



PROJECT MANUAL

Repairs to Exterior Facade Landers State Office Building Springfield, MO, Missouri

Designed By: Buddy Webb & Company, Inc
3057 East Cairo Street
Springfield, MO 65802

Date Issued: September 29, 2022

Project No.: O1920-01

STATE *of* MISSOURI

OFFICE *of* ADMINISTRATION
Facilities Management, Design & Construction

SECTION 00 01 07

PROFESSIONAL SEALS AND CERTIFICATIONS

PROJECT NUMBER: 01920-01 (Repairs to Exterior Façade; Landers State Office Building)

THE FOLLOWING DESIGN PROFESSIONALS HAVE SIGNED AND SEALED THE ORIGINAL PLANS AND SPECIFICATIONS FOR THIS PROJECT, WHICH ARE ON FILE WITH THE DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION:

ARCHITECTURAL FIRM CERTIFICATE OF AUTHORITY NO.: ARC 2004028947

ARCHITECT

**Buddy Webb & Company, Inc.
Architects / Consultants
3057 East Cairo Street
Springfield, MO 65802
(417) 877-1385 Phone**



TABLE OF CONTENTS

SECTION	TITLE	NUMBER OF PAGES
DIVISION 00 – PROCUREMENT AND CONTRACTING INFORMATION		
000000	INTRODUCTORY INFORMATION	
000101	Project Manual Cover	1
000107	Professional Seals and Certifications	1
000110	Table of Contents	2
000115	List of Drawings	1
001116	INVITATION FOR BID (IFB) plus Missouri Buys instructions and special notice	3
002113	INSTRUCTIONS TO BIDDERS (Includes MBE/WBE/SDVE Information)	8
003144	MBE/WBE/SDVE Directory	1
The following documents may be found on MissouriBUYS at https://missouribuyss.mo.gov/		
004000	PROCUREMENT FORMS & SUPPLEMENTS	
004113	Bid Form	*
004322	Unit Prices Form	*
004336	Proposed Subcontractors Form	*
004337	MBE/WBE/SDVE Compliance Evaluation Form	*
004338	MBE/WBE/SDVE Eligibility Determination Form for Joint Ventures	*
004339	MBE/WBE/SDVE Good Faith Effort (GFE) Determination Forms	*
004340	SDVE Business Form	*
004541	Affidavit of Work Authorization	*
004545	Anti-Discrimination Against Israel Act Certification form	*
005000	CONTRACTING FORMS AND SUPPLEMENTS	
005213	Construction Contract	3
005414	Affidavit for Affirmative Action	1
006000	PROJECT FORMS	
006113	Performance and Payment Bond	2
006325	Product Substitution Request	2
006519.16	Final Receipt of Payment and Release Form	1
006519.18	MBE/WBE/SDVE Progress Report	2
006519.21	Affidavit of Compliance with Prevailing Wage Law	1
007000	CONDITIONS OF THE CONTRACT	
007213	General Conditions	20
007300	Supplementary Conditions	1
007346	Wage Rate	4
DIVISION 1 - GENERAL REQUIREMENTS		
011000	Summary of Work	2
012100	Allowances	2
012200	Unit Prices	3
012300	Alternates	2
012600	Contract Modification Procedures	2
013100	Coordination	4
013115	PM Communications	4
013200	Schedules	4
013300	Submittals	5
013513.10	Site Security and Health Requirements (OA)	3
015000	Construction Facilities and Temporary Controls	8
017400	Cleaning	3

TECHNICAL SPECIFICATIONS INDEX:

DIVISION 02 – EXISTING CONDITIONS

02 41 00	Demolition	2
----------	------------	---

DIVISION 04 – MASONRY

04 01 20	Masonry Restoration and Cleaning	2
04 05 13	Masonry Repointing	4
04 21 29	Architectural Terra Cotta Masonry	8

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 19 00	Water Repellents	2
07 24 00	Exterior Insulation and Finish Systems	4
07 27 26	Fluid Applied Weather Barriers	4
07 92 00	Joint Sealants	4

DIVISION 09 – FINISHES

09 30 00	Tile	3
----------	------	---

APPENDIX A

INFORMATION AVAILABLE TO BIDDERS	1
Hazardous Materials Testing Report (Dated July 10, 2019), Project No. B5197023	28

END OF SECTION 00 01 10

SECTION 00 01 15

LIST OF DRAWINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section provides a comprehensive list of the drawings that comprise the Bid Documents for this project.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 LIST OF DRAWINGS

- A. The following list of drawings is a part of the Bid Documents:

<u>TITLE</u>	<u>SHEET #</u>	<u>DATE</u>	<u>CAD #</u>
1. Cover Sheet	Sheet G-001	09/01/22	G-001
2. First Floor Plan & General Notes	Sheet A-101	09/01/22	A-101
3. Exterior Elevations	Sheet A-201	09/01/22	A-201
4. Exterior Elevations	Sheet A-202	09/01/22	A-202
5. Exterior Elevations	Sheet A-203	09/01/22	A-203
6. Exterior Elevations	Sheet A-204	09/01/22	A-204

END OF SECTION 00 01 15

SECTION 001116 - INVITATION FOR BID

1.0 OWNER:

- A. The State of Missouri
Office of Administration,
Division of Facilities Management, Design and Construction
Jefferson City, Missouri

2.0 PROJECT TITLE AND NUMBER:

- A. Repairs to Exterior Facade
Landers State Office Building
Springfield, MO, Missouri
Project No.: O1920-01

3.0 BIDS WILL BE RECEIVED:

- A. Until: 1:30 PM, Thursday, December 1, 2022
- B. **Only electronic bids on MissouriBUYS shall be accepted: <https://missouribuyss.mo.gov>. Bidder must be registered to bid.**

4.0 DESCRIPTION:

- A. Scope: The project includes exterior façade repairs and cleaning as indicated in Contract Documents. The Work includes, but not limited to the following:
1. Base Bid: Exterior removal and replacement of joint sealants and masonry repointing.
 2. Alternate No. 1: Exterior repair and replacement of damaged and defective terra cotta and exterior insulation finish system (EIFS).
 3. Alternate No. 2: South and East exterior façade surface cleaning and installation of water repellents.
 4. Alternate No. 3: North and South exterior façade surface cleaning and installation of water repellents.
- B. MBE/WBE/SDVE Goals: MBE 10%, WBE 10%, and SDVE 3%. **NOTE: Only MBE/WBE firms certified by the State of Missouri Office of Equal Opportunity as of the date of bid opening, or SDVE(s) meeting the requirements of Section 34.074, RSMo and 1 CSR 30-5.010, can be used to satisfy the MBE/WBE/SDVE participation goals for this project.**
- C. ****NOTE:** Bidders are provided new Good Faith Effort (GFE) forms on MissouriBUYS.

5.0 PRE-BID MEETING:

- A. Place/Time: 10 AM, Tuesday, November, 15, 2022, at Landers State Office Building, 149 Park Central Square, Springfield, MO 65806
- B. Access to State of Missouri property requires presentation of a photo ID by all persons

6.0 HOW TO GET PLANS & SPECIFICATIONS:

- A. View Only Electronic bid sets are available at no cost or paper bid sets for a deposit of \$100.00 from American Document Solutions (ADS). MAKE CHECKS PAYABLE TO: American Document Solutions. Mail to: American Document Solutions, 1400 Forum Blvd., Suite 7A, Columbia, Missouri 65203. Phone 573-446-7768, Fax 573-355-5433, <https://www.adsplanroom.net>. NOTE: Prime contractors will be allowed a maximum of two bid sets at the deposit rate shown above. Other requesters will be allowed only one bid set at this rate. Additional bid sets or parts thereof may be obtained by any bidder at the cost of printing and shipping by request to American Document Solutions at the address shown above. **Bidder must secure at least one bid set to become a planholder.**
- B. **Refunds: Return plans and specifications in unmarked condition within 15 working days of bid opening to American Document Solutions, 1400 Forum Blvd., Suite 7A, Columbia, Missouri 65203. Phone 573-446-7768, Fax 573-355-5433. Deposits for plans not returned within 15 working days shall be forfeited.**
- C. Information for upcoming bids, including downloadable plans, specifications, Invitation for Bid, bid tabulation, award, addenda, and access to the ADS planholders list, is available on the Division of Facilities Management, Design and Construction's web site: <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans>.

7.0 POINT OF CONTACT:

- A. Designer: Buddy Webb & Company, Inc, Buddy Webb, 417-877-1385, email: Buddy@webbarch.com
- B. Project Manager: Jesse Rollins, 573-522-5053, email: Jesse.Rollins@oa.mo.gov

8.0 GENERAL INFORMATION:

- A. The State reserves the right to reject any and all bids and to waive all informalities in bids. No bid may be withdrawn for a period of 20 working days subsequent to the specified bid opening time. The contractor shall pay not less than the prevailing hourly rate of wages for

work of a similar character in the locality in which the work is performed, as determined by the Missouri Department of Labor and Industrial Relations and as set out in the detailed plans and specifications.

- B. Bid results will be available at <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans> after it is verified that at least one bid is awardable and affordable.

Very Important MissouriBUYS Instructions to Help Submit a Bid Correctly

- A. The bidder shall submit his or her bid and all supporting documentation on MissouriBUYS eProcurement System. No hard copy bids shall be accepted. Go to <https://missouribuy.mo.gov> and register. The bidder must register and complete a profile fully with all required documents submitted prior to submitting a bid.
- B. Once registered, log in.
1. Under "Solicitation" select "View Current Solicitations."
 2. Under "Filter by Agency" select "OA-FMDC-Contracts Chapter 8", then click "Filter Solicitation" button.
 3. Select "Active Solicitations" tab.
 4. To see the Solicitation Summary, click on the Project Number and the summary will open. Click each heading to open detailed information.
- C. Here are simplified instructions for uploading the bid to MissouriBUYS:
1. Find the solicitation by completing Steps 1 through 4 above.
 2. Select the three dots under "Actions." Select "Add New Response."
 3. When the Quote box opens, give the response a title and select "OK."
 4. The detailed solicitation will open. Select "Check All" for the Original Solicitation Documents, open each document, and select "Accept." If this step is not completed, a bid cannot be uploaded. Scroll to the bottom of the page and select "Add Attachments." If you do not see this command, not all documents have been opened and accepted.
 5. The Supplier Attachments box will open. Select "Add Attachment" again.
 6. The Upload Documents box will open. Read the instructions for uploading. Disregard the "Confidential" check box.
 7. Browse and attach up to 5 files at a time. Scroll to bottom of box and select "Upload." The Supplier Attachments box will open. Repeat Steps 5 through 7 if more than 5 files are to be uploaded.
 8. When the Supplier Attachments box opens again and uploading is complete, select "Done." A message should appear that the upload is successful. If it does not, go to the Bidder Response tab and select "Submit."
 9. The detailed solicitation will open. At the bottom select "Close."
- D. Any time a bidder wants to modify the bid, he or she will have to submit a new one. FMDC will open the last response the bidder submits. The bidder may revise and submit the bid up to the close of the solicitation (bid date and time). Be sure to allow for uploading time so that the bid is successfully uploaded prior to the 1:30 PM deadline; we can only accept the bid if it is uploaded before the deadline.
- E. If you want to verify that you are uploading documents correctly, please contact Paul Girouard: 573-751-4797, paul.girouard@oa.mo.gov; April Howser: 573-751-0053, April.Howser@oa.mo.gov; or Mandy Roberson: 573-522-0074, Mandy.Roberson@oa.mo.gov.
- F. If you are experiencing login issues, please contact Web Procure Support (Proactis) at 866-889-8533 anytime from 7:00 AM to 7:00 PM Central Time, Monday through Friday. If you try using a userid or password several times that is incorrect, the system will lock you out. Web Procure Support is the only option to unlock you! If you forget your userid or password, Web Procure Support will provide a temporary userid or password. Also, if it has been a while since your last successful login and you receive an "inactive" message, contact Web Procure (Proactis). If you are having a registration issue, you may contact Cathy Holliday at 573-751-3491 or by email: cathy.holliday@oa.mo.gov.

IMPORTANT REMINDER REGARDING REQUIREMENT FOR OEO CERTIFICATION

A. SECTION 002113 – INSTRUCTIONS TO BIDDERS: Article 15.0, Section D1:

As of July 1, 2020, all MBE, WBE, and MBE/WBE contractors, subcontractors, and suppliers must be certified by the State of Missouri, Office of Equal Opportunity. No certifications from other Missouri certifying agencies will be accepted.

SECTION 002113 – INSTRUCTIONS TO BIDDERS

1.0 - SPECIAL NOTICE TO BIDDERS

- A. If awarded a contract, the Bidder's employees, and the employees of all subcontractors, who perform the work on the project must adhere to requirements in Section 013513 – Site Security and Health Requirements as applicable per Agency.
- B. The Bidder's prices shall include all city, state, and federal sales, excise, and similar taxes that may lawfully be assessed in connection with the performance of work, and the purchased of materials to be incorporated in the work. THIS PROJECT IS NOT TAX EXEMPT.

2.0 - BID DOCUMENTS

- A. The number of sets obtainable by any one (1) party may be limited in accordance with available supply.
- B. For the convenience of contractors, sub-contractors and suppliers, copies of construction documents are on file at the office of the Director, Division of Facilities Management, Design and Construction and on the Division's web site - <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans>.

3.0 - BIDDERS' OBLIGATIONS

- A. Bidders must carefully examine the entire site of the work and shall make all reasonable and necessary investigations to inform themselves thoroughly as to the facilities available as well as to all the difficulties involved in the completion of all work in accordance with the specifications and the plans. Bidders are also required to examine all maps, plans and data mentioned in the specifications. No plea of ignorance concerning observable existing conditions or difficulties that may be encountered in the execution of the work under this contract will be accepted as an excuse for any failure or omission on the part of the contractor to fulfill in every detail all of the requirements of the contract, nor accepted as a basis for any claims for extra compensation.
- B. Under no circumstances will contractors give their plans and specifications to another contractor. Any bid received from a contractor whose name does not appear on the list of plan holders may be subject to rejection.

4.0 - INTERPRETATIONS

- A. No bidder shall be entitled to rely on oral interpretations as to the meaning of the plans and specifications or the acceptability of alternate products, materials, form or type of construction. Every request for interpretation shall be made in writing and submitted with all supporting documents not less than five (5) working days before opening of bids. Every interpretation made to a bidder will be in the form of an addendum and will be sent as promptly as is practicable to all persons to whom plans and specifications have been issued. All such addenda shall become part of the contract documents.
- B. Approval for an "acceptable substitution" issued in the form of an addendum as per Paragraph 4A above, and as per Article 3.1 of the General Conditions; ACCEPTABLE SUBSTITUTIONS shall constitute approval for use in the project of the product.
- C. An "acceptable substitution" requested after the award of bid shall be approved if proven to the satisfaction of the Owner and the Designer as per Article 3.1, that the product is acceptable in design, strength, durability, usefulness, and convenience for the purpose intended. Approval of the substitution after award is at the sole discretion of the Owner.
- D. A request for "Acceptable Substitutions" shall be made on the Section 006325 Substitution Request Form. The request shall be sent directly to the project Designer. A copy of said request should also be mailed to the Owner, Division of Facilities Management, Design and Construction, Post Office Box 809, Jefferson City, Missouri 65102.

5.0 - BIDS AND BIDDING PROCEDURE

- A. Bidders shall submit all submission forms and accompanying documents listed in SECTION 004113 – BID FORM, Article 5.0, ATTACHMENTS TO BID by the stated time or their bid will be rejected for being non-responsive.

Depending on the specific project requirements, **the following is a GENERIC list** of all possible bid forms that may be due with bid submittals and times when they may be due. Please check for specific project requirements on the proposal form (Section 004113). ***Not all of the following bid forms may be required to be submitted.***

Bid Submittal – due before stated date and time of bid opening (see IFB):

004113	Bid Form (all pages are always required)
004322	Unit Prices Form
004336	Proposed Subcontractors Form
004337	MBE/WBE/SDVE Compliance Evaluation Form
004338	MBE/WBE/SDVE Eligibility Determination for Joint Ventures
004339	MBE/WBE/SDVE GFE Determination
004340	SDVE Business Form
004541	Affidavit of Work Authorization
004545	Anti-Discrimination Against Israel Act Certification form

- B. All bids shall be submitted without additional terms and conditions, modification or reservation on the bid forms with each space properly filled. Bids not on these forms will be rejected.
- C. All bids shall be accompanied by a bid bond executed by the bidder and a duly authorized surety company, certified check, cashier's check or bank draft made payable to the Division of Facilities Management, Design and Construction, State of Missouri, in the amount indicated on the bid form, Section 004113. Failure of the contractor to submit the full amount required shall be sufficient cause to reject his bid. The bidder agrees that the proceeds of the check, draft or bond shall become the property of the State of Missouri, if for any reason the bidder withdraws his bid after closing, or if on notification of award refuses or is unable to execute tendered contract, provide an acceptable performance and payment bond, provide evidence of required insurance coverage and/or provide required copies of affirmative action plans within ten (10) working days after such tender.
- D. The check or draft submitted by the successful bidder will be returned after the receipt of an acceptable performance and payment bond and execution of the formal contract. Checks or drafts of all other bidders will be returned within a reasonable time after it is determined that the bid represented by same will receive no further consideration by the State of Missouri. Bid bonds will only be returned upon request.

6.0 - SIGNING OF BIDS

- A. A bid from an individual shall be signed as noted on the Bid Form.
- B. A bid from a partnership or joint venture shall require only one signature of a partner, an officer of the joint venture authorized to bind the venture or an attorney-in-fact. If the bid is signed by an officer of a joint venture or an attorney-in-fact, a document evidencing the individual's authority to execute contracts should be included with the bid form.
- C. A bid from a limited liability company (LLC) shall be signed by a manager or a managing member of the LLC.
- D. A bid from a corporation shall have the correct corporate name thereon and the signature of an authorized officer of the corporation manually written. Title of office held by the person signing for the corporation shall appear, along with typed name of said individual. Corporate license number shall be provided and, if a corporation organized in a state other than Missouri, a Certificate of Authority to do business in the State of Missouri shall be attached. In addition, for corporate proposals, the President or Vice-President should sign as the bidder. If the signator is other than the corporate president or vice president, the bidder must provide satisfactory evidence that the signator has the legal authority to bind the corporation.

- E. A bid should contain the full and correct legal name of the Bidder. If the Bidder is an entity registered with the Missouri Secretary of State, the Bidder's name on the bid form should appear as shown in the Secretary of State's records.
- F. The Bidder should include its corporate license number on the Bid Form and, if the corporation is organized in a state other than Missouri, a Certificate of Authority to do business in the State of Missouri shall be attached to the bid form.

7.0 - RECEIVING BID SUBMITTALS

- A. It is the bidder's sole responsibility to assure receipt by Owner of bid submittals by the date and time specified in the Invitation for Bid. Bids received after the date and time specified shall not be considered by the Owner.
- B. Bids must be submitted through the MissouriBUYS statewide eProcurement system (<https://www.missouribuy.com/>) in accordance with the instructions for that system. The Owner shall only accept bids submitted through MissouriBUYS. Bids received by the Owner through any other means, including hard copies, shall not be considered and will be discarded by the Owner unopened.
- C. To respond to an Invitation for Bid, the Bidder must first register with MissouriBUYS by going through the MissouriBUYS Home Page (<https://www.missouribuy.com/>), clicking the "Register" button at the top of the page, and completing the Vendor Registration. Once registered, the Bidder accesses its account by clicking the "Login" button at the top of the MissouriBUYS Home Page. Enter your USERID and PASSWORD, which the Bidder will select. Under Solicitations, select "View Current Solicitations." A new screen will open. Under "Filter by Agency" select "OA-FMDC-Contracts Chapter 8." Under "Filter by Opp. No." type in the State Project Number. Select "Submit." Above the dark blue bar, select "Other Active Opportunities." To see the Solicitation Summary, single click the Opp. No. (Project Number) and the summary will open. Single quick click each blue bar to open detailed information. The Bidder must read and accept the Original Solicitation Documents and complete all identified requirements. The Bidder should download and save all of the Original Solicitation Documents on its computer so that the Bidder can prepare its response to these documents. The Bidder should upload its completed response to the downloaded documents as an attachment to the electronic solicitation response.
- D. Step-by-step instructions for how a registered vendor responds to a solicitation electronically are provided in Section 001116 – Invitation For Bid.
- E. The Bidder shall submit its bid on the forms provided by the Owner on MissouriBUYS with each space fully and properly completed, including all amounts required for alternate bids, unit prices, cost accounting data, etc. The Owner may reject bids that are not on the Owner's forms or that do not contain all requested information.
- F. No Contractor shall stipulate in his bid any conditions not contained in the specifications or standard bid form contained in the contract documents. To do so may subject the Contractor's bid to rejection.
- G. The completed forms shall be without interlineations, alterations or erasures.

8.0 - MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bidder may withdraw his bid at any time prior to scheduled closing time for receipt of bids, but no bidder may withdraw his bid for a period of twenty (20) working days after the scheduled closing time for receipt of bids.
- B. The Bidder shall modify his or her original bid by submitting a revised bid on MissouriBUYS.

9.0 - AWARD OF CONTRACT

- A. The Owner reserves the right to reject any and/or all bids and further to waive all informalities in bidding when deemed in the best interest of the State of Missouri.
- B. The Owner reserves the right to let other contracts in connection with the work, including but not by way of limitation, contracts for the furnishing and installation of furniture, equipment, machines, appliances and other apparatus.

- C. In awarding the contract the Owner may take into consideration the bidder's skill, facilities, capacity, experience, responsibility, previous work record, financial standing and the necessity of prompt and efficient completion of work herein described. Inability of any bidder to meet the requirements mentioned above may be cause for rejection of his bid. However, no contract will be awarded to any individual, partnership or corporation, who has had a contract with the State of Missouri declared in default within the preceding twelve months.
- D. Award of alternates, if any, will be made in numerical order unless all bids received are such that the order of acceptance of alternates does not affect the determination of the low bidder.
- E. No bid shall be considered binding upon the Owner until the written contract has been properly executed, a satisfactory bond has been furnished, evidence of required insurance coverage, submittal of executed Section 004541, Affidavit of Work Authorization form, documentation evidencing enrollment and participation in a federal work authorization program has been received and an affirmative action plan submitted. Failure to execute and return the contract and associated documents within the prescribed period of time shall be treated, at the option of the Owner, as a breach of bidder's obligation and the Owner shall be under no further obligation to bidder.
- F. If the successful bidder is doing business in the State of Missouri under a fictitious name, he shall furnish to Owner, attached to the Bid Form, a properly certified copy of the certificate of Registration of Fictitious Name from the State of Missouri, and such certificate shall remain on file with the Owner.
- G. Any successful bidder which is a corporation organized in a state other than Missouri shall furnish to the Owner, attached to the Bid Form, a properly certified copy of its current Certificate of Authority to do business in the State of Missouri, such certificate to remain on file with the Owner. No contract will be awarded by the Owner unless such certificate is furnished by the bidder.
- H. Any successful bidder which is a corporation organized in the State of Missouri shall furnish at its own cost to the Owner, if requested, a Certificate of Good Standing issued by the Secretary of State, such certificate to remain on file with the Owner.
- I. Transient employers subject to Sections 285.230 and 285.234, RSMo, (out-of-state employers who temporarily transact any business in the State of Missouri) may be required to file a bond with the Missouri Department of Revenue. No contract will be awarded by the Owner unless the successful bidder certifies that he has complied with all applicable provisions of Section 285.230-234.
- J. Sections 285.525 and 285.530, RSMo, require business entities to enroll and participate in a federal work authorization program in order to be eligible to receive award of any state contract in excess of \$5,000. Bidders should submit with their bid an Affidavit of Work Authorization (Section 004541) along with appropriate documentation evidencing such enrollment and participation. Section-004541, Affidavit of Work Authorization is located on the MissouriBUYS solicitation for this project. Bidders must also submit an E-Verify Memorandum before the Owner may award a contract to the Bidder. Information regarding a E-Verify is located at <https://www.uscis.gov/e-verify/>. The contractor shall be responsible for ensuring that all subcontractors and suppliers associated with this contract enroll in E-Verify.

