foam	None Detected
RU-3A B186046	Roof Flashing	Heterogeneous Black Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
RU-3B B186047	Roof Flashing	Heterogeneous Black Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
RU-3C B186048	Roof Flashing	Heterogeneous Black Non-fibrous Bound	5% 10%	Synthetic Fiber Silicates	None Detected



ASBESTOS BULK ANALYSIS

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 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
RU-4A B186049	Shingle Patch	Heterogeneous Black Non-fibrous Bound	5%	Cellulose	85%	Silicates 10% Tar	None Detected
RU-4B B186050	Shingle Patch	Heterogeneous Black Non-fibrous Bound	5%	Cellulose	85%	Silicates 10% Tar	None Detected
RU-4C B186051	Shingle Patch	Heterogeneous Black Non-fibrous Bound	5%	Cellulose	85%	Silicates 10% Tar	None Detected
RU-5A B186052	Roof Gasket	Heterogeneous Black Non-fibrous Bound			50%	Vinyl 50% Foam	None Detected
RU-5B B186053	Roof Gasket	Heterogeneous Black Non-fibrous Bound			50%	Vinyl 50% Foam	None Detected
RU-5C B186054	Roof Gasket	Heterogeneous Black Non-fibrous Bound			50%	Vinyl 50% Foam	None Detected
RU-6A B186055	Roofing	Heterogeneous Black Fibrous Loosely Bound	15%	Cellulose	50%	Rubber 35% Foam	None Detected



ASBESTOS BULK ANALYSIS

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Client: Tioga Environmental Consultants
 357 North Main Street
 Memphis, TN 38103

CEI Lab Code: B16-4825
Date Received: 06-28-16
Date Analyzed: 06-30-16
Date Reported: 06-30-16

Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
RU-6B B186056	Roofing	Heterogeneous Black Fibrous Loosely Bound	5%	Mastic	95%	Rubber	None Detected
RU-6C B186057	Roofing	Heterogeneous Black Fibrous Loosely Bound	5%	Cellulose	5%	Mastic Rubber Foam	None Detected
RU-7A B186058	Foam Insulation	Heterogeneous Black Non-fibrous Bound			90%	Foam Paint	None Detected
RU-7B B186059	Foam Insulation	Heterogeneous Black Non-fibrous Bound			90%	Foam Paint	None Detected
RU-7C B186060	Foam Insulation	Heterogeneous Black Non-fibrous Bound			90%	Foam Paint	None Detected
RU-8A B186061	Pipe Mastic	Heterogeneous Black Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
RU-8B B186062	Pipe Mastic	Heterogeneous Black Fibrous Bound	5%	Cellulose	95%	Binder	None Detected



ASBESTOS BULK ANALYSIS

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Project: Juvenile Court Bldg. Roof; 22712.03

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
RU-8C B186063	Pipe Mastic	Heterogeneous Black Fibrous Bound	5%	Cellulose	95%	Binder	None Detected
RU-9A B186064	Roof Patch	Heterogeneous Black Fibrous Bound	5%	Cellulose	95%	Vinyl	None Detected
RU-9B B186065	Roof Patch	Heterogeneous Black Fibrous Bound	5%	Cellulose	95%	Vinyl	None Detected
RU-9C B186066	Roof Patch	Heterogeneous Black Fibrous Bound	5%	Cellulose	90% 5%	Vinyl Mastic	None Detected



LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

LIMIT OF DETECTION: <1% by visual estimation

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation.