10.0 - CONTRACT SECURITY

- A. The successful bidder shall furnish a performance/payment bond as set forth in General Conditions Article 6.1 on a condition prior to the State executing the contract and issuing a notice to proceed.

11.0 - LIST OF SUBCONTRACTORS

- A. If required by "Section 004113 – Bid Form," each bidder must submit as part of their bid a list of subcontractors to be used in performing the work (Section 004336). The list must specify the name of the single designated subcontractor, for each category of work listed in "Section 004336 - Proposed Subcontractors Form." If work within a category will be performed by more than one subcontractor, the bidder must provide the name of each subcontractor and specify the exact portion of the work to be done by each. Failure to list the Bidder's firm, or a subcontractor for each category of work identified on the Bid Form or the listing of more than one subcontractor for any category without designating the portion of work to be performed by each shall be cause for rejection of the bid. If the bidder intends to perform any of the designated subcontract work with the use of his own employees, the bidder shall make that fact

clear, by listing his own firm for the subject category. **If any category of work is left vacant, the bid shall be rejected.**

12.0 - WORKING DAYS

- A. Contract duration time is stated in working days and will use the following definition in determining the actual calendar date for contract completion:
 - 1. Working days are defined as all calendar days except Saturdays, Sundays and the following State of Missouri observed holidays: New Year's Day, Martin Luther King, Jr. Day, Lincoln Day, Washington's Birthday, Truman Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day.

13.0 - AMERICAN AND MISSOURI - MADE PRODUCTS AND FIRMS

- A. By signing the bid form and submitting a bid on this project, the Bidder certifies that it will use American and Missouri products as set forth in Article 1.7 of the General Conditions. Bidders are advised to review those requirements carefully prior to bidding.
- B. A preference shall be given to Missouri firms, corporations or individuals, or firms, corporations or individuals that maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less.
- C. Pursuant to Section 34.076, RSMo, a contractor or Bidder domiciled outside the boundaries of the State of Missouri shall be required, in order to be successful, to submit a bid the same percent less than the lowest bid submitted by a responsible contractor or Bidder domiciled in Missouri as would be required for such a Missouri domiciled contractor or Bidder to succeed over the bidding contractor or Bidder domiciled outside Missouri on a like contract or bid being let in the person's domiciliary state and, further, the contractor or Bidder domiciled outside the boundaries of Missouri shall be required to submit an audited financial statement as would be required of a Missouri domiciled contractor or Bidder on a like contract or bid being let in the domiciliary state of that contractor or Bidder.

14.0 – ANTI-DISCRIMINATION AGAINST ISRAEL ACT CERTIFICATION:

- A. Pursuant to section 34.600, RSMo, if the Bidder meets the section 34.600, RSMo, definition of a “company” and the Bidder has ten or more employees, the Bidder must certify in writing that the Bidder is not currently engaged in a boycott of goods or services from the State of Israel as defined in section 34.600, RSMo, and shall not engage in a boycott of goods or services from the State of Israel, if awarded a contract, for the duration of the contract. The Bidder is requested to complete and submit the applicable portion of Section 004545 - Anti-Discrimination Against Israel Act Certification with their Bid Form. The applicable portion of the exhibit must be submitted prior to execution of a contract by the Owner and issuance of Notice to Proceed. If the exhibit is not submitted, the Owner shall rescind its Intent to Award and move to the next lowest, responsive, responsible bidder.

15.0 - MBE/WBE/SDVE INSTRUCTIONS

- A. Definitions:
 - 1. **“MBE”** means a Minority Business Enterprise.
 - 2. **“MINORITY”** has the same meaning as set forth in 1 C.S.R. 10-17.010.
 - 3. **“MINORITY BUSINESS ENTERPRISE”** has the same meaning as set forth in section 37.020, RSMo.
 - 4. **“WBE”** means a Women's Business Enterprise.
 - 5. **“WOMEN'S BUSINESS ENTERPRISE”** has the same meaning as set forth in section 37.020, RSMo.
 - 6. **“SDVE”** means a Service-Disabled Veterans Enterprise.
 - 7. **“SERVICE-DISABLED VETERAN”** has the same meaning as set forth in section 34.074, RSMo.

8. **“SERVICE-DISABLED VETERAN ENTERPRISE”** has the same meaning as “Service-Disabled Veteran Business” set forth in section 34.074, RSMo.

B. MBE/WBE/SDVE General Requirements:

1. For all bids greater than \$100,000, the Bidder shall obtain MBE, WBE and SDVE participation in an amount equal to or greater than the percentage goals set forth in the Invitation for Bid and the Bid Form, unless the Bidder is granted a Good Faith Effort waiver by the Director of the Division, as set forth below. If the Bidder does not meet the MBE, WBE and SDVE goals, or make a good faith effort to do so, the Bidder shall be non-responsive, and its bid shall be rejected.
2. The Bidder should submit with its bid all of the information requested in the MBE/WBE/SDVE Compliance Evaluation Form for every MBE, WBE, or SDVE subcontractor or material supplier the Bidder intends to use for the contract work. The Bidder is required to submit all appropriate MBE/WBE/SDVE documentation before the stated time and date set forth in the Invitation for Bid. If the Bidder fails to provide such information by the specified date and time, the Owner shall reject the bid.
3. The Director reserves the right to request additional information from a Bidder to clarify the Bidder’s proposed MBE, WBE, and/or SDVE participation. The Bidder shall submit the clarifying information requested by the Owner within two (2) Working Days of receiving the request for clarification.
4. Pursuant to section 34.074, RSMo, a Bidder that is a SDVE doing business as Missouri firm, corporation, or individual, or that maintains a Missouri office or place of business, shall receive a three-point bonus preference in the contract award evaluation process. The bonus preference will be calculated and applied by reducing the bid amount of the eligible SDVE by three percent of the apparent low responsive bidder’s bid. Based on this calculation, if the eligible SDVE’s evaluation is less than the apparent low responsive bidder’s bid, the eligible SDVE’s bid becomes the apparent low responsive bid. This reduction is for evaluation purposes only, and will have no impact on the actual amount(s) of the bid or the amount(s) of any contract awarded. In order to be eligible for the SDVE preference, the Bidder must complete and submit with its bid the Missouri Service Disabled Veteran Business Form, and any information required by the form. The form is available on the MissouriBUYS solicitation for this project.

C. Computation of MBE/WBE/SDVE Goal Participation:

1. A Bidder who is a MBE, WBE, or SDVE may count 100% of the contract towards the MBE, WBE or SDVE goal, less any amounts awarded to another MBE, WBE or SDVE. (NOTE: A MBE firm that bids as general contractor must obtain WBE and SDVE participation; a WBE firm that bids as a general contractor must obtain MBE and SDVE participation; and a SDVE firm that bids as general contractor must obtain MBE and WBE participation.) In order for the remaining contract amount to be counted towards the MBE, WBE or SDVE goal, the Bidder must complete the MBE/WBE/SDVE Compliance Evaluation Form (Section 004337) identifying itself as an MBE, WBE or SDVE.
2. The total dollar value of the work granted to a certified MBE, WBE or SDVE by the Bidder shall be counted towards the applicable goal.
3. Expenditures for materials and supplies obtained from a certified MBE, WBE, or SDVE supplier or manufacturer may be counted towards the MBE, WBE and SDVE goals, if the MBE, WBE, or SDVE assumes the actual and contractual responsibility for the provision of the materials and supplies.
4. The total dollar value of the work granted to a second or subsequent tier subcontractor or a supplier may be counted towards a Bidder’s MBE, WBE and SDVE goals, if the MBE, WBE, or SDVE properly assumes the actual and contractual responsibility for the work.
5. The total dollar value of work granted to a certified joint venture equal to the percentage of the ownership and control of the MBE, WBE, or SDVE partner in the joint venture may be counted towards the MBE/WBE/SDVE goals.
6. Only expenditures to a MBE, WBE, or SDVE that performs a commercially useful function in the work may be counted towards the MBE, WBE and SDVE goals. A MBE, WBE, or SDVE performs a commercially useful function when it is responsible for executing a distinct element of the work

and carrying out its responsibilities by actually performing, managing and supervising the work or providing supplies or manufactured materials.

D. Certification of MBE/WBE/SDVE Subcontractors:

1. In order to be counted towards the goals, an MBE or WBE must be certified by the State of Missouri Office of Equal Opportunity and an SDVE must be certified by the State of Missouri, Office of Administration, Division of Purchasing and Material Management or by the Department of Veterans Affairs.
2. The Bidder may determine the certification status of a proposed MBE or WBE subcontractor or supplier by referring to the Office of Equal Opportunity (OEO)'s online MBE/WBE directory (<https://apps1.mo.gov/MWBCertifiedFirms/>). The Bidder may determine the eligibility of a SDVE subcontractor or supplier by referring to the Division of Purchasing and Materials Management's online SDVE directory (<https://oa.mo.gov/sites/default/files/sdvelisting.pdf>) or the Department of Veterans Affairs' directory (<https://vetbiz.va.gov/basic-search/>).
3. Additional information, clarifications, etc., regarding the listings in the directories may be obtained by calling the Division at (573)751-3339 and asking to speak to the Contract Specialist of record as shown in the Supplementary Conditions (Section 007300).

E. Waiver of MBE/WBE/SDVE Participation:

1. If a Bidder has made a good faith effort to secure the required MBE, WBE and/or SDVE participation and has failed, the Bidder shall submit with its bid the information requested in MBE/WBE/SDVE Good Faith Effort (GFE) Determination form. The GFE forms are located on the MissouriBUYS solicitation for this project. The Director will determine if the Bidder made a good faith effort to meet the applicable goals. If the Director determines that the Bidder did not make a good faith effort, the bid shall be rejected as being nonresponsive to the bid requirements. Bidders who demonstrate that they have made a good faith effort to include MBE, WBE, and/or SDVE participation will be determined to be responsive to the applicable participation goals, regardless of the percent of actual participation obtained, if the bid is otherwise acceptable.
2. In determining whether a Bidder has made a good faith effort to obtain MBE, WBE and/or SDVE participation, the Director may evaluate the factors set forth in 1 CSR 30-5.010(6)(C) and the following:
 - a. The amount of actual participation obtained;
 - b. How and when the Bidder contacted potential MBE, WBE, and SDVE subcontractors and suppliers;
 - c. The documentation provided by the Bidder to support its contacts, including whether the Bidder provided the names, addresses, phone numbers, and dates of contact for MBE/WBE/SDVE firms contacted for specific categories of work;
 - d. If project information, including plans and specifications, were provided to MBE/WBE/SDVE subcontractors;
 - e. Whether the Bidder made any attempts to follow-up with MBE, WBE or SDVE firms prior to bid;
 - f. Amount of bids received from any of the subcontractors and/or suppliers that the Bidder contacted;
 - g. The Bidder's stated reasons for rejecting any bids;
3. If no bidder has obtained any participation in a particular category (MBE/WBE/SDVE) or made a good faith effort to do so, the Director may waive that goal rather than rebid.

F. Contractor MBE/WBE/SDVE Obligations

1. If awarded a contract, the Bidder will be contractually required to subcontract with or obtain materials from the MBE, WBE, and SDVE firms listed in its bid, in amounts equal to or greater than the dollar amount bid, unless the amount is modified in writing by the Owner.
2. If the Contractor fails to meet or maintain the participation requirements contained in the Contractor's bid, the Contractor must satisfactorily explain to the Director why it cannot comply with the requirement and why failing meeting the requirement was beyond the Contractor's control. If the Director finds the Contractor's explanation unsatisfactory, the Director may take any appropriate action including, but not limited to:
 - a. Declaring the Contractor ineligible to participate in any contracts with the Division for up to twelve (12) months (suspension); and/or
 - b. Declaring the Contractor be non-responsive to the Invitation for Bid, or in breach of contract and rejecting the bid or terminating the contract.
3. If the Contractor replaces an MBE, WBE, or SDVE during the course of this contract, the Contractor shall replace it with another MBE, WBE, or SDVE or make a good faith effort to do so. All MBE, WBE and SDVE substitutions must be approved by the Director.
4. The Contractor shall provide the Owner with regular reports on its progress in meeting its MBE/WBE/SDVE obligations. At a minimum, the Contractor shall report the dollar-value of work completed by each MBE, WBE, or SDVE during the preceding month and the cumulative total of work completed by each MBE, WBE or SDVE to date with each monthly application for payment. The Contractor shall also make a final report, which shall include the total dollar-value of work completed by each MBE, WBE, and SDVE during the entire contract.

STATE OF MISSOURI
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION
MBE/WBE/SDVE DIRECTORY

The MBE/WBE Directory for goods and services is maintained by the Office of Equal Opportunity (OEO). The current Directory can be accessed at the following web address:

<https://apps1.mo.gov/MWBCertifiedFirms/>

Please note that you may search by MBE, WBE, or both as well as by region, location of the business by city or state, as well as by commodity or service.

The SERVICE DISABLED VETERAN ENTERPRISE (SDVE) Directory (s) may be accessed at the following web addresses:

<https://oa.mo.gov/sites/default/files/sdvelisting.pdf>

<https://vetbiz.va.gov/basic-search/>



State of Missouri Construction Contract

THIS AGREEMENT is made (DATE) by and between:

Contractor Name and Address

hereinafter called the "Contractor,"

and the **State of Missouri**, hereinafter called the "**Owner**", represented by the Office of Administration, Division of Facilities Management, Design and Construction, on behalf of the Department of the Office of Administration.

WITNESSETH, that the Contractor and the Owner, for the consideration stated herein agree as follows:

ARTICLE 1. STATEMENT OF WORK

The Contractor shall furnish all labor and materials and perform all work required for furnishing and installing all labor, materials, equipment and transportation and everything necessarily inferred from the general nature and tendency of the plans and specifications for the proper execution of the work for:

Project Name: **Repairs to Exterior Facade
Landers State Office Building
Springfield, MO, Missouri**

Project Number: **O1920-01**

in strict accordance with the Contract Documents as enumerated in Article 7, all of which are made a part hereof.

ARTICLE 2. TIME OF COMPLETION

The contract performance time is **130 working days** from the transmittal date of this agreement. The contract completion date is **MONTH, DAY, YEAR**. This time includes ten (10) working days for the Contractor to receive, sign and return the contract form along with required bonding and insurance certificates. Failure of the Contractor to provide correct bonding and insurance within the ten (10) working days shall not be grounds for a time extension. Receipt of proper bonding and insurance is a condition precedent to the formation of the contract and if not timely received, may result in forfeiture of the Contractor's bid security. Work may not commence until the Owner issues a written Notice to Proceed and must commence within seven (7) working days thereafter.

ARTICLE 3. LIQUIDATED DAMAGES

Whenever time is mentioned in this contract, time shall be and is of the essence of this contract. The Owner would suffer a loss should the Contractor fail to have the work embraced in this contract fully completed on or before the time above specified. **THEREFORE**, the parties hereto realize in order to adjust satisfactorily the damages on account of such failure that it might be impossible to compute accurately or estimate the amount of such loss or damages which the Owner would sustain by reason of failure to complete fully said work within the time required by this contract. The Contractor hereby covenants and agrees to pay the Owner, as and for **liquidated damages, the sum of \$700** per day for each and every day, Sunday and legal holidays excepted, during which the work remains incomplete and unfinished. Any sum which may be due the Owner for such damages shall be deducted and retained by the Owner from any balance which may be due the Contractor when said work shall have been finished and accepted. But such provisions shall not release the Bond of the Contractor from liability according to its terms. In case of failure to complete, the Owner will be under no obligation to show or prove any actual or specific loss or damage.

ARTICLE 4. CONTRACT SUM

The Owner shall pay the Contractor for the prompt, faithful and efficient performance of the conditions and undertakings of this contract, subject to additions, and deductions as provided herein, in current funds the sum of:

Base Bid:	\$
Alternate No. 1:	\$
Alternate No. 2:	\$
Alternate No. 3:	\$

TOTAL CONTRACT AMOUNT: (\$CONTRACT AMOUNT)

UNIT PRICES: The Owner accepts the following Unit Prices:

For changing specified quantities of work from those indicated by the contract drawings and specifications, upon written instructions of Owner, the following unit prices shall prevail. The unit prices include all labor, overhead and profit, materials, equipment, appliances, bailing, shoring, shoring removal, etc., to cover the finished work of the several kinds of work called for. Only a single unit price shall be given and it shall apply for either MORE or LESS work than that shown on the drawings and called for in the specifications or included in the Base Bid. In the event of more or less units than so indicated or included, change orders may be issued for the increased or decreased amount.

ARTICLE 5. PREVAILING WAGE RATE

MISSOURI PREVAILING WAGE LAW (Sections 290.210 to 290.340, RSMo): The Contractor shall pay not less than the specified hourly rate of wages, as set out in the wage order attached to and made part of the specifications for work under this contract, to all workers performing work under the contract, in accordance with sections 290.210 to 290.340, RSMo. The Contractor shall forfeit a penalty to the Owner of one hundred dollars per day (or portion of a day) for each worker that is paid less than the specified rates for any work done under the contract by the Contractor or by any subcontractor, in accordance with section 290.250, RSMo.

DAVIS-BACON ACT: If this Project is financed in whole or in part from Federal funds (as indicated in the Instructions to Bidders or other bid or contract documents for this Project), then this contract shall be subject to all applicable federal labor statutes, rules and regulations, including provisions of the Davis-Bacon Act, 40 U.S.C. §3141 et seq., and the "Federal Labor Standards Provisions," as further set forth in Section 007333 – Supplementary General Conditions for Federally Funded/Assisted Construction Projects, which is incorporated into the contract by reference. Where the Missouri Prevailing Wage Law and the Davis-Bacon Act require payment of different wages for work performed under this contract, the Contractor and all Subcontractors shall pay the greater of the wages required under either law, on a classification by classification basis.

ARTICLE 6. MINORITY/WOMEN/SERVICE DISABLED VETERAN BUSINESS ENTERPRISE PARTICIPATION

The Contractor has been granted a waiver of the 10% MBE and 10% WBE and 3% SDVE participation goals. The Contractor agrees to secure the MBE/WBE/SDVE participation amounts for this project as follows: (OR)

The Contractor has met the MBE/WBE/SDVE participation goals and agrees to secure the MBE/WBE/SDVE participation amounts for this project as follows:

MBE/WBE/SDVE Firm:	Subcontract Amt:\$
MBE/WBE/SDVE Firm:	Subcontract Amt:\$
MBE/WBE/SDVE Firm:	Subcontract Amt:\$

Total \$

MBE/WBE/SDVE assignments identified above shall not be changed without a contract change signed by the Owner.

The Director of the Division of Facilities Management, Design and Construction or his Designee shall be the final authority to resolve disputes and disagreements between the Contractor and the MBE/WBE/SDVE firms listed above when such disputes impact the subcontract amounts shown above.

ARTICLE 7. CONTRACT DOCUMENTS

The following documents are hereby incorporated into this contract by reference (all division/section numbers and titles are as utilized in the Project Manual published by the Owner for this Project):

1. Division 0 – Procurement and Contracting Information, including, but not limited to:
 - a. Invitation for Bid (Section 001116)
 - b. Instructions to Bidders (Section 002113)
 - c. Supplementary Instructions to Bidders (if applicable) (Section 002213)
 - d. The following documents as completed and executed by the Contractor and accepted by the Owner, if applicable:
 - i. Bid Form (Section 004113)
 - ii. Unit Prices (Section 004322)
 - iii. Proposed Contractors Form (Section 004336)
 - iv. MBE, WBE, SDVE Compliance Evaluation Form(s) (Section 004337)
 - v. MBE, WBE, SDVE Eligibility Determination Form for Joint Ventures (Section 004338)
 - vi. MBE, WBE, SDVE Good Faith Effort (GFE) Determination Form (Section 004339)
 - vii. Missouri Service Disabled Veteran Business Form (Section 004340)
 - viii. Affidavit of Work Authorization (Section 004541)
 - ix. Affidavit for Affirmative Action (Section 005414)
 - e. Performance and Payment Bond, completed and executed by the Contractor and surety (Section 006113)
 - f. General Conditions (Section 007213)
 - g. Supplementary Conditions (Section 007300)
 - h. Supplementary General Conditions for Federally Funded/Assisted Construction Projects (Section 007333)
 - i. Wage Rate(s) (Section 007346)
2. Division 1 – General Requirements
3. All Drawings identified in the Project Manual
4. All Technical Specifications included in the Project Manual
5. Addenda, if applicable

ARTICLE 8 – CERTIFICATION

By signing this contract, the Contractor hereby re-certifies compliance with all legal requirements set forth in Section 6.0, Bidder's Certifications of the Bid Form.

Further, if the Contractor provides any "personal information" as defined in §105.1500, RSMo concerning an entity exempt from federal income tax under Section 501(c) of the Internal Revenue Code of 1986, as amended, the Contractor understands and agrees that it is voluntarily choosing to enter into a state contract and providing such information for that purpose. The state will treat such personal information in accord with §105.1500, RSMo.

By signature below, the parties hereby execute this contract document.

APPROVED:

Brian Yansen, Director
Division of Facilities Management,
Design and Construction

Contractor's Authorized Signature

I, Corporate Secretary, certify that I am Secretary of the corporation named above and that (CONTRACTOR NAME), who signed said contract on behalf of the corporation, was then (TITLE) of said corporation and that said contract was duly signed for and in behalf of the corporation by authority of its governing body, and is within the scope of its corporate powers.

Corporate Secretary



STATE OF MISSOURI
OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
AFFIDAVIT FOR AFFIRMATIVE ACTION

PROJECT NUMBER

NAME

First being duly sworn on oath states: that

he/she is the ☐ sole proprietor ☐ partner ☐ officer or ☐ manager or managing member of

NAME

a ☐ sole proprietorship ☐ partnership
☐ limited liability company (LLC)

or ☐ corporation, and as such, said proprietor, partner, or officer is duly authorized to make this

affidavit on behalf of said sole proprietorship, partnership, or corporation; that under the contract known as

PROJECT TITLE

Less than 50 persons in the aggregate will be employed and therefore, the applicable Affirmative Action
requirements as set forth in Article 1.4 of the General Conditions of the State of Missouri have been met.

PRINT NAME & SIGNATURE

DATE

NOTARY INFORMATION

NOTARY PUBLIC EMBOSSER SEAL

STATE OF

COUNTY (OR CITY OF ST.
LOUIS)

**USE RUBBER STAMP IN CLEAR AREA
BELOW**

SUBSCRIBED AND SWORN BEFORE ME, THIS

DAY OF

YEAR

NOTARY PUBLIC SIGNATURE

MY COMMISSION EXPIRES

NOTARY PUBLIC NAME (TYPED OR PRINTED)

SECTION 006113 - PERFORMANCE AND PAYMENT BOND FORM

KNOW ALL MEN BY THESE PRESENTS, THAT we _____

as principal, and _____

_____ as Surety, are held and firmly bound unto the

STATE OF MISSOURI. in the sum of _____ Dollars (\$ _____)

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

WHEREAS, the Principal has, by means of a written agreement dated the _____

day of _____, 20_____, enter into a contract with the State of Missouri for

(Insert Project Title and Number)

NOW, THEREFORE, if the Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the State of Missouri, with or without notice to the Surety and during the life of any guaranty required under the contract; and shall also faithfully perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made with or without notice to the Surety; and shall also promptly make payment for materials incorporated, consumed or used in connection with the work set forth in the contract referred to above, and all insurance premiums, both compensation and all other kinds of insurance, on said work, and for all labor performed on such work, whether by subcontractor or otherwise, at not less than the prevailing hourly rate of wages for work of a similar character (exclusive of maintenance work) in the locality in which the work is performed and not less than the prevailing hourly rate of wages for legal holiday and overtime work (exclusive of maintenance work) in the locality in which the work is performed both as determined by the Department of Labor and Industrial Relations or determined by the Court of Appeal, as provided for in said contract and in any and all duly authorized modifications of said contract that may be hereafter made, with or without notice to the Surety, then, this obligation shall be void and of no effect, but it is expressly understood that if the Principal should make default in or should fail to strictly, faithfully and efficiently do, perform and comply with any or more of the covenants, agreements, stipulations, conditions, requirements or undertakings, as specified in or by the terms of said contract, and with the time therein named, then this obligation shall be valid and binding upon each of the parties hereto and this bond shall remain in full force and effect; and the same may be sued on at the instance of any material man, laborer, mechanic, subcontractor, individual, or otherwise to whom such payment is due, in the name of the State of Missouri, to the use of any such person.

AND, IT IS FURTHER specifically provided that any modifications which may hereinafter be made in the terms of the contract or in the work to be done under it or the giving by the Owner of any extension of the time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal to the other, shall not in any way release the Principal and the Surety, or either or any of them, their heirs, executors, administrators and successors, from their liability hereunder, notice to the Surety of any such extension, modifications or forbearance being hereby waived.

IN WITNESS WHEREOF, the above bounden parties have executed the within instrument this _____ day of _____, 20 ____.

AS APPLICABLE:

AN INDIVIDUAL

Name: _____

Signature: _____

A PARTNERSHIP

Name of Partner: _____

Signature of Partner: _____

Name of Partner: _____

Signature of Partner: _____

CORPORATION

Firm Name: _____

Signature of President: _____

SURETY

Surety Name: _____

Attorney-in-Fact: _____

Address of Attorney-in-Fact: _____

Telephone Number of Attorney-in-Fact: _____

Signature Attorney-in-Fact: _____

NOTE: Surety shall attach Power of Attorney



STATE OF MISSOURI
OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
PRODUCT SUBSTITUTION REQUEST

PROJECT NUMBER

PROJECT TITLE AND LOCATION

CHECK APPROPRIATE BOX

- ☐ **SUBSTITUTION PRIOR TO BID OPENING**
(Minimum of (5) working days prior to receipt of Bids as per Article 4 – Instructions to Bidders)
- ☐ **SUBSTITUTION FOLLOWING AWARD**
(Maximum of (20) working days from Notice to Proceed as per Article 3 – General Conditions)

FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)

TO: ARCHITECT/ENGINEER (PRINT COMPANY NAME)

Bidder/Contractor hereby requests acceptance of the following product or systems as a substitution in accordance with provisions of Division One of the Bidding Documents:

SPECIFIED PRODUCT OR SYSTEM

SPECIFICATION SECTION NO.

SUPPORTING DATA

- ☐ Product data for proposed substitution is attached (include description of product, standards, performance, and test data)
- ☐ Sample ☐ Sample will be sent, if requested

QUALITY COMPARISON

	SPECIFIED PRODUCT	SUBSTITUTION REQUEST
NAME, BRAND		
CATALOG NO.		
MANUFACTURER		
VENDOR		

PREVIOUS INSTALLATIONS

PROJECT	ARCHITECT/ENGINEER
LOCATION	DATE INSTALLED

SIGNIFICANT VARIATIONS FROM SPECIFIED PRODUCT

REASON FOR SUBSTITUTION

DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?☐ YES ☐ NO

IF YES, EXPLAIN

SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUCTURE OR A/E WORK☐ YES ☐ NO**BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:**

We have investigated the proposed substitution. We believe that it is equal or superior in all respects to specified product, except as stated above; that it will provide the same Warranty as specified product; that we have included complete implications of the substitution; that we will pay redesign and other costs caused by the substitution which subsequently become apparent; and that we will pay costs to modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning as a result of the substitution.

BIDDER/CONTRACTOR

DATE

REVIEW AND ACTION☐ Resubmit Substitution Request with the following additional information:

☐ Substitution is accepted.☐ Substitution is accepted with the following comments:

☐ Substitution is not accepted.

ARCHITECT/ENGINEER

DATE



STATE OF MISSOURI
OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
FINAL RECEIPT OF PAYMENT AND RELEASE

PROJECT NUMBER

KNOW ALL MEN BY THESE PRESENT THAT: hereinafter called "Subcontractor" who heretofore entered into an agreement with hereinafter called "Contractor", for the performance of work and/or furnishing of material for the construction of the project entitled

(PROJECT TITLE, PROJECT LOCATION, AND PROJECT NUMBER)

at

(ADDRESS OF PROJECT)

for the State of Missouri (Owner) which said subcontract is by this reference incorporated herein, in consideration of such final payment by Contractor.

DOES HEREBY:

1. ACKNOWLEDGE that they have been **PAID IN FULL** all sums due for work and materials contracted or done by their Subcontractors, Material Vendors, Equipment and Fixture Suppliers, Agents and Employees, or otherwise in the performance of the Work called for by the aforesaid Contract and all modifications or extras or additions thereto, for the construction of said project or otherwise.
2. RELEASE and fully, finally, and forever discharge the Owner from any and all suits, actions, claims, and demands for payment for work performed or materials supplied by Subcontractor in accordance with the requirements of the above referenced Contract.
1. REPRESENT that all of their Employees, Subcontractors, Material Vendors, Equipment and Fixture Suppliers, and everyone else has been **paid in full** all sums due them, or any of them, in connection with performance of said Work, or anything done or omitted by them, or any of them in connection with the construction of said improvements, or otherwise.

DATED this day of , 20 .

NAME OF SUBCONTRACTOR

BY (TYPED OR PRINTED NAME)

SIGNATURE

TITLE

ORIGINAL: FILE/Closeout Documents



STATE OF MISSOURI
OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

MBE/WBE/SDVE PROGRESS REPORT

Remit with ALL Progress and Final Payments

(Please check appropriate box) ☐CONSULTANT ☐CONSTRUCTION

PAY APP NO.	PROJECT NUMBER
CHECK IF FINAL <input type="checkbox"/> FINAL	DATE

PROJECT TITLE			
PROJECT LOCATION			
FIRM			
ORIGINAL CONTRACT SUM (Same as Line Item 1. on Form A of Application for Payment) \$		TOTAL CONTRACT SUM TO DATE (Same as Line Item 3. on Form A of Application for Payment) \$	
THE TOTAL MBE/WBE/SDVE PARTICIPATION DOLLAR AMOUNT OF THIS PROJECT AS INDICATED IN THE ORIGINAL CONTRACT: \$			
SELECT MBE, WBE, SDVE	TOTAL AMOUNT OF SUBCONTRACT	\$ AMOUNT PAID-TO-DATE (include approved contract changes)	CONSULTANT/SUBCONSULTANT OR CONTRACTOR/SUBCONTRACTOR/SUPPLIER COMPANY NAME
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	

INSTRUCTIONS FOR MBE/WBE/SDVE PROGRESS REPORT

CONTRACTOR OR CONSULTANT TO FILL OUT AND REMIT WITH EACH PAY APPLICATION:

The MBE/WBE/SDVE Progress Report for the project is issued with the contract comprising values reported in the consultant's Proposal or on the successful contractor's Section 004337 Compliance Evaluation Forms.

At Initial Pay Application fill in the following:

1. Pay App No. Start with 1.
2. Fill in the Project Number and Date.
3. Enter Project Title, Project Location, and Firm.
4. Fill in the "Original Contract Sum" and "Total Contract Sum To Date" (Reference applicable Line Items on Form A of Application for Payment).
5. Indicate the Total Participation Dollar Amount from the Original Contract.
6. Select MBE, WBE, or SDVE for each Consultant/Subconsultant or Contractor/Subcontractor/Supplier.
7. Enter the "Total Amount of Subcontract", "\$ Amount (Paid-To-Date)", and Company Name.

For all subsequent Pay Applications fill in the following:

1. Pay App No.
2. If Final Pay App, check box.
3. Fill in the Project Number and Date.
4. Enter Project Title, Project Location, and Firm
5. At each Pay App fill in the "Original Contract Sum" and "Total Contract Sum To Date" (reference applicable Line Items on Form A of Application for Payment).
6. Indicate the Total Participation Dollar Amount from the Original Contract.
7. Select MBE, WBE, or SDVE for each Consultant/Subconsultant or Contractor/Subcontractor/Supplier
8. Enter the "Total Amount of Subcontract", "\$ Amount (Paid-To-Date)", and Company Name.



STATE OF MISSOURI
OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
AFFIDAVIT – COMPLIANCE WITH PREVAILING WAGE LAW

PROJECT NUMBER

Before me, the undersigned Notary Public, in and for the County of _____

State of _____ personally came and appeared _____

(NAME)

of the _____

(POSITION)

(NAME OF THE COMPANY)

(a corporation) (a partnership) (a proprietorship) and after being duly sworn did depose and say that all provisions and requirements set out in Chapter 290, Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workmen employed on public works project have been fully satisfied and there has been no exception to the full and completed compliance with said provisions and requirements

and with Wage Determination No: _____ issued by the

Department of Labor and Industrial Relations, State of Missouri on the _____ day of _____ 20 ____

in carrying out the contract and working in connection with _____

(NAME OF PROJECT)

Located at _____ in _____ County

(NAME OF THE INSTITUTION)

Missouri, and completed on the _____ day of _____ 20 ____

SIGNATURE

NOTARY INFORMATION

NOTARY PUBLIC EMBOSSEY OR
BLACK INK RUBBER STAMP SEAL

STATE

COUNTY (OR CITY OF ST. LOUIS)

SUBSCRIBED AND SWORN BEFORE ME, THIS

DAY OF

YEAR

USE RUBBER STAMP IN CLEAR AREA BELOW

NOTARY PUBLIC SIGNATURE

MY COMMISSION
EXPIRES

NOTARY PUBLIC NAME (TYPED OR PRINTED)

FILE: Closeout Documents

GENERAL CONDITIONS

INDEX

ARTICLE:

1. General Provisions

- 1.1. Definitions
- 1.2. Drawings and Specifications
- 1.3. Compliance with Laws, Permits, Regulations and Inspections
- 1.4. Nondiscrimination in Employment
- 1.5. Anti-Kickback
- 1.6. Patents and Royalties
- 1.7. Preference for American and Missouri Products and Services
- 1.8. Communications
- 1.9. Separate Contracts and Cooperation
- 1.10. Assignment of Contract
- 1.11. Indemnification
- 1.12. Disputes and Disagreements

2. Owner/Designer Responsibilities

3. Contractor Responsibilities

- 3.1. Acceptable Substitutions
- 3.2. Submittals
- 3.3. As-Built Drawings
- 3.4. Guaranty and Warranties
- 3.5. Operation and Maintenance Manuals
- 3.6. Other Contractor Responsibilities
- 3.7. Subcontracts

4. Changes in the Work

- 4.1. Changes in the Work
- 4.2. Changes in Completion Time

5. Construction and Completion

- 5.1. Construction Commencement
- 5.2. Project Construction
- 5.3. Project Completion
- 5.4. Payments

6. Bond and Insurance

6.1. Bond

6.2. Insurance

7. Termination or Suspension of Contract

7.1. For Site Conditions

7.2. For Cause

7.3. For Convenience

SECTION 007213 - GENERAL CONDITIONS

- A. These General Conditions apply to each section of these specifications. The Contractor is subject to the provisions contained herein.
- B. The General Conditions are intended to define the relationship of the Owner, the Designer and the Contractor thereby establishing certain rules and provisions governing the operation and performance of the work so that the work may be performed in a safe, orderly, expeditious and workmanlike manner.

ARTICLE 1 – GENERAL PROVISIONS

ARTICLE 1.1 - DEFINITIONS

As used in these contract documents, the following terms shall have the meanings and refer to the parties designated in these definitions.

- 1. **"COMMISSIONER"**: The Commissioner of the Office of Administration.
- 2. **"CONSTRUCTION DOCUMENTS"**: The "Construction Documents" shall consist of the Project Manual, Drawings and Addenda.
- 3. **"CONSTRUCTION REPRESENTATIVE"**: Whenever the term "Construction Representative" is used, it shall mean the Owner's Representative at the work site.
- 4. **"CONTRACTOR"**: Party or parties who have entered into a contract with the Owner to furnish work under these specifications and drawings.
- 5. **"DESIGNER"**: When the term "Designer" is used herein, it shall refer to the Architect, Engineer, or Consultant of Record specified and defined in Paragraph 2.0 of the Supplemental Conditions, or his duly authorized representative. The Designer may be either a consultant or state employee.
- 6. **"DIRECTOR"**: Whenever the term "Director" is used, it shall mean the Director of the Division of Facilities Management, Design and Construction or his Designee, representing the Office of Administration, State of Missouri. The Director is the agent of the Owner.
- 7. **"DIVISION"**: Shall mean the Division of Facilities Management, Design and Construction, State of Missouri.

- 8. **"INCIDENTAL JOB BURDENS"**: Shall mean those expenses relating to the cost of work, incurred either in the home office or on the job-site, which are necessary in the course of doing business but are incidental to the job. Such costs include office supplies and equipment, postage, courier services, telephone expenses including long distance, water and ice and other similar expenses.
- 9. **"JOINT VENTURE"**: An association of two (2) or more businesses to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge.
- 10. **"OWNER"**: Whenever the term "Owner" is used, it shall mean the State of Missouri.
- 11. **"PROJECT"**: Wherever the term "Project" is used, it shall mean the work required to be completed by the construction contract.
- 12. **"PROJECT MANUAL"**: The "Project Manual" shall consist of Introductory Information, Invitation for Bid, Instructions to Bidders, Bid Documents, Additional Information, Standard Forms, General Conditions, Supplemental General Conditions, General Requirements and Technical Specifications.
- 13. **"SUBCONTRACTOR"**: Party or parties who contract under, or for the performance of part or this entire Contract between the Owner and Contractor. The subcontract may or may not be direct with the Contractor.
- 14. **"WORK"**: Labor, material, supplies, plant and equipment required to perform and complete the service agreed to by the Contractor in a safe, expeditious, orderly and workmanlike manner so that the project shall be complete and finished in the best manner known to each respective trade.
- 15. **"WORKING DAYS"**: are all calendar days except Saturdays, Sundays and the following holidays: New Year's Day, Martin Luther King, Jr. Day, Lincoln Day, Washington's Birthday (observed), Truman Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day (observed), Thanksgiving Day, Christmas Day.

ARTICLE 1.2 DRAWINGS AND SPECIFICATIONS

- A. In case of discrepancy between drawings and specifications, specifications shall govern. Should discrepancies in architectural drawings, structural drawings and mechanical drawings occur,

architectural drawings shall govern and, in case of conflict between structural and mechanical drawings, structural drawings shall govern.

- B. Specifications are separated into titled divisions for convenience of reference only and to facilitate letting of contracts and subcontracts. The Contractor is responsible for establishing the scope of work for subcontractors, which may cross titled divisions. Neither the Owner nor Designer will establish limits and jurisdiction of subcontracts.
- C. Figured dimensions take precedence over scaled measurements and details over smaller scale general drawings. In the event of conflict between any of the documents contained within the contract, the documents shall take precedence and be controlling in the following sequence: addenda, supplementary general conditions, general conditions, division 1 specifications, technical division specifications, drawings, bid form and instructions to bidders.
- D. Anything shown on drawings and not mentioned in these specifications or vice versa, as well as any incidental work which is obviously necessary to complete the project within the limits established by the drawings and specifications, although not shown on or described therein, shall be performed by the Contractor at no additional cost as a part of his contract.
- E. Upon encountering conditions differing materially from those indicated in the contract documents, the Contractor shall promptly notify the Designer and Construction Representative in writing before such conditions are disturbed. The Designer shall promptly investigate said conditions and report to the Owner, with a recommended course of action. If conditions do materially differ and cause an increase or decrease in contract cost or time required for completion of any portion of the work, a contract change will be initiated as outlined in Article 4 of these General Conditions.
- E. Only work included in the contract documents is authorized, and the Contractor shall do no work other than that described therein or in accordance with appropriately authorized and approved contract changes.

ARTICLE 1.3 - COMPLIANCE WITH LAWS, PERMITS, REGULATIONS AND INSPECTIONS

- A. Since the Owner is the State of Missouri, municipal or political subdivisions, zoning ordinances, construction codes (other than licensing of trades), and other like ordinances are not applicable to construction on Owner's property, and Contractor will not be required to submit drawings and specifications to any municipal or political subdivision, authority, obtain

construction permits or any other licenses (other than licensing of trades) or permits from or submit to inspections by any municipality or political subdivision relating to the construction for this project. All permits or licenses required by municipality or political subdivision for operation on property not belonging to Owner shall be obtained by and paid for by Contractor. Each Contractor shall comply with all applicable laws, ordinances, rules and regulations that pertain to the work of this contract.

- B. Contractors, subcontractors and their employees engaged in the businesses of electrical, mechanical, plumbing, carpentry, sprinkler system work, and other construction related trades shall be licensed to perform such work by the municipal or political subdivision where the project is located, if such licensure is required by local code. Local codes shall dictate the level (master, journeyman, and apprentice) and the number, type and ratio of licensed tradesmen required for this project within the jurisdiction of such municipal or political subdivision.
- C. Equipment and controls manufacturers and their authorized service and installation technicians that do not maintain an office within the jurisdiction of the municipal or political subdivision but are a listed or specified contractor or subcontractor on this project are exempt from Paragraph 1.3 B above.
- D. The Contractor shall post a copy of the wage determination issued for the project and included as a part of the contract documents, in a prominent and easily accessible location at the site of construction for the duration of the project.
- E. Any contractor or subcontractor to such contractor at any tier signing a contract to work on this project shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the Department of Labor and Industrial Relations which is at least as stringent as an approved OSHA program. The contractor shall forfeit as a penalty to the public body on whose behalf the contract is made or awarded, two thousand five hundred dollars plus one hundred dollars for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training.

ARTICLE 1.4 - NONDISCRIMINATION IN EMPLOYMENT

- A. The Contractor and his subcontractors will not discriminate against individuals based on race,

color, religion, national origin, sex, disability, or age, but may use restrictions which relate to bona fide occupational qualifications. Specifically, the Contractor and his subcontractors shall not discriminate:

1. Against recipients of service on the basis of race, color, religion, national origin, sex, disability or age.
2. Against any employee or applicant, for employment on the basis of race, color, religion, national origin, sex or otherwise qualified disability status.
3. Against any applicant for employment or employee on the basis of age, where such applicant or employee is between ages 40 and 70 and where such Contractor employs at least 20 persons.
4. Against any applicant for employment or employee on the basis of that person's status as a disabled or Vietnam-era veteran.

The Contractor and his Subcontractors will take affirmative action to insure applicants for employment and employees are treated equally without regard to race, color, religion, national origin, sex, disability, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion and transfer; recruitment or recruitment advertising; and selection for training, including apprenticeship. The Contractor and his Subcontractors will give written notice of their commitments under this clause to any labor union with which they have bargaining or other agreements.

- B. The Contractor and his subcontractors shall develop, implement, maintain and submit in writing to the Owner an affirmative action program if at least fifty (50) persons in the aggregate are employed under this contract. If less than fifty (50) persons in the aggregate are to be employed under this contract, the Contractor shall submit, in lieu of the written affirmative action program, a properly executed Affidavit for Affirmative Action in the form included in the contract specifications. For the purpose of this section, an "affirmative action program" means positive action to influence all employment practices (including, but not limited to, recruiting, hiring, promoting and training) in providing equal employment opportunity regardless of race, color, sex, national origin, religion, age (where the person affected is between age 40 and 70), disabled and Vietnam-era veteran status, and disability. Such "affirmative action program" shall include:

1. A written policy statement committing the total organization to affirmative action and

assigning management responsibilities and procedures for evaluation and dissemination;

2. The identification of a person designated to handle affirmative action;
3. The establishment of non-discriminatory selection standards, objective measures to analyze recruitment, an upward mobility system, a wage and salary structure, and standards applicable to lay-off, recall, discharge, demotion and discipline;
4. The exclusion of discrimination from all collective bargaining agreements; and
5. Performance of an internal audit of the reporting system to monitor execution and to provide for future planning.

In the enforcement of this non-discrimination clause, the Owner may use any reasonable procedures available, including, but not limited to: requests, reports, site visits and inspection of relevant documents of contractors and subcontractors.

- C. In the event of the Contractor's or his subcontractor's noncompliance with any provisions of this Article of the Contract, the Owner may cancel this contract in whole or in part or require the Contractor to terminate his contract with the subcontractor.