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by CEI Labs, Inc. CEI Labs makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

ANALYST: Mikaela Batta
Mikaela Batta

APPROVED BY: Tianbao Bai
Tianbao Bai, Ph.D., CIH
Laboratory Director

Mikaela Batta
Mikaela Batta





107 New Edition Court, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

ASBESTOS CHAIN OF CUSTODY

LAB USE ONLY:
CEI Lab Code: B16-4825 (62)
CEI Lab I.D. Range: B18600S - B18606L

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Phillip Gardner
Company: Tioga Environmental	Email / Tel: 662-288-9569
Address: 357 North Main St. Memphis, TN 38103	Project Name: Juvenile Court Bldg. Roof
Email: pgardner@tiogaenv.com	Project ID# 22712.03
Tel: 901-791-2432 Fax: 901-791-2442	PO #:
	STATE SAMPLES COLLECTED IN: TN

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	24 HR	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS: Stop at 1st Positive for each HA!			<input checked="" type="checkbox"/> Accept Samples <input type="checkbox"/> Reject Samples
Relinquished By:	Date/Time	Received By:	Date/Time
Phillip Gardner	6-27-16 @ 1500	SA	6 28 16 9:20

Samples will be disposed of 30 days after analysis

ASBESTOS SAMPLING FORM



COMPANY CONTACT INFORMATION	
Company: <u>Tioga Environmental</u>	Job Contact: <u>Phillip Gardner</u>
Project Name: <u>Juvenile Court Bldg. Roof</u>	
Project ID #: <u>22712.03</u>	Tel: <u>662-288-9569</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST			
SH-1A	Black Roof Flashing		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-1B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-1C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-1D	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-1E	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-2A	Roof Shingles		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-2B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-2C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-3A	White Duct Wrap		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-3B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-3C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-4A	Black Duct Wrap		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-4B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-4C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-5A	Silver Duct Wrap		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-5B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-5C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-6A	Black Caulk		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-6B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-6C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-7A	White Caulk		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-7B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-7C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-8A	Black Pipe Mastiz		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-8B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-8C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-9A	Black Shingle Patch		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-9B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>

ASBESTOS SAMPLING FORM



COMPANY CONTACT INFORMATION	
Company: <u>Tioga Environmental</u>	Job Contact: <u>Phillip Gardner</u>
Project Name: <u>Juvenile Court Bldg. Roof</u>	
Project ID #: <u>22712.03</u>	Tel: <u>662-288-9569</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST			
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-9C	Black Shingle Patch		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-10A	Black Foam Insulation		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-10B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-10C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-11A	Roof Gasket		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-11B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
SH-11C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-1A	Black Caulk		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-1B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-1C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-2A	White Caulk		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-2B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-2C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-3A	Black Roof Flashing		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-3B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-3C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-4A	Black Shingle Patch		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-4B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-4C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-5A	Roof Gasket		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-5B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-5C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-6A	Rubber Roofing		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-6B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-6C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-7A	Black Foam Insulation		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-7B	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
RU-7C	↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>

9.0 QUALIFICATIONS OF LABORATORIES AND INSPECTORS

9.1 LABORATORY

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101768-0

CEI Labs, Inc.
Cary, NC

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2015-04-01 through 2016-03-31

Effective dates



A handwritten signature in black ink, appearing to read "William R. Mallon".

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CEI Labs, Inc.
107 New Edition Court
Cary, NC 27511
Dr. Tianbao Bai
Phone: 919-481-1413 Fax: 919-481-1442
E-Mail: bai@ceilabs.com
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BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101768-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2015-04-01 through 2016-03-31

Effective dates

For the National Institute of Standards and Technology

9.2 INSPECTORS



THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program

William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accredited to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

Tioga Environmental Consultants, Inc.

357 N. Main Street Memphis TN, 38103

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee.
This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-718-46028	December 01, 2015	December 31, 2016

THE STATE OF TENNESSEE
Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

Phillip R Gardner

DOB 11-Nov-1984 Sex M HGT 5' 6" WGT 165

Discipline	Accreditation	Expiration
Inspector	A-I-95204-49546	May-31-2017
Management Planner	A-MP-95204-49546	May-31-2017

Asbestos Accreditation

Re-Accreditation



Given under the Seal of the State of Tennessee in Nashville.

This 8th Day of December 2015

Division of Solid Waste Management
Toxic Substance Program

CN-1324 (Rev 6/13)

RDA-3020