ARTICLE 1.5 - ANTI-KICKBACK

No employee of the division, shall have or acquire any pecuniary interest, whether direct or indirect, in this contract or in any part hereof. No officer, employee, designer, attorney, or administrator of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall have or acquire any pecuniary interest, whether direct or indirect, in this contract, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

ARTICLE 1.6 - PATENTS AND ROYALTIES

- A. The Contractor shall hold and save the Owner and its officers, agents, servants and employees harmless from liabilities of any nature or kind, including cost and expenses, for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of this contract, including its use by the Owner, unless otherwise specifically stipulated in the contract documents.
- B. If the Contractor uses any design, device or materials covered by letters, patent or copyright,

the Contractor shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, without exception, that the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract and shall indemnify the Owner for any cost, expense or damage it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

ARTICLE 1.7 - PREFERENCE FOR AMERICAN AND MISSOURI PRODUCTS AND SERVICES

- A. By virtue of statutory authority a preference will be given to Missouri labor and to products of mines, forests and quarries of the state of Missouri when they are found in marketable quantities in the state, and all such materials shall be of the best quality and suitable character that can be obtained at reasonable market prices, all as provided for in Section 8.280, Missouri Revised Statutes and Cumulative Supplements.
- B. Furthermore, pursuant to Section 34.076 Missouri Revised Statutes and Cumulative Supplements, a preference shall be given to those persons doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less. In addition, in order for a non-domiciliary bidder to be successful, his bid must be that same percentage lower than a domiciliary Missouri bidder's bid, as would be required for a Missouri bidder to successfully bid in the non-domiciliary state.
- C. In accordance with the Missouri Domestic Products Procurement Act Section 34.350 RSMo and Cumulative Supplements any manufactured goods or commodities used or supplied in the performance of this contract or any subcontract thereto shall be manufactured, assembled or produced in the United States, unless the specified products are not manufactured, assembled or produced in the United States in sufficient quantities to meet the agency's requirements or cannot be manufactured, assembled or produced in the United States within the necessary time in sufficient quantities to meet the contract requirements, or if obtaining the specified products manufactured, assembled or produced in the

United States would increase the cost of this contract for purchase of the product by more than ten percent.

ARTICLE 1.8 - COMMUNICATIONS

- A. All notices, requests, instructions, approvals and claims must be in writing and shall be delivered to the Designer and copied to the Construction Representative for the project except as required by Article 1.12 Disputes and Disagreements, or as otherwise specified by the Owner in writing as stated in Section 012600. Any such notice shall be deemed to have been given as of the time of actual receipt.
- B. The Contractor shall attend on-site progress and coordination meetings, as scheduled by the Construction Representative, no less than once a month.
- C. The Contractor shall ensure that major subcontractors and suppliers shall attend monthly progress meetings as necessary to coordinate the work, and as specifically requested by the Construction Representative.

ARTICLE 1.9 - SEPARATE CONTRACTS AND COOPERATION

- A. The Owner reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with theirs.
- B. The Contractor shall consult the drawings for all other contractors in connection with this work. Any work conflicting with the above shall be brought to the attention of the Owner's Representative before the work is performed. If the Contractor fails to do this, and constructs any work which interferes with the work of another contractor, the Contractor shall remove any part so conflicting and rebuild same, as directed by the Owner's Representative at no additional cost to the Owner.
- C. Each contractor shall be required to coordinate his work with other contractors so as to afford others reasonable opportunity for execution of their work. No contractor shall delay any other contractor by neglecting to perform contract work at the proper time. If any contractor causes delay to another, they shall be liable directly to that contractor for such delay in addition to any liquidated damages which might be due the Owner.
- D. Should the Contractor or project associated subcontractors refuse to cooperate with the instructions and reasonable requests of other Contractors or other subcontractors in the overall

coordinating of the work, the Owner may take such appropriate action and issue directions, as required, to avoid unnecessary and unwarranted delays.

- E. Each Contractor shall be responsible for damage done to Owner's or other Contractor's property by him/her or workers in his employ through their fault or negligence.
- F. Should a Contractor sustain any damage through any act or omission of any other Contractor having a contract with the Owner, the Contractor so damaged shall have no claim or cause of action against the Owner for such damage, but shall have a claim or cause of action against the other Contractor to recover any and all damages sustained by reason of the acts or omissions of such Contractor. The phrase "acts or omissions" as used in this section shall be defined to include, but not be limited to, any unreasonable delay on the part of any such contractors.

ARTICLE 1.10 - ASSIGNMENT OF CONTRACT

- A. No assignment by Contractor of any amount or any part of this contract or of the funds to be received there under will be recognized unless such assignment has had the written approval of the Director and the surety has been given due notice of such assignment and has furnished written consent thereto. In addition to the usual recitals in assignment contracts, the following language must be set forth: "It is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor of this contract and to claims or liens for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms or corporations rendering such services or supplying such materials."

ARTICLE 1.11 - INDEMNIFICATION

- A. Contractor agrees to indemnify and save harmless Owner and its respective commissioners, officers, officials, agents, consultants and employees and Designer, their agents, servants and employees, from and against any and all liability for damage arising from injuries to persons or damage to property occasioned by any acts or omissions of Contractor, any subcontractors, agents, servants or employees, including any and all expense, legal or otherwise, which may be incurred by Owner or Designer, its agents, servants or employees, in defense of any claim, action or suit.
- B. The obligations of the Contractor under this paragraph shall not extend to the liability of the Designer, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, contract changes, design or specifications, or (2) giving of or the failure to

give directions or instructions by the Designer, his agents or employees as required by this contract documents provided such giving or failure to give is the primary cause of the injury or damage.

ARTICLE 1.12 - DISPUTES AND DISAGREEMENTS

It is hereby expressly agreed and understood that in case any controversy or difference of opinion arises during construction, best efforts will be given to resolution at the field level. Should those efforts be unsuccessful, the Contractor has the right to appeal in writing, the decision of the Director's Designee to the Director at Room 730 Truman Building, P.O. Box 809, Jefferson City, Missouri 65102. The decision of the Director shall be final and binding on all parties.

ARTICLE 2 -- OWNER/DESIGNER RESPONSIBILITIES

- A. The Owner shall give all orders and directions contemplated under this contract relative to the execution of the work. During progress of work the Owner will be represented at the project site by the Construction Representative and/or Designer, whose responsibilities are to see that this contract is properly fulfilled.
- B. The Owner shall at all times have access to the work whenever it is in preparation or progress. The Contractors shall provide proper facilities for such access and for inspection and supervision.
- C. All materials and workmanship used in the work shall be subject to the inspection of the Designer and Construction Representative, and any work which is deemed defective shall be removed, rebuilt or made good immediately upon notice. The cost of such correction shall be borne by the Contractor. Contractor shall not be entitled to an extension of the contract completion date in order to remedy defective work. All rejected materials shall be immediately removed from the site of the work.
- D. If the Contractor fails to proceed at once with the correction of rejected defective materials or workmanship, the Owner may, by separate contract or otherwise, have the defects remedied or rejected. Materials removed from the site and charge the cost of the same against any monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.
- E. Failure or neglect on the part of Owner to observe faulty work, or work done which is not in accordance with the drawings and specifications shall not relieve the Contractor from responsibility

for correcting such work without additional compensation.

- F. The Owner shall have the right to direct the Contractor to uncover any completed work.
 - 1. If the Contractor fails to adequately notify the Construction Representative and/or Designer of an inspection as required by the Contract Documents, the Contractor shall, upon written request, uncover the work. The Contractor shall bear all costs associated with uncovering and again covering the work exposed.
 - 2. If the Contractor is directed to uncover work, which was not otherwise required by the Contract Documents to be inspected, and the work is found to be defective in any respect, no compensation shall be allowed for this work. If, however, such work is found to meet the requirements of this contract, the actual cost of labor and material necessarily involved in the examination and replacement plus 10% shall be allowed the Contractor.
- G. The Designer shall give all orders and directions contemplated under this contract relative to the scope of the work and shall give the initial interpretation of the contract documents.
- H. The Owner may file a written notice to the Contractor to dismiss immediately any subcontractors, project managers, superintendents, foremen, workers, watchmen or other employees whom the Owner may deem incompetent, careless or a hindrance to proper or timely execution of the work. The Contractor shall comply with such notice as promptly as practicable without detriment to the work or its progress.
- I. If in the Owner's judgment it becomes necessary at any time to accelerate work, when ordered by the Owner in writing, the Contractor shall redirect resources to such work items and execute such portions of the work as may be required to complete the work within the current approved contract schedule.

ARTICLE 3 -- CONTRACTOR RESPONSIBILITIES

The Contractor shall register and utilize the Owner's eBuilder digital project management system for submission of documents described in the following sections. This includes but is not limited to submittals as required by designer, payment applications, Request for Information (RFI), construction change orders, Request for Proposals (RFP), Designer Supplemental Instructions (DSI), etc.

ARTICLE 3.1 -- ACCEPTABLE SUBSTITUTIONS

- A. The Contractor may request use of any article, device, product, material, fixture, form or type of construction which in the judgment of the Owner and Designer is equal in all respects to that named. Standard products of manufacturers other than those specified will be accepted when, prior to the ordering or use thereof, it is proven to the satisfaction of the Owner and Designer that they are equal in design, strength, durability, usefulness and convenience for the purpose intended.
- B. Any changes required in the details and dimensions indicated on the drawings for the substitution of products other than those specified shall be properly made at the expense of the Contractor requesting the substitution or change.
- C. The Contractor shall submit a request for such substitutions in writing to the Owner and Designer within twenty (20) working days after the date of the "Notice to Proceed." Thereafter no consideration will be given to alternate forms of accomplishing the work. This Article does not preclude the Owner from exercising the provisions of Article 4 hereof.
- D. Any request for substitution by the Contractor shall be submitted in accordance with SECTION 002113 - INSTRUCTIONS TO BIDDERS.
- E. When a material has been approved, no change in brand or make will be permitted unless:
 - 1. Written verification is received from the manufacturer stating they cannot make delivery on the date previously agreed, or
 - 2. Material delivered fails to comply with contract requirements.

ARTICLE 3.2 -- SUBMITTALS

- A. The Contractor's submittals must be submitted with such promptness as to allow for review and approval so as not to cause delay in the work. The Contractor shall coordinate preparation and processing of submittals with performance of construction activities.

Coordinate each submittal with fabrication, = purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

Submit four (4) copies to the Designer and additional copies as required for the subcontractors and material suppliers. Also provide copies to meet the requirements for maintenance manuals.

- B. All subcontractors' shop drawings and schedules shall be submitted by the Contractor and shall bear evidence that Contractor has received, reviewed, and approved them. Any shop drawings and

schedules submitted without this evidence will be returned to the Contractor for resubmission.

- C. The Contractor shall include with the shop drawing, a letter indicating any and all deviations from the drawings and/or specifications. Failure to notify the Designer of such deviations will be grounds for subsequent rejection of the related work or materials. If, in the opinion of the Designer, the deviations are not acceptable, the Contractor will be required to furnish the item as specified and indicated on the drawings.
- D. The Designer shall check shop drawings and schedules with reasonable promptness and approve them only if they conform to the design concept of the project and comply with the information given in the contract documents. The approval shall not relieve the Contractor from the responsibility to comply with the drawings and specifications, unless the Contractor has called the Designer's attention to the deviation, in writing, at the time of submission and the Designer has knowingly approved thereof. An approval of any such modification will be given only under the following conditions:
 - 1. It is in the best interest of the Owner
 - 2. It does not increase the contract sum and/or completion time
 - 3. It does not deviate from the design intent
 - 4. It is without prejudice to any and all rights under the surety bond.
- E. No extension of time will be granted because of the Contractor's failure to submit shop drawings and schedules in ample time to allow for review, possible resubmission, and approval. Fabrication of work shall not commence until the Contractor has received approval. The Contractor shall furnish prints of approved shop drawings and schedules to all subcontractors whose work is in any way related to the work under this contract. Only prints bearing this approval will be allowed on the site of construction
- F. The Contractor shall maintain a complete file on-site of approved shop drawings available for use by the Construction Representative.

ARTICLE 3.3 – AS-BUILT DRAWINGS

- A. The Contractor shall update a complete set of the construction drawings, shop drawings and schedules of all work monthly by marking changes, and at the completion of their work (prior to submission of request for final payment) note all changes and turn the set over to the Construction Representative. The updates shall show all addenda, all field changes that were made to adapt to field conditions, changes resulting from contract

changes or supplemental instructions, and all locations of structures, buried installations of piping, conduit, and utility services. All buried and concealed items both inside and outside shall be accurately located as to depth and referenced to permanent features such as interior or exterior wall faces and dimensions shall be given in a neat and legible manner in a contrasting colored pencil or ink. If approved by the Designer, an electronic file format may be provided.

ARTICLE 3.4 – GUARANTY AND WARRANTIES

A. General Guaranty

- 1. Neither the final certificate of payment nor any provision in the contract documents nor partial use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with contract requirements.
- 2. The Contractor or surety shall remedy any defects in the work and pay for any damage to property resulting there from which shall appear within a period of one (1) year from the date of substantial completion unless a longer period is otherwise specified or a differing guaranty period has been established in the substantial completion certificate. The Owner will give notice of observed defects with reasonable promptness.
- 3. In case of default on the part of the Contractor in fulfilling this part of this contract, the Owner may correct the work or repair the damage and the cost and expense incurred in such event shall be paid by or recoverable from the Contractor or surety.
- 4. The work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's guaranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment

B. Extended Warranty

Manufacturer's certificates of warranty shall be obtained for all major equipment. Warranty shall be obtained for at least one year. Where a longer

period is offered at no additional cost or called for in the specific equipment specifications, the longer period shall govern.

ARTICLE 3.5 -- OPERATION AND MAINTENANCE MANUALS

A. Immediately after equipment submittals are approved and no later than ten (10) working days prior to the substantial completion inspection, the Contractor shall provide to the Designer three (3) copies of operating instructions and service manuals, containing the following:

1. Start-up and Shut-down Procedures: Provide a step-by-step write up of all major equipment. When manufacturer's printed start-up, trouble shooting and shut-down procedures are available; they may be incorporated into the operating manual for reference.
2. Operating Instructions: Written operating instructions shall be included for the efficient and safe operation of all equipment.
3. Equipment List: List of all major equipment as installed shall be prepared to include model number, capacities, flow rate, name plate data, shop drawings and air and water balance reports.
4. Service Instructions: Provide the following information for all pieces of equipment.
 - a. Recommended spare parts including catalog number and name of local supplier or factory representative.
 - b. Belt sizes, types, and lengths.
 - c. Wiring diagrams.
5. Manufacturer's Certificate of Warranty as described in Article 3.4.
6. Prior to the final payment, furnish to the Designer three (4) copies of parts catalogs for each piece of equipment furnished by him/her on the project with the components identified by number for replacement ordering.

B. Submission of operating instructions shall be done in the following manner.

1. Manuals shall be in quadruplicate, and all materials shall be bound into volumes of standard 8½" x 11" hard binders. Large drawings too bulky to be folded into 8½" x 11" shall be separately bound or folded and in envelopes, cross referenced and indexed with the manuals.
2. The manuals shall identify project name, project number, and include the name and

address of the Contractor, subcontractors and manufacturers who were involved with the activity described in that particular manual.

3. Internally subdivide the binder contents with permanent page dividers, logically organized with tab titles clearly printed under reinforced laminated plastic tabs.
4. Contents: Prepare a Table of Contents for each volume, with each product or system description identified.

ARTICLE 3.6 -- OTHER CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall keep on site, during progress of the work, a competent superintendent satisfactory to the Construction Representative. The superintendent shall represent the Contractor and all agreements made by the superintendent shall be binding. The superintendent shall carefully study and compare all drawings, specifications and other instructions and shall promptly notify the Construction Representative and Designer, in writing, any error, inconsistency or omission which may be discovered. The superintendent shall coordinate all work on the project. Any change of the superintendent shall be approved by the Construction Representative.
- B. 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 work assigned to him/her.
- C. The Contractor shall supply sufficient labor, material, plant and equipment and pay when due any laborer, subcontractor or supplier for supplies furnished and otherwise prosecute the work with diligence to prevent work stoppage and insure completion thereof within the time specified.
- D. The Contractor and each of his subcontractors shall submit to the Construction Representative, through the Designer such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.
- E. The Contractor, subcontractors, and material suppliers shall upon written request, give the Owner access to all time cards, material invoices, payrolls, estimates, profit and loss statements, and all other direct or indirect costs related to this work.
- F. The Contractor shall be responsible for laying out all contract work such as layout of architectural, structural, mechanical and electrical work, which shall be coordinated with layouts of subcontractors

for general construction work. The Contractor is also responsible for unloading, uncrating and handling of all materials and equipment to be erected or placed by him/her, whether furnished by Contractor or others. No extra charges or compensation will be allowed as a result of failure to verify dimensions before ordering materials or fabricating items.

- G. The Contractor must notify the Construction Representative at least one working day before placing concrete or burying underground utilities, pipelines, etc.
- H. Contractors shall prearrange time with the Construction Representative for the interruption of any facility operation. Unless otherwise specified in these documents, all connections, alterations or relocations as well as all other portions of the work will be performed during normal working hours.
- I. The Contractor shall coordinate all work so there will not be prolonged interruptions of existing equipment operation. Any existing plumbing, heating, ventilating, air conditioning or electrical disconnections necessary for the project, which affect portions of this construction or building or any other building must be scheduled with the Construction Representative to minimize or avoid any disruption of facility operations. In no case, unless previously approved in writing by the Construction Representative, shall utilities be left disconnected at the end of a work day or over a weekend. Any interruption of utilities either intentionally or accidentally shall not relieve the Contractor responsible for the interruption from the responsibility to repair and restore the utility to normal service. Repairs and restoration shall be made before the workers responsible for the repair and restoration leave the job.
- J. Contractors shall limit operations and storage of materials to the area within the project, except as necessary to connect to existing utilities, and shall not encroach on neighboring property. The Contractor shall be responsible for repair of their damage to property on or off the project site occurring during construction of project. All such repairs shall be made to the satisfaction of the property owner.
- K. Unless otherwise permitted, all materials shall be new and both workmanship and materials shall be of the best quality.
- L. Unless otherwise provided and stipulated within these specifications, the Contractor shall furnish, construct, and/or install and pay for materials, devices, mechanisms, equipment, all necessary personnel, utilities including, but not limited to water, heat, light and electric power, transportation

services, applicable taxes of every nature, and all other facilities necessary for the proper execution and completion of the work.

- M. Contractor shall carefully examine the plans and drawings and shall be responsible for the proper fitting of his material, equipment and apparatus into the building.
- N. The Contractor or subcontractors shall not overload, or permit others to overload, any part of any structure during the performance of this contract.
- O. All temporary shoring, bracing, etc., required for the removal of existing work and/or for the installation of new work shall be included in this contract. The Contractor shall make good, at no cost to the Owner, any damage caused by improper support or failure of shoring in any respect. Each Contractor shall be responsible for shoring required to protect his work or adjacent property and improvements of Owner and shall be responsible for shoring or for giving written notice to adjacent property owners. Shoring shall be removed only after completion of permanent supports.
- P. The Contractor shall provide at the proper time such material as is required for support of the work. If openings are required, whether shown on drawings or not, the Contractor shall see that they are properly constructed.
- Q. During the performance of work the Contractor shall be responsible for providing and maintaining warning signs, lights, signal devices, barricades, guard rails, fences and other devices appropriately located on site which will give proper and understandable warning to all persons of danger of entry onto land, structure or equipment.
- R. The Contractor shall be responsible for protection, including weather protection, and proper maintenance of all equipment and materials.
- S. The Contractor shall be responsible for care of the finished work and shall protect same from damage or defacement until substantial completion by the Owner. If the work is damaged by any cause, the Contractor shall immediately begin to make repairs in accordance with the drawings and specifications. Contractor shall be liable for all damage or loss unless attributable to the acts or omissions of the Owner or Designer. Any claim for reimbursement shall be submitted in accordance with Article 4. After substantial completion the Contractor will only be responsible for damage resulting from acts or omissions of the Contractor or subcontractors through final warranty.
- T. In the event the Contractor encounters an unforeseen hazardous material, the Contractor

shall immediately stop work in the area affected and report the condition to the Owner and Designer in writing. The Contractor shall not be required, pursuant to Article 4, to perform, any work relating to hazardous materials.

- U. In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 4.
- V. Before commencing work, Contractors shall confer with the Construction Representative and facility representative and review any facility rules and regulations which may affect the conduct of the work.
- W. Project signs will only be erected on major projects and only as described in the specifications. If no sign is specified, none shall be erected.

ARTICLE 3.7 -- SUBCONTRACTS

- A. Subcontractor assignments as identified in the bid form shall not be changed without written approval of the Owner. The Owner will not approve changes of a listed subcontractor unless the Contractor documents, to the satisfaction of the Owner that the subcontractor cannot or will not perform the work as specified.
- B. The Contractor is fully responsible to the Owner for the acts and omissions of all subcontractors and of persons either directly or indirectly employed by them.
- C. Every subcontractor shall be bound by the applicable terms and provisions of these contract documents, but no contractual relationship shall exist between any subcontractor and the Owner unless the right of the Contractor to proceed with the work is suspended or this contract is terminated as herein provided, and the Owner in writing elects to assume the subcontract.
- D. The Contractor shall upon receipt of "Notice to Proceed" and prior to submission of the first payment request, notify the Designer and Construction Representative in writing of the names of any subcontractors to be used in addition to those identified in the bid form and all major material suppliers proposed for all parts of the work.

ARTICLE 4 -- CHANGES IN THE WORK

4.1 CHANGES IN THE WORK

- A. The Construction Representative, without giving notice to the surety and without invalidating this contract, may order extra work or make changes by

altering, adding to or deducting from the work, this contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract. A claim for extension of time caused by any change must be adjusted at the time of ordering such change. No future request for time will be considered.

- B. Each Contract Change shall include all costs required to perform the work including all labor, material, equipment, overheads and profit, delay, disruptions, or other miscellaneous expenses. No subsequent requests for additional compensation including claims for delay, disruption, or reduced efficiency as a result of each change will be considered. Values from the Schedule of Values will not be binding as a basis for additions to or deductions from the contract price.
- C. The amount of any adjustment in this contract price for authorized changes shall be agreed upon before such changes become effective and shall be determined, through submission of a request for proposal, as follows:
 - 1. By an acceptable fixed price proposal from the Contractor. Breakdowns shall include all takeoff sheets of each Contractor and subcontractor. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
 - 2. By a cost-plus-fixed-fee (time and material) basis with maximum price, total cost not to exceed said maximum. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
 - 3. By unit prices contained in Contractor's original bid form and incorporated in the construction contract.
- D. Overhead and Profit on Contract Changes shall be applied as follows:

- 1. The overhead and profit charge by the Contractor and all subcontractors shall be considered to include, but is not limited to: incidental job burdens, small truck (under 1 ton) expense, mileage, small hand tools,

- warranty costs, company benefits and general office overhead. Project supervision including field supervision and job site office expense shall be considered a part of overhead and profit unless a compensable time extension is granted.
2. The percentages for overhead and profit charged on Contract Changes shall be negotiated, and may vary according to the nature, extent, and complexity of the work involved. However, the overhead and profit for the Contractor or subcontractor actually performing the work shall not exceed 14%. When one or more tiers of subcontractors are used, in no event shall any Contractor or subcontractor receive as overhead and profit more than 3% of the cost of the work performed by any of his subcontractors. In no case shall the total overhead and profit paid by the Owner on any Contract Changes exceed twenty percent (20%) of the cost of materials, labor and equipment (exclusive of Contractor or any Subcontractor overhead and profit) necessary to put the contract change work in place.
 3. The Contractor will be allowed to add the cost of bonding and insurance to their cost of work. This bonding and insurance cost shall not exceed 2% and shall be allowed on the total cost of the added work, including overhead and profit.
 4. On proposals covering both increases and decreases in the amount of this contract, the application of overhead and profit shall be on the net change in the cost of the work.
 5. The percentage for overhead and profit to be credited to the Owner on Contract Changes that are solely decreases in the quantity of work or materials shall be negotiated, and may vary according to the nature, extent and complexity of the work involved, but in no case shall be less than ten percent (10%). If the percentage for overhead and profit charged for work added by Contract Changes for this contract has been negotiated to less than 10%, the negotiated rate shall then apply to credits as well.
- E. No claim for an addition to this contract sum shall be valid unless authorized as aforesaid in writing by the Owner. In the event that none of the foregoing methods are agreed upon, the Owner may order the Contractor to perform work on a time and material basis. The cost of such work shall be determined by the Contractor's actual labor and material cost to perform the work plus overhead and profit as outlined herein. The

Designer and Construction Representative shall approve the Contractor's daily time and material invoices for the work involved.

- F. If the Contractor claims that any instructions involve extra cost under this contract, the Contractor shall give the Owner's Representative written notice thereof within a reasonable time after the receipt of such instructions, and in any event before proceeding to execute the work. No such claim shall be valid unless so made and authorized by the Owner, in writing.
- G. In an emergency affecting the safety of life or of the structure or of adjoining property, the Contractor, without special instruction or authorization from the Construction Representative, is hereby permitted to act at their discretion to prevent such threatened loss or injury. The Contractor shall submit a claim for compensation for such emergency work in writing to the Owner's Representative.

ARTICLE 4.2 – CHANGES IN COMPLETION TIME

- A. Extension of the number of work days stipulated in the Contract for completion of the work with compensation may be made when:
 1. The contractor documents that proposed Changes in the work, as provided in Article 4.1, extends construction activities critical to contract completion date, OR
 2. The Owner suspends all work for convenience of the Owner as provided in Article 7.3, OR
 3. An Owner caused delay extends construction activities critical to contract completion (except as provided elsewhere in these General Conditions). The Contractor is to review the work activities yet to begin and evaluate the possibility of rescheduling the work to minimize the overall project delay.
- B. Extension of the number of work days stipulated in the Contract for completion of the work without compensation may be made when:
 1. Weather-related delays occur, subject to provisions for the inclusion of a specified number of "bad weather" days when provided for in Section 012100-Allowances, OR
 2. Labor strikes or acts of God occur, OR
 3. The work of the Contractor is delayed on account of conditions which were beyond the control of the Contractor, subcontractors or suppliers, and were not the result of their fault or negligence.
- C. No time extension or compensation will be provided for delays caused by or within the control

of the Contractor, subcontractors or suppliers and for concurrent delays caused by the Owner.

- D. The Contractor shall notify the Owner promptly of any occurrence or conditions which in the Contractor's opinion results in a need for an extension of time. The notice shall be in writing and shall include all necessary supporting materials with details of any resultant costs and be submitted in time to permit full investigation and evaluation of the Contractor's claim. The Owner shall promptly acknowledge the Contractor's notice and, after recommendation from the Owner's Representative and/or Designer, shall provide a decision to the Contractor. Failure on the part of the Contractor to provide such notice and to detail the costs shall constitute a waiver by the Contractor of any claim. Requests for extensions of time shall be for working days only.

ARTICLE 5 - CONSTRUCTION AND COMPLETION

ARTICLE 5.1 – CONSTRUCTION COMMENCEMENT

- A. Upon receipt of the "Intent to Award" letter, the Contractor must submit the following properly executed instruments to the Owner:
1. Contract;
 2. Performance/payment bond as described in Article 6.1;
 3. Certificates of Insurance, or the actual policies themselves, showing that the Contractor has obtained the insurance coverage required by Article 6.2.
 4. Written Affirmative Action Plans as required in Article 1.4.

Above referenced items must be received by the Owner within ten (10) working days after the effective date of the contract. If not received, the Owner may treat the failure to timely submit them as a refusal by the Contractor to accept a contract for this work and may retain as liquidated damages the Contractor's bid bond, cashier's check or certified check as provided in the Instructions to Bidders. Upon receipt the Owner will issue a "Notice to Proceed" with the work to the Contractor.

- B. Within the time frame noted in Section 013200 - Schedules, following receipt of the "Notice to Proceed", the Contractor shall submit to the Owner a progress schedule and schedule of values, showing activities through the end of the contract period. Should the Contractor not receive written notification from the Owner of the disapproval of the schedule of values within fifteen (15) working

days, the Contractor may consider it approved for purpose of determining when the first monthly Application and Certification for Payment may be submitted.

- C. The Contractor may commence work upon receipt of the Division of Facilities Management, Design and Construction's "Notice to Proceed" letter. Contractor shall prosecute the work with faithfulness and energy, and shall complete the entire work on or before the completion time stated in the contract documents or pay to the Owner the damages resulting from the failure to timely complete the work as set out within Article 5.4.

ARTICLE 5.2 -- PROJECT CONSTRUCTION

- A. Each Contractor shall submit for the Owner's approval, in reproducible form, a progress schedule showing the rate of progress and the order of the work proposed to carry on various phases of the project. The schedule shall be in conformance with the requirements outlined in Section 013200 – Schedules.
- B. Contractor shall employ and supply a sufficient force of workers, material, and equipment and shall pay when due, any worker, subcontractor or supplier and otherwise prosecute the work with such diligence so as to maintain the rate of progress indicated on the progress schedule, prevent work stoppage, and insure completion of the project within the time specified.

ARTICLE 5.3 -- PROJECT COMPLETION

- A. Substantial Completion. A Project is substantially complete when construction is essentially complete and work items remaining to be completed can be done without interfering with the Owner's ability to use the Project for its intended purpose.
1. Once the Contractor has reached what they believe is Substantial Completion, the Contractor shall notify the Designer and the Construction Representative of the following:
 - a. That work is essentially complete with the exception of certain listed work items. The list shall be referred to as the "Contractor's Punch."
 - b. That all Operation and Maintenance Manuals have been assembled and submitted in accordance with Article 3.5A.
 - c. That the Work is ready for inspection by the Designer and Construction Representative. The Owner shall be entitled to a minimum of ten working

days notice before the inspection shall be performed.

2. If the work is acceptable, the Owner shall issue a Certificate of Substantial Completion, which shall set forth the responsibilities of the Owner and the Contractor for utilities, security, maintenance, damage to the work and risk of loss. The Certificate shall also identify those remaining items of work to be performed by the Contractor. All such work items shall be complete within 30 working days of the date of the Certificate, unless the Certificate specifies a different time. If the Contractor shall be required to perform tests that must be delayed due to climatic conditions, it is understood that such tests and affected equipment will be identified on the Certificate and shall be accomplished by the Contractor at the earliest possible date. Performance of the tests may not be required before Substantial Completion can be issued. The date of the issuance of the Certificate of Substantial Completion shall determine whether or not the work was completed within the contract time and whether or not Liquidated Damages are due.
 3. If the work is not acceptable, and the Owner does not issue a Certificate of Substantial Completion, the Owner shall be entitled to charge the Contractor with the Designer's and Owner's costs of re-inspection, including time and travel.
- B. Partial Occupancy. Contractor agrees that the Owner shall be permitted to occupy and use any completed or partially completed portions of the Project, when such occupancy and use is in the Owner's best interest. Owner shall notify Contractor of its desire and intention to take Partial Occupancy as soon as possible but at least ten (10) working days before the Owner intends to occupy. If the Contractor believes that the portion of the work the Owner intends to occupy is not ready for occupancy, the Contractor shall notify the Owner immediately. The Designer shall inspect the work in accordance with the procedures above. If the Contractor claims increased cost of the project or delay in completion as a result of the occupancy, he shall notify the Owner immediately but in all cases before occupancy occurs.
- C. Final Completion. The Project is finally complete when the Certificate of Substantial Completion has been issued and all work items identified therein as incomplete have been completed, and when all administrative items required by the contract have been completed. Final Completion entitles the Contractor to payment of the outstanding balance of the contract amount including all change orders

and retainage. Within five (5) working days of the date of the Certificate of Substantial Completion, the Contractor shall identify the cost to complete any outstanding items of work. The Designer shall review the Contractor's estimate and either approve it or provide an independent estimate for all such items. If the Contractor fails to complete the remaining items within the time specified in the Certificate, the Owner may terminate the contract and go to the surety for project completion in accordance with Article 7.2 or release the contract balance to the Contractor less 150% of the approved estimate to complete the outstanding items. Upon completion of the outstanding items, when a final cost has been established, any monies remaining shall be paid to the Contractor. Failure to complete items of work does not relieve the Contractor from the obligation to complete the administrative requirements of the contract, such as the provisions of Article 5.3 FAILURE TO COMPLETE ALL ITEMS OF WORK UNDER THE CONTRACT SHALL BE CONSIDERED A DEFAULT AND BE GROUNDS FOR CONTRACT TERMINATION AND DEBARMENT.

- D. Liquidated Damages. Contractor agrees that the Owner may deduct from the contract price and retain as liquidated damages, and not as penalty or forfeiture, the sum stipulated in this contract for each work day after the Contract Completion Day on which work is not Substantially Complete. Assessment of Liquidated Damages shall not relieve the Contractor or the surety of any responsibility or obligation under the Contract. In addition, the Owner may, without prejudice to any other rights, claims, or remedies the Owner may have including the right to Liquidated Damages, charge the Contractor for all additional expenses incurred by the Owner and/or Designer as the result of the extended contract period through Final Completion. Additional Expenses shall include but not be limited to the costs of additional inspections.
- E. Early Completion. The Contractor has the right to finish the work before the contract completion date; however, the Owner assumes no liability for any hindrances to the Contractor unless Owner caused delays result in a time extension to the contract completion date. The Contractor shall not be entitled to any claims for lost efficiencies or for delay if a Certificate of Substantial Completion is given on or before the Contract Completion Date.

ARTICLE 5.4 -- PAYMENT TO CONTRACTOR

- A. Payments on account of this contract will be made monthly in proportion to the work which has been completed. Request for payment must be submitted on the Owner's forms. No other pay request will

be processed. Supporting breakdowns must be in the same format as Owner's forms and must provide the same level of detail. The Designer will, within 5 working days from receipt of the contractor's request for payment either issue a Certificate for Payment to the Owner, for such amount as the Designer determines is properly due, or notify the Contractor in writing of reasons for withholding a Certificate. The Owner shall make payment within 30 calendar days after the "Application and Certification for Payment" has been received and certified by the Designer. The following items are to be attached to the contractor's pay request:

1. Updated construction schedule
 2. Certified payrolls consisting of name, occupation and craft, number of hours worked and actual wages paid for each individual employee, of the Contractor and all subcontractors working on the project
- B. The Owner shall retain 5 percent of the amount of each such payment application, except as allowed by Article 5.4, until final completion and acceptance of all work covered by this contract.
- C. Each payment made to Contractor shall be on account of the total amount payable to Contractor and all material and work covered by paid partial payment shall thereupon become the sole property of Owner. This provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made or restoration of any damaged work or as a waiver of the right of Owner to require fulfillment of all terms of this contract.
- D. Materials delivered to the work site and not incorporated in the work will be allowed in the Application and Certification for Payment on the basis of one hundred (100%) percent of value, subject to the 5% retainage providing that they are suitably stored on the site or in an approved warehouse in accordance with the following requirements:
1. Material has previously been approved through submittal and acceptance of shop drawings conforming to requirements of Article 3.2 of General Conditions.
 2. Delivery is made in accordance with the time frame on the approved schedule.
 3. Materials, equipment, etc., are properly stored and protected from damage and deterioration and remain so - if not, previously approved amounts will be deleted from subsequent pay applications.

4. The payment request is accompanied by a breakdown identifying the material equipment, etc. in sufficient detail to establish quantity and value.
- E. The Contractor shall be allowed to include in the Application and Certification for Payment, one hundred (100%) of the value, subject to retainage, of major equipment and material stored off the site if all of the following conditions are met:
1. The request for consideration of payment for materials stored off site is made at least 15 working days prior to submittal of the Application for Payment including such material. Only materials inspected will be considered for inclusion on Application for Payment requests.
 2. Materials stored in one location off site are valued in excess of \$25,000.
 3. That a Certificate of Insurance is provided indicating adequate protection from loss, theft conversion or damage for materials stored off site. This Certificate shall show the State of Missouri as an additional insured for this loss.
 4. The materials are stored in a facility approved and inspected, by the Construction Representative.
 5. Contractor shall be responsible for, Owner costs to inspect out of state facilities, and any delays in the completion of the work caused by damage to the material or for any other failure of the Contractor to have access to this material for the execution of the work.
- F. The Owner shall determine the amount, quality and acceptability of the work and materials which are to be paid for under this contract. In the event any questions shall arise between the parties, relative to this contract or specifications, determination or decision of the Owner or the Construction Representative and the Designer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.
- G. Payments Withheld: The Owner may withhold or nullify in whole or part any certificate to such extent as may be necessary to protect the Owner from loss on account of:
1. Defective work not remedied. When a notice of noncompliance is issued on an item or items, corrective action shall be undertaken immediately. Until corrective action is completed, no monies will be paid and no additional time will be allowed for the item or

items. The cost of corrective action(s) shall be borne by the Contractor.

2. A reasonable doubt that this contract can be completed for the unpaid balance.
3. Failure of the Contractor to update as-built drawings monthly for review by the Construction Representative.
4. Failure of the Contractor to update the construction schedule.

When the Construction Representative is satisfied the Contractor has remedied above deficiencies, payment shall be released.

H. Final Payment: Upon receipt of written notice from the Contractor to the Designer and Project Representative that the work is ready for final inspection and acceptance, the Designer and Project Representative, with the Contractor, shall promptly make such inspection. If the work is acceptable and the contract fully performed, the Construction Representative shall complete a final acceptance report and the Contractor will be directed to submit a final Application and Certification for Payment. If the Owner approves the same, the entire balance shall be due and payable, with the exception of deductions as provided for under Article 5.4.

1. Where the specifications provide for the performance by the Contractor of (certain tests for the purpose of balancing and checking the air conditioning and heating equipment and the Contractor shall have furnished and installed all such equipment in accordance with the specifications, but said test cannot then be made because of climatic conditions, such test shall may be considered as required under the provisions of the specifications, Section 013300 and this contract may be substantial Full payment will not be made until the tests have been made and the equipment and system is finally accepted. If the tests are not completed when scheduled, the Owner may deduct 150% of the value of the tests from the final payment.
2. The final payment shall not become due until the Contractor delivers to the Construction Representative:
 - a) A complete file of releases, on the standard form included in the contract documents as "Final Receipt of Payment and Release Form", from subcontractors and material suppliers evidencing payment in full for services, equipment and materials, as the case may require, if the Owner approves, or a consent from

the Surety to final payment accepting liability for any unpaid amounts.

- b) An Affidavit of Compliance with Prevailing Wage Law, in the form as included in this contract specifications, properly executed by each subcontractor, and the Contractor
 - c) Certified copies of all payrolls
 - d) As-built drawings
3. If any claim 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 a claim including all costs and a reasonable attorney's fee.
 4. Missouri statute requires prompt payment from the Owner to the Contractor within thirty calendar days and from the Contractor to his subcontractors within fifteen calendar days. Failure to make payments within the required time frame entitles the receiving party to charge interest at the rate of one and one half percent per month calculated from the expiration of the statutory time period until paid.
 5. The value of all unused unit price allowances and/or 150% of the value of the outstanding work items, and/or liquidated damages may be deducted from the final pay request without executing a Contract Change. Any unit price items which exceed the number of units in the contract may be added by Contract Change.

ARTICLE 6 -- INSURANCE AND BONDS

ARTICLE 6.1 -- BOND

- A. Contractor shall furnish a performance/payment bond in an amount equal to 100% of the contract price to guarantee faithful performance of the contract and 100% of the contract price to guarantee the payment of all persons performing labor on the project and furnishing materials in connection therewith under this contract as set forth in the standard form of performance and payment bond included in the contract documents. The surety on such bond shall be issued by a surety company authorized by the Missouri Department of Insurance to do business in the state of Missouri.
- B. All Performance/Payment Bonds furnished in response to this provision shall be provided by a bonding company with a rating of B+ or higher as established by A.M. Best Company, Inc. in their most recent publication.

ARTICLE 6.2 – INSURANCE

A. The successful Contractor shall procure and maintain for the duration of the contract issued a policy or policies of insurance for the protection of both the Contractor and the Owner and their respective officers, officials, agents, consultants and employees. The Owner requires certification of insurance coverage from the Contractor prior to commencing work.

B. Minimum Scope and Extent of Coverage

1. General Liability

Commercial General Liability, ISO coverage form number or equivalent CG 00 01 ("occurrence" basis), or I-SO coverage form number CG 00 02, or ISO equivalent.

If ISO equivalent or manuscript general liability coverage forms are used, minimum coverage will be as follows: Premises/Operations; Independent Contractors; Products/Completed Operations; personal injury; Broad Form Property Damage including Completed Operations; Broad Form Contractual Liability Coverage to include Contractor's obligations under Article 1.11 Indemnification and any other Special Hazards required by the work of the contract.

2. Automobile Liability

Business Automobile Liability Insurance, ISO Coverage form number or equivalent CA 00 01 covering automobile liability, code 1 "ANY AUTO".

3. Workers' Compensation and Employer's Liability

Statutory Workers' Compensation Insurance for Missouri and standard Employer's Liability Insurance, or the authorization to self-insure for such liability from the Missouri Division of Workers' Compensation.

4. Builder's Risk or Installation Floater Insurance

Insurance upon the work and all materials, equipment, supplies, temporary structures and similar items which may be incident to the performance of the work and located at or adjacent to the site, against loss or damage from fire and such other casualties as are included in extended coverage in broad "All Risk" form, including coverage for Flood and Earthquake, in an amount not less than the replacement cost of the work or this contract price, whichever is greater, with loss payable to Contractor and Owner as their respective interests may appear.

Contractor shall maintain sufficient insurance to cover the full value of the work and materials as the work progresses, and shall furnish Owner copies of all endorsements. If Builder's Risk Reporting- Form of Endorsement is used, Contractor shall make all reports as required therein so as to keep in force an amount of insurance which will equal the replacement cost of the work, materials, equipment, supplies, temporary structures, and other property covered thereby; and if, as a result of Contractor's failure to make any such report, the amount of insurance so recoverable shall be less than such replacement cost, Contractor's interest in the proceeds of such insurance, if any, shall be subordinated to Owner's interest to the end that Owner may receive full reimbursement for its loss.

C. Minimum Limits of Insurance

1. General Liability

Contractor

\$2,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage

\$2,000,000 annual aggregate

2. Automobile Liability

\$2,000,000 combined single limit per occurrence for bodily injury and property damage

3. Workers' Compensation and Employers Liability

Workers' Compensation limits as required by applicable State Statutes (generally unlimited) and minimum of \$1,000,000 limit per accident for Employer's Liability.

General Liability and Automobile Liability insurance may be arranged under individual policies for the full limits required or by a combination of underlying policies with the balance provided by a form-following Excess or Umbrella Liability policy.

D. Deductibles and Self-Insured Retentions

All deductibles, co-payment clauses, and self-insured retentions must be declared to and approved by the Owner. The Owner reserves the right to request the reduction or elimination of unacceptable deductibles or self-insured retentions, as they would apply to the Owner, and their respective officers, officials, agents, consultants and employees. Alternatively, the Owner may request Contractor to procure a bond guaranteeing

payment of losses and related investigations, claims administration, and defense expenses.

E. Other Insurance Provisions and Requirements

The respective insurance policies and coverage, as specified below, must contain, or be endorsed to contain the following conditions or provisions:

1. General Liability

The Owner, and its respective commissioners, officers, officials, agents, consultants and employees shall be endorsed as additional insured's by ISO form CG 20 26 Additional Insured - Designated Person or Organization. As additional insured's, they shall be covered as to work performed by or on behalf of the Contractor or as to liability which arises out of Contractor's activities or resulting from the performance of services or the delivery of goods called for by the Contract.

Contractor's insurance coverage shall be primary with respect to all additional insured's. Insurance of self-insurance programs maintained by the designated additional -insured's shall be excess of the Contractor's insurance and shall not contribute with it.

Additionally, the Contractor and Contractor's general liability insurer shall agree to waive all rights of subrogation against the Owner and any of their respective officers, officials, agents, consultants or employees for claims, losses, or expenses which arise out of Contractor's activities or result from the performance of services or the delivery of goods called for by the Contract.

Contractor's failure to comply with the terms and conditions of these insurance policies shall not affect or abridge coverage for the Owner, or for any of their officers, officials, agents, consultants or employees.

2. Automobile Insurance

The Owner, and their respective officers, officials, agents, consultants and employees shall be endorsed as additional insured's by ISO form CG 20 26 - Additional Insured Designated Person or Organization. As additional insured's, they shall be covered as to work performed by or on behalf of the Contractor or as to liability which arises out of Contractor's activities or resulting from the performance of services or the delivery of goods called for by the Contract.

Contractor's insurance coverage shall be primary with respect to all additional insured's. Insurance or self-insurance

programs maintained by the designated additional insured's shall be in excess of the Contractor's insurance and shall not contribute with it.

Additionally, the Contractor and Contractor's automobile insurer shall agree to waive all rights of subrogation against the Owner and any of their respective officers, officials, agents, consultants or employees for claims, losses, or expenses which arise out of Contractor's activities or result from the performance of services or the delivery of goods called for by the Contract.

Contractor's failure to comply with the terms and conditions of these insurance policies shall not affect or abridge coverage for the Owner or for any of its officers, officials, agents, consultants or employees.

3. Workers' Compensation/Employer's Liability

Contractor's workers' compensation insurance shall be endorsed with NCCI form WC 00 03 01 A - Alternative Employer Endorsement. The Alternative Employer Endorsement shall designate the Owner as "alternate employers."

4. All Coverages

Each insurance policy required by this section of the Contract shall contain a stipulation, endorsed if necessary, that the Owner will receive a minimum of a thirty (30) calendar day advance notice of any policy cancellation. Ten (10) calendar days advance notice is required for policy cancellation due to non-payment of premium.

F. Insurer Qualifications and Acceptability

Insurance required hereunder shall be issued by an A.M. Best, "B+" rated, Class IX insurance company approved to conduct insurance business in the state of Missouri.

G. Verification of Insurance Coverage

Prior to Owner issuing a Notice to Proceed, the Contractor shall furnish the Owner with Certificate(s) of Insurance and with any applicable original endorsements evidencing the required insurance coverage. The insurance certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements received by the Owner are subject to review and approval by the Owner. The Owner reserves the right to require certified copies of all required policies at any time. If the scope of this contract will exceed one (1) year - or, if any of Contractor's applicable insurance coverage expires prior to completion of the work or services required under this contract -

the Contractor will provide a renewal or replacement certificate before continuing work or services hereunder. If the Contractor fails to provide documentation of required insurance coverage, the Owner may issue a stop work order and no additional contract completion time and/or compensation shall be granted as a result thereof.

ARTICLE 7 – SUSPENSION OR TERMINATION OF CONTRACT

ARTICLE 7.1 - FOR SITE CONDITIONS

When conditions at the site of the proposed work are considered by the Owner to be unsatisfactory for prosecution of the work, the Contractor may be ordered in writing to suspend the work or any part thereof until reasonable conditions exist. When such suspension is not due to fault or negligence of the Contractor, time allowed for completion of such suspended work will be extended by a period of time equal to that lost due to delay occasioned by ordered suspension. This will be a no cost time extension.

ARTICLE 7.2 - FOR CAUSE

A. Termination or Suspension for Cause:

1. If the Contractor shall file for bankruptcy, or should make a general assignment for the benefit of the creditors, or if a receiver should be appointed on account of insolvency, or if the contractor should persistently or repeatedly refuse or fail to supply enough properly skilled workers or proper materials, or if the contractor should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of this contract, then the Owner may serve notice on the Contractor and the surety setting forth the violations and demanding compliance with this contract. Unless within ten (10) consecutive calendar days after serving such notice, such violations shall cease and satisfactory arrangements for correction be made, the Owner may suspend the Contractor's right to proceed with the work or terminate this contract.
2. In the event the Owner suspends Contractor's right to proceed with the work or terminates the contract, the Owner may demand that the Contractor's surety take over and complete the work on this contract, after the surety submits a written proposal to the Owner and receives written approval and upon the surety's failure or refusal to do so within ten (10) consecutive

calendar days after demand therefore, the Owner may take over the work and prosecute the same to completion by bid or negotiated contract, or the Owner may elect to take possession of and utilize in completing the work such materials, supplies, appliances and plant as may be on the site of the work, and all subcontractors, if the Owner elects, shall be bound to perform their contracts.

- B. The Contractor and its surety shall be and remain liable to the Owner for any excess cost or damages occasioned to the Owner as a result of the actions above set forth.
- C. The Contractor in the event of such suspension or termination shall not be entitled to receive any further payments under this contract until the work is wholly finished. Then if the unpaid balance under this contract shall exceed all expenses of the Owner as certified by the Director, such excess shall be paid to the Contractor; but, if such expenses shall exceed the unpaid balance as certified by the Director, the Contractor and their surety shall be liable for and shall pay the difference and any damages to the Owner.
- D. In exercising Owner's right to secure completion of the work under any of the provisions hereof, the Director shall have the right to exercise Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the work.
- E. The rights of the Owner to suspend or terminate as herein provided shall be cumulative and not exclusive and shall be in addition to any other remedy provided by law.
- F. The Contractor in the event of such suspension or termination may be declared ineligible for Owner contracts for a minimal period of twelve (12) months. Further, no contract will be awarded to any Contractor who lists in their bid form any subcontractor whose prior performance has contributed, as determined by the Owner, to a breach of a contract. In order to be considered for state-awarded contracts after this period, the Contractor/subcontractor will be required to forward acceptance reports to the Owner regarding successful completion of non-state projects during the intervening twelve (12) months from the date of default. No contracts will be awarded to a subcontractor/Contractor until the ability to perform responsibly in the private sector has been proven to the Owner.

ARTICLE 7.3 -- FOR CONVENIENCE

- A. The Owner may terminate or suspend the Contract or any portion of the Work without cause at any time, and at the Owner's convenience. Notification of a termination or suspension shall be in writing

and shall be given to the Contractor and their surety. If the Contract is suspended, the notice will contain the anticipated duration of the suspension or the conditions under which work will be permitted to resume. If appropriate, the Contractor will be requested to demobilize and re-mobilize and will be reimbursed time and costs associated with the suspension.

B. Upon receipt of notification, the Contractor shall:

1. Cease operations when directed.
2. Take actions to protect the work and any stored materials.
3. Place no further subcontracts or orders for material, supplies, services or facilities except as may be necessary to complete the portion of the Contract that has not been terminated. No claim for payment of materials or supplies ordered after the termination date shall be considered.
4. Terminate all existing subcontracts, rentals, material, and equipment orders.

5. Settle all outstanding liabilities arising from termination with subcontractors and suppliers.

6. Transfer title and deliver to the Owner, work in progress, completed work, supplies and other material produced or acquire for the work terminated, and completed or partially completed plans, drawings information and other property that, if the Contract had been completed, would be required to be furnished to the Owner.

C. For termination without cause and at the Owner's convenience, in addition to payment for work completed prior to date of termination, the Contractor may be entitled to payment of other documented costs directly associated with the early termination of the contract. Payment for anticipated profit and unapplied overhead will not be allowed.

SECTION 007300 - SUPPLEMENTARY CONDITIONS

1.0 GENERAL:

- A. These Supplementary General Conditions clarify, add, delete, or otherwise modify standard terms and conditions of DIVISION 0, BIDDING AND CONTRACTING REQUIREMENTS.

2.0 CONTACTS:

Designer: Buddy Webb
Buddy Webb & Company, Inc
3057 East Cairo Street
Springfield, MO 65802
Telephone: 417-877-1385
Email: Buddy@webbarch.com

Construction Representative: Don Wagner
Division of Facilities Management, Design and Construction
709 Missouri Blvd (Upper Level)
Jefferson City, MO 65109
Telephone: 417-895-5001
Email: Don.Wagner@oa.mo.gov

Project Manager: Jesse Rollins
Division of Facilities Management, Design and Construction
301 West High Street, Room 730
Jefferson City, Missouri 65101
Telephone: 573-522-5053
Email: Jesse.Rollins@oa.mo.gov

Contract Specialist: Mandy Roberson
Division of Facilities Management, Design and Construction
301 West High Street, Room 730
Jefferson City, Missouri 65101
Telephone: 573-522-0074
Email: mandy.roberson@oa.mo.gov

3.0 NOTICE: ALL BID MATERIALS ARE DUE AT THE TIME OF BID SUBMITTAL. THERE IS NO SECOND SUBMITTAL FOR THIS PROJECT.

4.0 FURNISHING CONSTRUCTION DOCUMENTS:

- A. The Owner will furnish the Contractor with approximately 5 complete sets of drawings and specifications at no charge.
- B. The Owner will furnish the Contractor with approximately 5 sets of explanatory or change drawings at no charge.
- C. The Contractor may make copies of the documents as needed with no additional cost to the Owner.

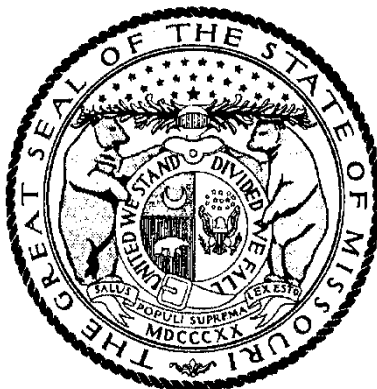
5.0 SAFETY REQUIREMENTS

Contractor and subcontractors at any tier shall comply with RSMo 292.675 and Article 1.3, E, of Section 007213, General Conditions.

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MICHAEL L. PARSON, Governor

Annual Wage Order No. 29

Section 039
GREENE COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

Todd Smith, Director
Division of Labor Standards

Filed With Secretary of State: March 10, 2022

Last Date Objections May Be Filed: April 11, 2022

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$32.85
Boilermaker	\$29.20*
Bricklayer	\$50.58
Carpenter	\$45.61
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$38.00
Plasterer	
Communications Technician	\$27.82
Electrician (Inside Wireman)	\$46.27
Electrician Outside Lineman	\$29.20*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$29.20*
Glazier	\$40.53
Ironworker	\$63.40
Laborer	\$38.31
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$46.95
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$42.14
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$36.40
Plumber	\$49.22
Pipe Fitter	
Roofer	\$40.77
Sheet Metal Worker	\$48.70
Sprinkler Fitter	\$62.37
Truck Driver	\$29.20*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in Section 290.210 RSMo.

Heavy Construction Rates for
GREENE County

Section 039

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$50.57
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$29.20*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$41.69
General Laborer	
Skilled Laborer	
Operating Engineer	\$48.05
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$46.10
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in Section 290.210 RSMo.

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "**overtime work**" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

SECTION 01 10 00

SUMMARY OF WORK

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 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Project consists of **Repairs to Exterior Façade - Landers State Office Building**.
 - 1. Project Location: **Landers State Office Building
149 Park Central Square
Springfield, MO 65806**
 - 2. Owner: State of Missouri, Office of Administration, Division of Facilities Management, Design and Construction, Harry S Truman State Office Building, Post Office Box 809, 301 West High Street, Jefferson City, Missouri 65102.
- B. Contract Documents, dated **09/29/22** were prepared for the Project by:
**Buddy Webb & Company, Inc.
Architects / Consultants
3057 East Cairo Street
Springfield, MO 65802**
- C. The Work consists of: **Exterior façade repairs and cleaning as indicated in Contract Documents**. The Work includes, but not limited to the following:
 - 1. **Base Bid:** Exterior removal and replacement of joint sealants and masonry repointing.
 - 2. **Alternate No. 1:** Exterior repair and replacement of damaged and defective terra cotta and exterior insulation finish system (EIFS).
 - 3. **Alternate No. 2:** South and East exterior façade surface cleaning and installation of water repellents.
 - 4. **Alternate No. 3:** North and South exterior façade surface cleaning and installation of water repellents.
- D. The Work will be constructed under a single prime contract.

1.3 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: The Owner may award a separate contract for performance of certain construction operations at the site. Those operations will be conducted simultaneously with work under this contract. The Contract includes the following:
 - 1. Contract: A separate contract may be awarded to **Environmental & Structural Inspections of Moisture Infiltration Issues – PROJECT NO. 02248-01**.
- B. Cooperate fully with separate contractors so that work under those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

1.4 WORK SEQUENCE

- A. The Work will be conducted in single (1) phase. Work shall be substantially complete, ready for occupancy within **One Hundred Thirty (130) Days** from Notice to Proceed.

1.5 CONTRACTOR USE OF PREMISES

- A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for Owner occupancy and use by the public.
 - 2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage cause by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1.6 OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: The Owner will occupy the site and existing building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate owner usage. Perform the Work so as not to interfere with the Owner's operations.

END OF SECTION 01 10 00

SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Weather allowances.
- C. Related Sections include the following:
 - 1. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Changes Orders for allowances.
 - 2. Division 1 Section "Unit Prices" for procedures for using unit prices.

1.3 WEATHER ALLOWANCE

- A. Included within the completion period for this project are a specified number of "bad weather" days (see Schedule of Allowances).
- B. The Contractor's progress schedule shall include an incorporate the total quantity of bad weather day allowance. In the event weather conditions preclude performance of critical work activities for 50% or more of the Contractor's scheduled workday, that day shall be declared unavailable for work due to weather (a "bad weather" day) and charged against the above allowance. Critical work activities will be determined by review of the Contractor's current progress schedule.
- C. The Contractor's Representative and the Construction Representative shall agree monthly on the number of "bad weather" days to be charged against the allowance. This determination will be documented in writing and be signed by the Contractor and the Construction Representatives. If there is a failure to agree on all or part of the "bad weather" days for a particular month, that disagreement shall be noted on this written document and signed by each party's representative. Failure of the Contractor's representative to sign the "bad weather" day documentation after it is presented, with or without the notes of disagreement, shall constitute agreement with the "bad weather" day determination contained in that document.
- D. There will be no modification to the time of contract performance due solely to the failure to deplete the "bad weather" day allowance.

- E. Once this allowance is depleted, a no cost Change Order time extension will be executed for “bad weather” days, as defined above, encountered during the remainder of the Project.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Weather Allowance: Included within the completion period for this Project **Fifteen (15)** “bad weather” days.

END OF SECTION 01 21 00

SECTION 01 22 00

UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and other Division 1 Specification Sections apply to this Section.
- B. Quantities of Units to be included in the Base Bid are indicated in Section 01 22 00 – Unit Prices.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Unit Prices.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 21 00 – “Allowances” for procedures for using Unit Prices to adjust quantity allowances.
 - 2. Division 1 Section 01 26 00 – “Contract Modification Procedures” for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Unit Price is **an amount proposed by bidders, stated on the Bid Form Attachment 00 41 13** a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit Prices include all necessary material plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of Unit Prices. Methods of measurement and payment for Unit Prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of Work in-place that involves use of established Unit Prices and to have this work measured, at Owner's expense, by an independent testing and inspection agency or surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of Unit Prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each Unit Price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

- A. Unit Price No. 1 – Joint Sealant Replacement at doors, windows, and opening perimeters:
1. Description: Provide unit price to remove and replace existing sealant from exterior of existing doors, windows, and opening perimeters with new Joint Sealant Work as required by the Construction Documents according to Division 7, Section 07 92 00.
 2. Unit of Measurement: Linear Feet.
 3. Base Bid Quantity: Seven Thousand Eight Hundred (7,800) linear feet.
- B. Unit Price No. 2 – Joint Sealant Replacement at fiber cement panel system joints and transitions:
1. Description: Provide unit price to remove and replace existing sealant from fiber cement joints with new Joint Sealant Work as required by the Construction Documents according to Division 7, Section 07 92 00.
 2. Unit of Measurement: Linear Feet.
 3. Base Bid Quantity: Four Thousand Eight Hundred (4,800) linear feet.
- C. Unit Price No. 3 – Joint Sealant Replacement at Masonry and Terra Cotta:
1. Description: Provide unit price to remove and replace existing sealant at existing masonry and terra cotta sealant joints with new Joint Sealant Work as required by the Construction Documents according to Division 7, Section 07 92 00.
 2. Unit of Measurement: Linear Feet
 3. Base Bid Quantity: Five Thousand Four Hundred and Fifty (5,450) linear feet.
- D. Unit Price No. 4 - Masonry and Terra Cotta Mortar Joint Tuck Pointing:
1. Description: Provide unit price to remove and replace (repointing) defective existing masonry and terra cotta mortar joints. Masonry Repointing Work as required by the Construction Documents to be provided according to Division 4, Section 04 05 13.
 2. Unit of Measurement: Linear Feet
 3. Base Bid Quantity: Two Hundred and Fifty (250) linear feet.
- E. Unit Price No. 5 – Repair or Replace Damaged Terra Cotta:
1. Description: Provide unit price to repair or replace existing damaged terra cotta. Masonry Restoration Work and Terra Cotta Masonry Work as required by the Construction Documents to be provided according to Division 4, Sections 04 01 20 and 04 21 29.
 2. Unit of Measurement: Square Feet
 3. Alternate No. 1 Quantity: Thirty-Five (35) square feet.
- F. Unit Price No. 6 – Repair Damaged Surfaces or Cracked Terra Cotta:

1. Description: Provide unit price to repair surfaces or cracked existing terra cotta. Masonry Restoration Work to be provided according to Division 4, Section 04 01 20.
 2. Unit of Measurement: Square Feet.
 3. Alternate No. 1 Quantity: Two Thousand Seven Hundred (2,700) square feet.
- G. Unit Price No. 7 – Removal and Replacement of Defective Exterior Insulation Finish System (EIFS):
1. Description: Provide unit price to remove and replace defective exterior insulation finish system (EIFS) to substrate conditions. (EIFS) Work as required by the Construction Documents to be provided according to Division 2, Section 02 41 00 and Division 7, Sections 07 21 00, 07 24 00, and 07 25 26.
 2. Unit of Measurement: Square Feet
 3. Alternate No. 1 Quantity: Nine Hundred Eighty (980) square feet.
- H. Unit Price No. 8 - Repair Damaged Surface or Cracking Exterior Insulation Finish System (EIFS):.
1. Description: Provide unit price to repair damaged surface or cracking Exterior Insulation Finish System (EIFS). Provide Work required per manufacturer's recommendations for project conditions. Verify there is no defects to reinforcement mesh, base insulation, or weather barrier prior to application of surface coatings. (EIFS) Work as required by the Construction Documents to be provided according to Division 7, Section 07 24 00.
 2. Unit of Measurement: Square Feet
 3. Alternate No. 1 Quantity: One Hundred and Fifty (150) square feet.
- I. Unit Price No. 9 – Repair and Replacement of Damaged or Missing Mosaic Tile:
1. Description: Provide unit price to repair and replacement of damaged or missing mosaic tile. Remove loose grout and damaged mosaic tiles as required. Repair or replace existing and missing mosaic tiles as required. Tile Work as required by the Construction Documents to be provided according to Division 9, Section 09 30 00.
 2. Unit of Measurement: Square Feet
 3. Alternate No. 1 Quantity: Sixty (60) square feet.

END OF SECTION 01 22 00

SECTION 01 23 00

ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing Alternates.

1.3 DEFINITIONS

- A. Definition: An alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost for each alternate is the net addition to the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.
- B. No additional time will be allowed for alternate work unless the number of work days is so stated on the bid form.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate the Alternate Work into the Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- B. Notification: The award of the Contract will indicate whether alternates have been accepted or rejected.
- C. Execute accepted alternates under the same conditions as other Work of this Contract.
- D. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. **Alternate No. 1 (Exterior Repair and Replacement of Damaged and Defective Terra Cotta and Exterior Insulation Finish System (EIFS) and Masonry Repointing):** Provide Work required to repair and replace damaged and defective terra cotta and exterior insulation finish system (EIFS) construction at locations indicated in Construction Documents as follows:
1. Repair or replace existing damaged terra cotta. Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 4, Sections 04 01 20 and 04 21 29.
 2. Repair existing damaged surfaces or cracked terra cotta. Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 4, Section 04 01 20.
 3. Repair and/or replace existing damaged or missing mosaic tile. Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 9, Section 09 30 00.
 4. Remove and replace existing defective exterior insulation finish system (EIFS). Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 2, Section 02 41 00 and Sections 07 21 00, and 07 24 00.
 5. Repair damaged or cracking existing exterior insulation finish system (EIFS). Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 7, Section 07 24 00.
- B. **Alternate No. 2 (South and East Exterior Surface Cleaning and Installation of Water Repellents):** Provide Work required to clean existing building exterior wall surfaces and provide water repellents compatible with substrate conditions. Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 4, Section 04 01 20 and Division 7, Section 07 19 00.
- C. **Alternate No. 3 (North and West Exterior Surface Cleaning and Installation of Water Repellents):** Provide Work required to clean existing building exterior wall surfaces and provide water repellents compatible with substrate conditions. Alternate primary Work requirements shall be in accordance with drawings and specifications contained in Division 4, Section 04 01 20 and Division 7, Section 07 19 00.

END OF SECTION 01 23 00

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract Modifications.
- B. Related Sections include the following:
 - 1. Division 1, Section 01 21 00 "Allowances" for procedural requirements for handling and processing Allowances.
 - 2. Division 1, Section 01 22 00 "Unit Prices" for administrative requirements for using Unit Prices.
 - 3. Division 1, Section 01 31 15 "Project Management Communications" for administrative requirements for communications.
 - 4. Division 0, Section 00 72 13, Article 3.1 "Acceptable Substitutions" for administrative procedures for handling Requests for Substitutions made after Contract award.
 - 5. Division 0, Section 00 72 13, Article 4.0 "Changes in the Work" for Change Order requirements.

1.3 REQUESTS FOR INFORMATION

- A. In the event that the Contractor or Subcontractor, at any tier, determines that some portion of the Drawings, Specifications, or other Contract Documents requires clarification or interpretation, the Contractor shall submit a "Request for Information" (RFI) in writing to the Designer. A RFI may only be submitted by the Contractor and shall only be submitted on the RFI forms provided by the Owner. The Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed. In the RFI, the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.
- B. Responses to RFI shall be issued within ten (10) working days of receipt of the Request from the Contractor unless the Designer determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Designer, the Designer will, within five (5) working days of receipt of the request, notify the Contractor of the anticipated response time. If the Contractor submits a RFI on a time sensitive activity on the current project schedule, the Contractor shall not be entitled to any time extension due to the time it takes the Designer to respond to the request provided that the Designer responds within the ten (10) working days set forth above.

- C. Responses from the Designer will not change any requirement of the Contract Documents. In the event the Contractor believes that a response to a RFI will cause a change to the requirements of the Contract Document, the Contractor shall give written notice to the Designer requesting a Change Order for the work. Failure to give such written notice within ten (10) working days, shall waive the Contractor's right to seek additional time or cost under Article 4, "Changes in the Work" of the General Conditions.

1.4 MINOR CHANGES IN THE WORK

- A. Designer will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Amount or the Contract Time, on "Designer's Supplemental Instructions" (DSI).

1.5 PROPOSAL REQUESTS

- A. The Designer or Owner Representative will issue a detailed description of proposed Changes in the Work that may require adjustment to the Contract Amount or the Contract Time. The proposed Change Description will be issued using the "Request for Proposal" (RFP) form. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by the Designer or Owner Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within ten (10) working days after receipt of Proposal Request, submit a proposal for the cost adjustments to the Contract Amount and the Contract Time necessary to execute the Change. The Contractor shall submit his proposal on the appropriate Change Order Detailed Breakdown form. Subcontractors may use the appropriate Change Order Detailed Breakdown form or submit their proposal on their letterhead provided the same level of detail is included. All proposals shall include:
 - a. A detailed breakdown of costs per Article 4.1 of the General Conditions.
 - b. If requesting additional time per Article 4.2 of the General Conditions, include an updated Contractor's Construction Schedule that indicates the effect of the Change including, but not limited to, changes in activity duration, start and finish times, and activity relationship.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, the Designer or Owner Representative will issue a Change Order for signatures of Owner and Contractor on the "Change Order" form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 31 00

COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Projects including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
- B. Each Contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific Contractor.
- C. Related Sections include the following:
 - 1. Division 1, Section 01 32 00 "Schedules" for preparing and submitting Contractor's Construction Schedule.
 - 2. Articles 1.8.B and 1.8.C of Section 00 72 13 "General Conditions" for coordinating meetings onsite.
 - 3. Article 5.4.H of Section 00 72 13 "General Conditions" for coordinating Closeout of the Contract.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections, which depend on each other for proper installation, connection, and operation.
- B. Coordination: Each Contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each Contractor shall coordinate its operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other Contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.

4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components including mechanical and electrical.
- C. Prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate Contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Startup and adjustment of systems.
 8. Project Closeout activities.
- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
- B. Key Personnel Names: Within fifteen (15) work days of starting construction operations, submit a list of key personnel assignments including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 PROJECT MEETINGS

- A. The Owner's Construction Representative will schedule a Pre-Construction Meeting prior to beginning of construction. The date, time, and exact place of this meeting will be determined after Contract Award and notification of all interested parties. The Contractor shall arrange to have the Job Superintendent and all prime Subcontractors present at the meeting. During the Pre-Construction Meeting, the construction procedures and information necessary for submitting payment requests will be discussed and materials distributed along with any other pertinent information.
 - 1. Minutes: Designer will record and distribute meeting minutes.
- B. Progress Meetings: The Owner's Construction Representative will conduct Monthly Progress Meetings as stated in Articles 1.8.B and 1.8.C of Section 00 72 13 "General Conditions".
 - 1. Minutes: Designer will record and distribute to Contractor the meeting minutes.
- C. Preinstallation Conferences: Contractor shall conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
 - 1. Attendees: Installer and representatives of Manufacturers and Fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Designer and Construction Representative of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration including requirements for the following:
 - a. Contract Documents
 - b. Options
 - c. Related RFIs
 - d. Related Contract Changes
 - e. Purchases
 - f. Deliveries
 - g. Submittals
 - h. Review of mockups
 - i. Possible conflicts
 - j. Compatibility problems
 - k. Time schedules
 - l. Weather limitations
 - m. Manufacturer's written recommendations
 - n. Warranty requirements
 - o. Compatibility of materials
 - p. Acceptability of substrates
 - q. Temporary facilities and controls

- r. Space and access limitations
 - s. Regulations of authorities having jurisdiction
 - t. Testing and inspecting requirements
 - u. Installation procedures
 - v. Coordination with other Work
 - w. Required performance results
 - x. Protection of adjacent Work
 - y. Protection of construction and personnel
- 3. Contractor shall record significant conference discussions, agreements, and disagreements including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
 - 6. Revise paragraph below if Project requires holding progress meetings at different intervals. Insert special intervals such as "every third Tuesday" to suit special circumstances.
 - 7. Project name
 - 8. Name and address of Contractor
 - 9. Name and address of Designer
 - 10. RFI number including RFIs that were dropped and not submitted
 - 11. RFI description
 - 12. Date the RFI was submitted
 - 13. Date Designer's response was received
 - 14. Identification of related DSI or Proposal Request, as appropriate

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 31 15

PROJECT MANAGEMENT COMMUNICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.
- B. Division 1, Section 01 33 00 - Submittals
- C. Division 1, Section 01 26 00 – Contract Modification Procedures

1.2 SUMMARY

- A. Project Management Communications: The Contractor shall use the Internet web based project management communications tool, E-Builder® ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.
 - 1. Project management communications is available through E-Builder® as provided by "e-Builder®" in the form and manner required by the Owner.
 - 2. The project communications database is on-line and fully functional. User registration, electronic and computer equipment, and Internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited
- B. Support: E-Builder® will provide on-going support through on-line help files.
- C. Copyrights and Ownership: Nothing in this specification or the subsequent communications supersedes the parties' obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein.
- D. Purpose: The intent of using E-Builder® is to improve project work efforts by promoting timely initial communications and responses. Secondly, to reduce the number of paper documents while providing improved record keeping by creation of electronic document files
- E. Authorized Users: Access to the web site will be by individuals who are authorized users.

1. Individuals shall complete the E-Builder New Company/User Request Form located at the following web site: <https://oa.mo.gov/facilities/vendor-links/contractor-forms>. Completed forms shall be emailed to the following email address: OA.FMDCE-BuilderSupport@oa.mo.gov.
 2. Authorized users will be contacted directly and assigned a temporary user password.
 3. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.
- F. Administrative Users: Administrative users have access and control of user licenses and all posted items. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE! Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s).
- G. Communications: The use of fax, email and courier communication for this project is discouraged in favor of using E-Builder® to send messages. Communication functions are as follows:
1. Document Integrity and Revisions:
 - a. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.
 - b. The system shall make it easy to identify revised or superseded documents and their predecessors.
 - c. Server or Client side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
 2. Document Security:
 - a. The system shall provide a method for communication of documents. Documents shall allow security group assignment to respect the contractual parties communication except for Administrative Users. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!
 3. Document Integration:
 - a. Documents of various types shall be logically related to one another and discoverable. For example, requests for information, daily field reports, supplemental sketches and photographs shall be capable of reference as related records.
 4. Reporting:
 - a. The system shall be capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system shall be available for team members.
 5. Notifications and Distribution:

- a. Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.
- 6. Required Document Types:
 - a. RFI, Request for Information.
 - b. Submittals, including record numbering by drawing and specification section.
 - c. Transmittals, including record of documents and materials delivered in hard copy.
 - d. Meeting Minutes.
 - e. Application for Payments (Draft or Pencil).
 - f. Review Comments.
 - g. Field Reports.
 - h. Construction Photographs.
 - i. Drawings.
 - j. Supplemental Sketches.
 - k. Schedules.
 - l. Specifications.
 - m. Request for Proposals
 - n. Designer's Supplemental Instructions
 - o. Punch Lists
- H. Record Keeping: Except for paper documents, which require original signatures and large format documents (greater than 8½ x 11 inches), all other 8½ x 11 inches documents shall be submitted by transmission in electronic form to the E-Builder® web site by licensed users.
 - a. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier shall respond to documents received in electronic form on the web site, and consider them as if received in paper document form.
 - b. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier reserves the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
 - c. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier reserves the right to and shall copy any paper document into electronic form and make same available on the web site.
- I. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Owner and his representatives, the Construction Manager and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier required to have a user license(s) shall be responsible for the following:

1. Providing suitable computer systems for each licensed user at the users normal work location¹ with high-speed Internet access, i.e. DSL, local cable company's Internet connection, or T1 connection.
2. Each of the above referenced computer systems shall have the following minimum system² and software requirements:
 - a. Desktop configuration (Laptop configurations are similar and should be equal to or exceed desktop system.)
 - 1) Operating System: Windows XP or newer
 - 2) Internet Browser: Internet Explorer 6.01SP2+ (Recommend IE7.0+)
 - 3) Minimum Recommend Connection Speed: 256K or above
 - 4) Processor Speed: 1 Gigahertz and above
 - 5) RAM: 512 mb
 - 6) Operating system and software shall be properly licensed.
 - 7) Internet Explorer version 7 (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients may access the published content.
 - 8) Adobe Acrobat Reader (current version is a free distribution for download).
 - 9) Users should have the standard Microsoft Office Suite (current version must be purchased) or the equivalent.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable.)

END OF SECTION 01 31 15

¹ The normal work location is the place where the user is assigned for more than one-half of his time working on this project.

² The minimum system herein will not be sufficient for many tasks and may not be able to process all documents and files stored in the E-Builder® Documents area.

SECTION 01 32 00

SCHEDULE – BAR CHART

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for a Bar Chart Schedule for the project construction activities, schedule of submittals, and schedule for testing.

PART 2 - PRODUCTS – (Not Applicable)

PART 3 - EXECUTION

3.1 SUBMITTAL PROCEDURES

- A. The Contractor shall submit to the Designer, within ten (10) working days following the Notice to Proceed, a Progress Schedule including Schedule of Values showing the rate of progress the Contractor agrees to maintain and the order in which he proposed to carry out the various phases of Work. No payments shall be made to the Contractor until the Progress Schedule has been approved by the Owner.
 - 1. The Schedule of Values must have the following line items included with the value of the item as indicated below:
 - a. O&M's (Owner's Manual)
 - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
 - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
 - b. Close Out Documents
 - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
 - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
 - c. General Conditions
 - 1) No more than 10%
- B. The Contractor shall submit an updated Schedule for presentation at each Monthly Progress Meeting. The Schedule shall be updated by the Contractor as necessary to reflect the current Schedule and its relationship to the original Schedule. The updated Schedule shall reflect any changes in the logic, sequence, durations, or completion date. Payments to the Contractor shall be suspended if the Progress Schedule is not adequately updated to reflect actual conditions.

- C. The Contractor shall submit Progress Schedules to Subcontractors to permit coordinating their Progress Schedules to the general construction Work. The Contractor shall coordinate preparation and processing of Schedules and reports with performance of other construction activities.

3.2 CONSTRUCTION PROGRESS SCHEDULE – BAR CHART SCHEDULE

- A. Bar-Chart Schedule: The Contractor shall prepare a comprehensive, fully developed, horizontal bar chart-type Contractor's Construction Schedule. The Contractor for general construction shall prepare the Construction Schedule for the entire Project. The Schedule shall show the percentage of work to be completed at any time, anticipated monthly payments by Owner, as well as significant dates (such as completion of excavation, concrete foundation work, underground lines, superstructure, rough-ins, enclosure, hanging of fixtures, etc.) which shall serve as check points to determine compliance with the approved Schedule. The Schedule shall also include an activity for the number of "bad" weather days specified in Section 01 21 00 – Allowances.
1. The Contractor shall provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week.
 - a. If practical, use the same Schedule of Values breakdown for schedule time bars.
 2. The Contractor shall provide a base activity time bar showing duration for each construction activity. Each bar is to indicate start and completion dates for the activity. The Contractor is to place a contrasting bar below each original schedule activity time for indicating actual progress and planned remaining duration for the activity.
 3. The Contractor shall prepare the Schedule on a minimal number of separate sheets to readily show the data for the entire construction period.
 4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on schedule with other construction activities. Include minor elements involved in the overall sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
 5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other required schedules and reports.
 6. Indicate the Intent to Award and the Contract Substantial Completion dates on the schedule.
- B. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by the following:
1. Requirement for Phased completion
 2. Work by separate Contractors
 3. Work by the Owner
 4. Pre-purchased materials
 5. Coordination with existing construction
 6. Limitations of continued occupancies

7. Un-interruptible services
 8. Partial Occupancy prior to Substantial Completion
 9. Site restrictions
 10. Provisions for future construction
 11. Seasonal variations
 12. Environmental control
- C. Work Stages: Use crosshatched bars to indicate important stages of construction for each major portion of the Work. Such stages include, but are not necessarily limited to, the following:
1. Subcontract awards
 2. Submittals
 3. Purchases
 4. Mockups
 5. Fabrication
 6. Sample testing
 7. Deliveries
 8. Installation
 9. Testing
 10. Adjusting
 11. Curing
 12. Startup and placement into final use and operation
- D. Area Separations: Provide a separate time bar to identify each major area of construction for each major portion of the Work. For the purposes of this Article, a “major area” is a story of construction, a separate building, or a similar significant construction element.
1. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Permanent space enclosure
 - c. Completion of mechanical installation
 - d. Completion of the electrical portion of the Work
 - e. Substantial Completion

3.3 SCHEDULE OF SUBMITTALS

- A. Upon acceptance of the Construction Progress Schedule, prepare and submit a complete schedule of submittals. Coordinate the submittal schedule with Section 01 33 00 SUBMITTALS, the approved Construction Progress Schedule, list of subcontracts, Schedule of Values and the list of products.
- B. Prepare the schedule in chronological order. Provide the following information

1. Scheduled date for the first submittal
 2. Related Section number
 3. Submittal category
 4. Name of the Subcontractor
 5. Description of the part of the Work covered
 6. Scheduled date for resubmittal
 7. Scheduled date for the Designer's final release or approval
- C. Distribution: Following the Designer's response to the initial submittal schedule, print and distribute copies to the Designer, Owner, subcontractors, and other parties required to comply with submittal dates indicated.
1. Post copies in the Project meeting room and temporary field office.
 2. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned part of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or other activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

3.4 SCHEDULE OF INSPECTIONS AND TESTS

- A. Prepare a schedule of inspections, tests, and similar services required by the Contract Documents. Submit the schedule with (15) days of the date established for commencement of the Contract Work. The Contractor is to notify the testing agency at least (5) working days in advance of the required tests unless otherwise specified.
- B. Form: This schedule shall be in tabular form and shall include, but not be limited to, the following:
1. Specification Section number
 2. Description of the test
 3. Identification of applicable standards
 4. Identification of test methods
 5. Number of tests required
 6. Time schedule or time span for tests
 7. Entity responsible for performing tests
 8. Requirements for taking samples
 9. Unique characteristics of each service
- C. Distribution: Distribute the schedule to the Owner, Architect, and each party involved in performance of portions of the Work where inspections and tests are required.

END OF SECTION 01 32 00

SECTION 01 33 00

SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.
- B. Division 1, Section 01 31 15 "Project Management Communications" for administrative requirements for communications.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work including the following:
 - 1. Shop Drawings
 - 2. Product Data
 - 3. Samples
 - 4. Quality Assurance Submittals
 - 5. Construction Photographs
 - 6. Operating and Maintenance Manuals
 - 7. Warranties
- B. Administrative Submittals: Refer to General and Supplementary Conditions other applicable Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
 - 1. Construction Progress Schedule including Schedule of Values
 - 2. Performance and Payment Bonds
 - 3. Insurance Certificates
 - 4. Applications for Payment
 - 5. Certified Payroll Reports
 - 6. Partial and Final Receipt of Payment and Release Forms
 - 7. Affidavit – Compliance with Prevailing Wage Law
 - 8. Record Drawings
 - 9. Notifications, Permits, etc.
- C. The Contractor is obliged and responsible to check all shop drawings and schedules to assure compliance with contract plans and specifications. The Contractor is responsible for the content of the shop drawings and coordination with other contract work. Shop drawings and schedules shall indicate, in detail, all parts of an Item or Work including erection and setting instructions and integration with the Work of other trades.

- D. The Contractor shall at all times make a copy, of all approved submittals, available on site to the Construction Representative.

1.3 SUBMITTAL PROCEDURES

- A. The Contractor shall comply with the General and Supplementary Conditions and other applicable sections of the Contract Documents. The Contractor shall submit, with such promptness as to cause no delay in his work or in that of any other contractors, all required submittals indicated in Part 3.1 of this section and elsewhere in the Contract Documents. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Designer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
- B. Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and numbers of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:
 - 1. Date of Submission
 - 2. Name of Project
 - 3. Location
 - 4. Section Number of Specification
 - 5. State Project Number
 - 6. Name of Submitting Contractor
 - 7. Name of Subcontractor
 - 8. Indicate if Item is submitted as specified or as a substitution

1.4 SHOP DRAWINGS

- A. Comply with the General Conditions, Article 3.2.
- B. The Contractor shall submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- C. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings including the following information:
 - 1. Dimensions
 - 2. Identification of products and materials included by sheet and detail number

3. Compliance with specified standards
4. Notation of coordination requirements
5. Notation of dimensions established by field measurement
6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8½"x11" but no larger than 36"x48".

1.5 PRODUCT DATA

- A. The Contractor shall comply with the General Conditions, Article 3.2.
- B. The Contractor shall collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information including the following information:
 - a. Manufacturer's printed recommendations
 - b. Compliance with Trade Association standards
 - c. Compliance with recognized Testing Agency standards
 - d. Application of Testing Agency labels and seals
 - e. Notation of dimensions verified by field measurement
 - f. Notation of coordination requirements
 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

1.6 SAMPLES

- A. The Contractor shall comply with the General Conditions, Article 3.2.
- B. The Contractor shall submit full-size, fully fabricated samples, cured and finished as specified, and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 1. The Contractor shall mount or display samples in the manner to facilitate review of qualities indicated. Prepare samples to match the Designer's sample including the following:
 - a. Specification Section number and reference
 - b. Generic description of the Sample
 - c. Sample source
 - d. Product name or name of the Manufacturer
 - e. Compliance with recognized standards
 - f. Availability and delivery time
 2. The Contractor shall submit samples for review of size, kind, color, pattern, and texture. Submit samples for a final check of these characteristics with other

elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

- a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 - c. Refer to other Sections for samples to be returned to the Contractor for incorporation in the Work. Such samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.
 - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
3. Field samples are full-size examples erected onsite to illustrate finishes, coatings, or finish materials and to establish the Project standard.
- a. The Contractor shall comply with submittal requirements to the fullest extent possible. The Contractor shall process transmittal forms to provide a record of activity.

1.7 QUALITY ASSURANCE DOCUMENTS

- A. The Contractor shall comply with the General Conditions, Article 3.2
- B. The Contractor shall submit quality control submittals including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- C. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the Manufacturer certifying compliance with specified requirements.
 1. Signature: Certification shall be signed by an officer of the Manufacturer or other individual authorized to contractually bind the Company.
- D. Inspection and Test Reports: The Contractor shall submit the required inspection and test reports from independent testing agencies as specified in this Section and in other Sections of the Contract Documents.
- E. Construction Photographs: The Contractor shall submit record construction photographs as specified in this Section and in other Sections of the Contract Documents.
 1. The Contractor shall submit digital photographs. The Construction Administrator shall determine the quantity and naming convention at the preconstruction meeting.
 2. The Contractor shall identify each photograph with project name, location, number, date, time, and orientation.
 3. The Contractor shall submit progress photographs monthly unless specified otherwise. Photographs shall be taken one (1) week prior to submitting.

4. The Contractor shall take four (4) site photographs from differing directions and a minimum of five (5) interior photographs indicating the relative progress of the Work.

1.8 OPERATING AND MAINTENANCE MANUALS AND WARRANTIES

- A. The Contractor shall submit all required manufacturer's operating instructions, maintenance/service manuals, and warranties in accordance with the General Conditions, Article 3.5, and Supplementary Conditions along with this and other Sections of the Contract Documents.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REQUIRED SUBMITTALS

Contractor shall submit the following information for materials and equipment to be provided under this contract.

SECTION	TITLE	CATEGORY
01 31 00	Coordination	Operation / Maintenance Manual
01 32 00	Schedules	Construction Schedule
01 32 00	Schedules	Schedule of Values
01 32 00	Schedules	List of Subcontractors
01 32 00	Schedules	Major Material Suppliers
01 33 00	Submittals	Operation / Maintenance Manual
01 50 00	Construction Facilities and Temporary Controls	Construction Schedule
04 01 20	Masonry Restoration and Cleaning	Product Data
04 05 13	Masonry Repointing	Product Data
04 21 29	Architectural Terra Cotta Masonry	Product Data
04 21 29	Architectural Terra Cotta Masonry	Shop Drawings
04 21 29	Architectural Terra Cotta Masonry	Sample
04 21 29	Architectural Terra Cotta Masonry (Extra Materials)	Sample
07 19 00	Water Repellents	Product Data
07 24 00	Exterior Insulation and Finish Systems	Product Data
07 24 00	Exterior Insulation and Finish Systems	Shop Drawings
07 24 00	Exterior Insulation and Finish Systems	Sample
07 27 26	Fluid Applied Weather Barriers	Product Data
07 92 00	Joint Sealants	Product Data
07 92 00	Joint Sealants	Sample
09 30 00	Tile	Product Data
09 30 00	Tile	Sample
09 30 00	Tile (Extra Materials)	Sample

END OF SECTION 01 33 00

SECTION 01 35 13.10

SITE SECURITY AND HEALTH REQUIREMENTS (OA)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

- A. List of required submittals:
 - 1. Materials Safety Data Sheets for all hazardous materials to be brought onsite.
 - 2. Schedule of proposed shutdowns, if applicable.
 - 3. A list of the names of all employees who will submit fingerprints for a background check, and the signed privacy documents identified below for each employee.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 ACCESS TO THE SITE

- A. The Contractor shall arrange with Facility Representatives to establish procedures for the controlled entry of workers and materials into the work areas at the Facility.
- B. The Contractor shall establish regular working hours with Facility Representatives. The Contractor must report changes in working hours or overtime to Facility Representatives and obtain approval twenty-four (24) hours ahead of time. The Contractor shall report emergency overtime to Facility Representatives as soon as it is evident that overtime is needed. The Contractor must obtain approval from Facility Representatives for all work performed after dark.
- C. The Contractor shall provide the name and phone number of the Contractor's employee or agent who is in charge onsite; this individual must be able to be contacted in case of emergency. The Contractor must be able to furnish names and address of all employees upon request.
- D. All construction personnel shall visibly display issued identification cards.

3.2 FIRE PROTECTION, SAFETY, AND HEALTH CONTROLS

- A. The Contractor shall take all necessary precautions to guard against and eliminate possible fire hazards.
 - 1. Onsite burning is prohibited.
 - 2. The Contractor shall store all flammable or hazardous materials in proper containers located outside the buildings or offsite, if possible.

3. The Contractor shall provide and maintain, in good order, during construction fire extinguishers as required by the National Fire Protection Association. In areas of flammable liquids, asphalt, or electrical hazards, 15-pound carbon dioxide or 20-pound dry chemical extinguishers shall be provided.
- B. The Contractor shall not obstruct streets or walks without permission from the Owner's Construction Representative and Facility Representatives.
- C. The Contractor's personnel shall not exceed the speed limit of 15 mph while at the Facility unless otherwise posted.
- D. The Contractor shall take all necessary, reasonable measures to reduce air and water pollution by any material or equipment used during construction. The Contractor shall keep volatile wastes in covered containers, and shall not dispose of volatile wastes or oils in storm or sanitary drains.
- E. The Contractor shall keep the project site neat, orderly, and in a safe condition at all times. The Contractor shall immediately remove all hazardous waste, and shall not allow rubbish to accumulate. The Contractor shall provide onsite containers for collection of rubbish and shall dispose of it at frequent intervals during the progress of the Work.
- F. Fire exits, alarm systems, and sprinkler systems shall remain fully operational at all times, unless written approval is received from the Owner's Construction Representative and the appropriate Facility Representative at least twenty-four (24) hours in advance. The Contractor shall submit a written time schedule for any proposed shutdowns.
- G. For all hazardous materials brought onsite, Material Safety Data Sheets shall be on site and readily available upon request at least a day before delivery.
- H. Alcoholic beverages or illegal substances shall not be brought upon the Facility premises. The Contractor's workers shall not be under the influence of any intoxicating substances while on the Facility premises.

3.3 SECURITY CLEARANCES AND RESTRICTIONS

A. FMDC CONTRACTOR BACKGROUND AND ID BADGE PROCESS

1. All employees of an OA/FMDC contractor (or subcontractor performing work under an OA/FMDC contract) are required to submit a fingerprint check through the Missouri State Highway Patrol (MSHP) and the FBI enabling OA/FMDC to obtain state and national criminal background checks on the employees, unless stated otherwise in the Contractor's contract.
2. FMDC reserves the right to prohibit any employee of the Contractor from performing work in or on the premises of any facility owned, operated, or utilized by the State of Missouri for any reason.
3. The Contractor shall ensure all of its employees submit fingerprints to the Missouri State Highway Patrol and pay for the cost of such background checks. The Contractor shall submit to FMDC via email to FMDCSecurity@oa.mo.gov a list of the names of the Contractor's employees who will be fingerprinted and a signed OA/FMDC Authorization for Release of Information Confidentiality Oath for each employee. All employees of the Contractor approved by FMDC to work at a State facility must obtain a contractor ID badge from FMDC prior to beginning work

on-site, unless the Director of FMDC, at the Director's discretion, waives the requirement for a contractor ID badge. The Contractor and its employees must comply with the process for background checks and contractor ID badges found on FMDC's website at: <https://oa.mo.gov/facilities/facilities-operations/security-information/fmdc-contractor-background-and-id-badge>

4. Fingerprints and Authorization for Release of Information Confidentiality Oath form are valid for one (1) year and must be renewed annually. Changing or adding locations may result in additional required documentation. Certain employees may be required to be fingerprinted more frequently. OA/FMDC reserves the right to request additional background checks at any time for any reason.
5. The Contractor shall notify FMDC via email to FMDCSecurity@oa.mo.gov within 48 hours of anyone severing employment with their company.

3.4 DISRUPTION OF UTILITIES

- A. The Contractor shall give a minimum of seventy-two (72) hours written notice to the Construction Representative and the Facility Representative before disconnecting electric, gas, water, fire protection, or sewer service to any building.
- B. The Contractor shall give a minimum of seventy-two (72) hours written notice to the Construction Representative and Facility Representative before closing any access drives, and shall make temporary access available, if possible. The Contractor shall not obstruct streets, walks, or parking.

END OF SECTION 01 35 13.10

SECTION 01 50 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls including temporary utilities, support facilities, security, and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Sanitary facilities, including drinking water
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds
 - 2. Temporary roads and paving
 - 3. Temporary enclosures
 - 4. Hoists and temporary elevator use
 - 5. Temporary project identification signs and bulletin boards
 - 6. Waste disposal services
 - 7. Construction aids and miscellaneous services and facilities
- D. Security and protection facilities include, but are not limited to, to following:
 - 1. Temporary fire protection
 - 2. Barricades, warning signs, and lights
 - 3. Sidewalk bridge or enclosure fence for the site
 - 4. Environmental protection

1.3 SUBMITTALS

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within (15) days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations including, but not limited to, the following:
 - 1. Building code requirements
 - 2. Health and safety regulations
 - 3. Utility company regulations
 - 4. Police, fire department, and rescue squad rules
 - 5. Environmental protection regulations
- B. Standards: Comply with NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations”. ANSI A10 Series standards for “Safety Requirements for Construction and Demolition”, and NECA Electrical Design Library “Temporary Electrical Facilities”.
 - 1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 “National Electric Code”.
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist onsite.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the Designer, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section “Rough Carpentry”.
 - 1. For job-built temporary office, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sized and thicknesses indicated.

3. For fences and vision barriers, provide minimum 3/9" (9.5mm) thick exterior plywood.
 4. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8" (16mm) thick exterior plywood.
- C. Gypsum Wallboard: Provide gypsum wallboard on interior walls of temporary offices.
- D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary office, shops, and shed.
- E. Paint: Comply with requirements of Division 9 Section "Painting".
1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
 3. For interior walls of temporary offices, provide two (2) quarts interior latex-flat wall paint.
- F. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of (15) or less. For temporary enclosures, provide translucent, nylon-reinforced laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- G. Water: Provide potable water approved by local health authorities.
- H. Open-Mesh Fencing: Provide 0.120" (3mm) thick, galvanized 2" (50mm) chainlink fabric fencing 6' (2m) high with galvanized steel pipe posts, 1½" (38mm) ID for line posts and 2½" (64mm) ID for corner posts.

2.2 EQUIPMENT

- A. General: Provide new equipment. If acceptable to the Designer, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Water Hoses: Provide ¾" (19mm), heavy-duty, abrasion-resistant, flexible rubber hoses 100' (30m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110 to 120V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage rating.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixture where exposed to moisture.

- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated re-circulation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers, or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each Facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 - 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Designer. Neither the Owner nor Designer will accept cost or use charges as a basis of claims for Change Order.
- B. Temporary Water Service: The Owner will provide water for construction purposes from the existing building system. All required temporary extensions shall be provided and removed by the Contractor. Connection points and methods of connection shall be designated and approved by the Construction Representative.

- C. Temporary Electric Power Service: The Owner will provide electric power for construction lighting and power tools. Contractors using such services shall pay all costs of temporary services, circuits, outlet, extensions, etc.
- D. Temporary Heating: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
 - 1. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP gas or fuel-oil heaters with individual space thermostatic control.
 - 2. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
- E. Temporary Toilets: Use of the Owner's existing toilet facilities will be permitted, so long as facilities are cleaned and maintained in a condition acceptable to the Owner. All construction personnel will be allowed access only to those specific facilities designed by the Construction Representative. At substantial completion, restore these facilities to the condition prevalent at the time of initial use.
- F. Wash Facilities: The Owner will provide wash facilities within the building. All construction personnel will be allowed access only to those specific facilities designated by the Construction Representative.
- G. Drinking-Water Facilities: The Owner will provide drinking water facilities within the building. All construction personnel will be allowed access only to those specific facilities designated by the Construction Representative.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Storage Facilities: No areas for storage of building materials can be made available onsite. The Contractor shall provide for all storage offsite. All off-site storage locations shall be approved by the Construction Representative. The Contractor shall provide his own security as he finds necessary. The Construction Representative shall have access to the off-site storage at all times.
- C. Construction Parking: Contractors must be prepared to discuss their storage and parking needs at the Pre-Bid Meeting. Parking for construction personnel cannot be provided onsite. All parking will be offsite. The Contractor will have to park on the street, in city-owned lots, or in commercial lots. Under no circumstances will any vehicle be parked in a fire lane. Parking on lawns shall be prohibited.

- D. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and materials drying or curing requirements to avoid dangerous conditions and effects.
 2. Install tarpaulins securely with incombustible wood framing and other materials. Close openings of 25SqFt (2.3SqM) or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 4. Where temporary wood or plywood enclosure exceeds 100SqFt (9.2SqM) in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- E. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered “tools and equipment” and not temporary facilities.
- F. Temporary Elevator Use: The Owner will allow use of elevators within the building. All construction personnel will be allowed access only to those specific elevators designated by the Construction Representative.
- G. Project Identification and Temporary Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
1. Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.
 2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- H. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.
- I. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80°F (27°C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Designer.
- B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonable predictable and controllable fire losses. Comply with NFPA

10 “Standard for Portable Fire Extinguishers” and NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations”.

1. Locate fire extinguishers where convenient and effective for their intended purpose.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- C. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting including flashing red or amber lights.
- D. Enclosure Fence: Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.
1. Provide open-mesh, chainlink fencing with posts set in a compacted mixture of gravel and earth.
 2. Provide plywood fence, 8’ (2.5m) high, framed with (4) 2”x4” (50mm x 100mm) rails, and preservative-treated wood posts spaced not more than 8’ (2.5m) apart.
- E. Covered Walkway: Erect a structurally adequate, protective covered walkway for passage of persons along the adjacent public street. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction.
1. Construct covered walkways using scaffold or shoring framing. Provide wood plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage. Extend the back wall beyond the structure to complete the enclosure fence. Paint and maintain in a manner acceptable to the Owner and the Designer.
- F. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
1. Storage: Where materials and equipment must be stored and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- G. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment

that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the Designer requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.

END OF SECTION 01 50 00

SECTION 01 74 00

CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for cleaning during the Project.
- B. Environmental Requirements: Conduct cleaning and waste-disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and anti-pollution regulations.
 - 1. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
 - 2. Burning or burying of debris, rubbish, or other waste material on the premises is not permitted.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator for the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

- A. General
 - 1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.
 - 2. Do not allow the 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 all requirements for fire protection and protection of the ecology.
- B. Site:

1. Daily, inspect the site and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
2. Weekly, inspect all arrangements of materials stored on the site. Re-stack, tidy, or otherwise service all material arrangements.
3. Maintain the site in a neat and orderly condition at all times.

C. Structures:

1. Daily, inspect the structure and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
2. Weekly, sweep all interior spaces clean. "Clean," for the purposes of this paragraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and handheld broom.
3. In preparation for installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using all equipment and materials required to achieve the required cleanliness.
4. Following the installation of finish materials, clean the area daily while work is being performed in the space in which materials have been installed. "Clean," for the purposes of this subparagraph, shall be interpreted as meaning free from all foreign material which, in the opinion of the Construction Representative, may be injurious to the finish of the finish material.

3.2 FINAL CLEANING

- A. General: Provide final cleaning operations when indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.
 1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
 2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 3. Remove petrochemical spills, stains, and other foreign deposits.
 4. Remove tools, construction equipment, machinery, and surplus material from the site.
 5. Remove snow and ice to provide safe access to the building.
 6. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 7. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

8. Clean transparent material, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 9. Remove labels that are not permanent labels.
 10. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - a. Do not paint over “UL” and similar labels, including mechanical and electrical nameplates.
 11. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 12. Leave the Project clean and ready for occupancy.
- C. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
- D. Compliances: Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully.
1. Where extra materials of value remain after Final Acceptance by the Owner, they become the Owner’s property.

END OF SECTION 01 74 00

SECTION 02 41 00

DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide demolition work of existing conditions, complete, as indicated, specified, and required for new work, including removal and legal disposal of demolished materials.
- B. Selective Demolition: (Where indicated.)
 - 1. Selective demolition of building components designated to be removed.
 - 2. Protection of portions of building adjacent to or affected by selective demolition.
 - 3. Notification to Owner of schedule of shut-off of utilities which serve occupied spaces.
 - 4. Pollution control during selective demolition, including noise control.
 - 5. Removal and legal disposal of materials.

1.02 SUBMITTALS

- A. Upon request, submit documentation of proper disposal of demolition materials and terminating utilities.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations for demolition of structure, safety of adjacent structures, dust control, service utilities, discovered hazards, and environmental requirements. Use experienced workers.

1.04 PROJECT CONDITIONS

- A. Immediate areas of work will be occupied during selective demolition. Adjacent areas may be occupied by the public, including children.

PART 2 - PRODUCTS - Not Applicable To This Section

PART 3 - EXECUTION

3.01 DEMOLITION

- A. Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.
- B. Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.

- C. Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
- D. Provide adequate protection against accidental trespassing. Secure project after work hours.

END OF SECTION

SECTION 04 01 20

MASONRY RESTORATION AND CLEANING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide masonry cleaning
 - 1. Washing and cleaning exposed masonry surfaces.
- B. Provide masonry repair and restoration
 - 1. Bisque repair of terra cotta masonry units with repair zone ½" or deeper.
 - 2. Bisque repair of terra cotta masonry units with repair zone ½" or less.
 - 3. Refinishing of repaired terra cotta units.
 - 4. Glazing of repaired terra cotta units or repair of glazing damage.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Submit for approval product data.

1.03 QUALITY ASSURANCE

- A. Perform test cleaning to demonstrate/select appropriate cleaning materials, mixes, and methods. Allow test area to dry four days prior to inspection.
- B. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

1.04 PROJECT CONDITIONS

- A. Protect persons and property from injury and damage from cleaning operations. Do no work when winds prevent control of sand, cleaners or rinse water. Dispose of run-off in a legal manner. For chemical cleaning, clean only when ambient 40 degrees F temperature and above will be maintained during cleaning and seven days after.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Materials:
 - 1. Materials: Alkaline prewash cleaner, chemical paint remover, and chemical cleaner.
 - 2. Manufacturers: Diedrich Technologies, Hydrochemical Techniques, ProSoCo or approved equal.
- B. Restoration Materials:

1. Deep repairs (bisque spall ½” or greater): Colored cement-based repair mortar formulated to match the appearance and physical characteristics of the masonry substrate. Designed for use on terra cotta. Equal to Conopro “Matrix” (Basis of design).
2. Shallow repairs (bisque spall less than ½”): Colored acrylic modified cementitious repair mortar formulated for thin masonry repair. Equal to Conopro “Matrix TR” (Basis of design).
3. Colored glaze repair: Colored acrylic coating formulated for terra cotta glaze repair.
4. Clear glaze repair: Clear acrylic coating formulated to recreate the sheen/gloss on architectural terra cotta.
5. Manufacturers: Conproco, Edison Coatings, Cathedral Stone Products, Inc. or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Chemical Cleaning:

1. Comply with cleaning chemical manufacturer's instructions, recommendations, and precautions.
2. Protect adjacent surfaces with masking agent or other effective means.
3. Provide uniform final appearance.

B. Repair and Restoration:

1. Comply with manufacturer's instructions, recommendations, and precautions.
2. Prior to application of the product, inspect the substrate for proper cleaning and treatment of structural cracks, texture differences, damage, etc. Work shall not proceed until unsatisfactory conditions are corrected.
3. Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.
4. For deep repairs in the bisque (1/2” or greater) saw cut edges with a diamond blade at a 90 degree angle to eliminate feather edging. Avoid polishing the edges, as this will inhibit bond.
5. Avoid bruising or micro cracking during surface preparation.
6. Repair zone must be a minimum of 1/2 inch deep, of simple geometry, with no complex edge conditions. Feather edging can be done for shallow repairs.
7. Avoid long, narrow repairs, these have a greater tendency to crack.
8. Remove all scaling rust from embedded metal and steel and apply ECB anti-corrosion coating.
9. Saturate substrate with clean water (Saturated Surface Dry/SSD), with no standing water during Priming or Application.
10. Prepare and prime substrate in accordance with manufacturer’s instructions.

END OF SECTION 04 01 20

SECTION 04 05 13

MASONRY REPOINTING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide masonry repointing, grouting or replacement work, complete, where indicated in Construction Documents.
 - 1. Remove existing mortar to specified depth, clean joints, and tuck-point.
 - 2. Clean and install grouting of mortar joints.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Submit for approval product data, mortar mix proposed for use, mock-ups for each type of repointing and replacement units to be used.

1.03 QUALITY ASSURANCE

- A. Perform test to demonstrate/select appropriate materials, mixes, and methods.
- B. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- C. Use experienced craftsman with minimum of three years experience on projects of similar size and scope. Verifiable references and examples of previous work to be submitted to Architect upon request.
- D. Standards: Comply with the provisions of the following specifications and standards, except as otherwise noted or specified, or as accepted or directed by the Architect.
 - 1. ASTM C 150-94 "Standard Specification for Portland Cement".
 - 2. ASTM C 207-91 "Standard Specification for Hydrated Lime for Masonry Purposes".

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Repointing Mortar: Match existing with strength suitable for project conditions. Match existing color, texture, and appearance.
 - 1. Portland Cement: ASTM C 150, Type I.
 - 2. Hydrated Lime: ASTM C 207, Type S.
 - 3. Aggregate for Mortar: ASTM C 144. Match existing as much as possible. Generally, sand with rounded edges is preferred.
 - 4. Mortar Color Pigment: Iron oxides and chromium oxides. Match existing mortar color unless otherwise approved by Architect. This will generally require fresh mortar be slightly darker than existing to compensate for natural bleaching with age.
 - 5. Water: Clean, drinkable.

6. Aggregate for Grout: ASTM C 404.

- B. Restoration Materials: Masonry repair anchors and stone consolidation treatment, where required.

2.02 MORTAR MIXES

- A. Repointing mortar should be carefully selected and properly proportioned. For best results, the original mortar proportions should be duplicated. If this is not possible, Types N or O mortar should be used, as mortars with higher cement contents may not properly bond to the original mortar. Repointing mortar shall be softer or no harder than existing mortar. Unless otherwise approved by Architect, mix shall be as follows:
1. Type N Mortar: (1) part portland cement, (1) part Type S hydrated lime, aggregate measured in damp loose condition 4 -1/2 to 6.
 2. Type O Mortar: (1) part portland cement, (2) parts Type S hydrated lime, aggregate measured in damp loose condition 6 - 3/4 to 9.
 3. Pigment where required to match existing mortar color.
 4. Water as required to obtain consistency.
 5. Use no admixtures unless otherwise approved by the Architect.
- B. Repointing mortar should be pre-hydrated to reduce excessive shrinkage. Mix dry ingredients, then add about half water and mix for 5 minutes. Add additional water slowly until proper consistency is reached. Only enough clean water should be added to the dry mix to produce a damp, workable consistency which will retain its shape when formed into a ball. The mortar should stand in this dampened condition for 1 to 1 1/2 hours. Water should be added to the pre-hydrated mortar to bring it to a workable consistency. Use mortar within 30 minutes of end of hydration period. Do not re-temper.

2.03 GROUT MIXES

- A. Grout mix shall be as follows unless otherwise approved by Architect.
1. (1) part portland cement, (1/3) part hydrated line, and (1 1/3) parts fine sand (passing a No. 30 sieve).
 2. Pigment where required to match existing mortar color.
 3. Water as required to obtain consistency.
 4. Use no admixtures unless otherwise approved by the Architect.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Examine existing conditions to determine scope of work required.
1. Work only when ambient 40 degrees F to 80 degrees F temperature will be maintained until 72 hours after completion.
 2. Comply with manufacturer's recommendations for products used.
 3. Remove plant growth and vegetation attached to existing masonry surfaces.
 4. Do not clogged weep holes.
 5. Provide replacement sealants compatible with substrate conditions at existing damaged or deteriorated expansion joints where required.
 6. Avoid damage or penetrations of existing flashing systems.
 7. Protect existing adjacent construction to remain.

3.02 REPLACEMENT OF MASONRY UNITS

- A. Units which are broken or heavily spalled. Note: Prior to proceeding with removal and replacement work consult with Architect to determine units to be removed and availability of products for matching existing masonry units.
1. Remove affected units with tuck-pointer's toothing chisel by cutting mortar. Salvage units to be used. Avoid damage of adjacent units to remain.
 2. Once units is removed, all old mortar should be carefully chiseled out. Remove dust and debris with brush. Where units are located in exterior wythe of cavity wall construction exercise care not to allow debris to fall into cavity.
 3. Existing masonry surfaces should be dampened before new units are replaced. Masonry should absorb all surface moisture to ensure good bond.
 4. Apply mortar to appropriate surfaces of surrounding masonry and replacement masonry units.
 5. Replacement unit to be centered in opening and pressed into position.
 6. Provide full head and bed mortar joints. Remove excess mortar with trowel.
 7. When mortar becomes "thumbprint" hard, tool joints to match original profile.

3.03 REPOINTING OF MORTAR JOINTS

- A. Mortar joints which have softened, deteriorated or developed larger visible cracks.
1. Remove old mortar by hand chisel and mallet, unless Contractor can demonstrate to Architect that power tools will not damage masonry.
 2. Rake-out old mortar to depth equal to 2-1/2 times joint width and in no case less than 3/4" or depth required to expose sound mortar.
 3. Do not damage existing masonry units.
 4. Remove dust and debris and rinse joints with combination of water flushing and brushing with bristle brush.
 5. Joints to be repointed should be dampened and to ensure a good bond existing masonry must absorb surface water.
 6. Add water to pre-hydrated mortar to bring to workable consistency.
 7. Mortar to be packed tightly into joints in thin layers 1/4" deep maximum. Work fresh mortar from "hawk" to joint with jointing tool. First fill recessed areas, which are deeper than standard chiseled depth, then proceed to fill raked joint using several layers of mortar and working tool in one direction only. Each layer of mortar shall be thumb print hard before succeeding layer is applied. Where corners of face brick have eroded, it may be necessary to recess mortar to some degree in order to maintain consistent visual width of joints.
 8. When mortar becomes "thumbprint" hard, tool joints to match original profile.

3.04 GROUTING OF MORTAR JOINTS:

- A. Mortar joints with small visible "hairline" cracks.
1. Joints to be grouted to be dampened. To ensure good bond, masonry must absorb surface water.
 2. Apply grout to joints with stiff fiber brush to force the grout into the cracks. Two coats required to effectively reduce moisture penetration.
 3. Tool joints after grout application to force grout into cracks.
 4. Use of template or masking tape may prove effective in keeping brick faces clean.

3.05 CLEANING

- A. Clean face of masonry one to two hours after mortar has set.
 - 1. Use plain stiff bristle brush.
 - 2. If mortar has become too hard, use brush and plain water and wooden paddle or if necessary a chisel.
 - 3. If harsher cleaning methods are required, allow mortar to cure 30 days before commencing.

END OF SECTION 04 05 13

SECTION 04 21 29

ARCHITECTURAL TERRA COTTA MASONRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide architectural terra cotta masonry complete.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Product data: Submit manufacturer's product data.
- C. Shop and Setting Drawings:
 - 1. The Contractor shall furnish the Terra Cotta manufacturer with all drawings, details and information necessary for the manufacture of Terra Cotta units, including drawings of all classes of work with which the Terra Cotta engages, proposed method of installation and elevations showing location of the units to be replaced.
 - 2. Submit shop, fabrication and setting drawings to the Customer for approval by both the Architect and the Contractor prior to production of any material. Contractor shall be responsible for all field dimension verification.
 - 3. Shop drawings shall show sections, dimensions and connection with other work. These drawings must conform as nearly as practicable to the architect's drawing, but shall be in accordance with good Terra Cotta structural practice.
 - 4. Anchorage: Terra Cotta unit anchorage shall be coordinated with the Terra Cotta manufacturer and designed by Contractor's structural engineer and submitted to the Architect/Engineer for approval. The attachment design will withstand loads from wind, earthquake, gravity, building movement, and thermally induce movement according to the requirements of the governing Building Code and good engineering practice. The Terra Cotta manufacturer shall provide complete set of scale shop drawings to be used for setting and showing the piece numbering of the Terra Cotta. The size of the joints to be used for setting the various portions of the work shall be clearly indicated. These drawings shall be designated as the setting drawings.
- D. Samples:
 - 1. Whenever Terra Cotta is required to match existing terra cotta in contour, color finish and surface treatment, as for example in connection with alterations to existing work, the Terra Cotta manufacturer shall be furnished with the required profiles and samples of the original work and other needed information.
 - 2. If a restoration, the customer shall provide a cleaned, full size, Terra Cotta unit control sample representing required color, texture and finish.
 - 3. Preliminary Color Sample Approval: Submit two 6" x 6" x 5/8" samples showing typical color range and finish for preliminary acceptance.
 - 4. Final Approval: After approval of the preliminary color sample, submit two (2) final samples at minimum 12" x 12" x 3/4" which when inspected and approved become the standard for quality, color range, texture and color finish. All materials shall conform to

the approved samples within the range, subject to normal ceramic variation. Submit manufacturer's specifications and other product data for each manufactured product including instructions for storage, handling and use.

- E. Deliver 5% of each type and color of extra materials to Owner. Furnish extra material that match products installed, packaged with protective covering for storage and identification with labels clearly describing contents. Provide manufacturer's literature for cleaning and maintenance.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for five years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards: Comply with the provisions of the following specifications and standards, except as otherwise noted or specified, or as accepted or directed by the Architect.
 - 1. ASTM C67, Standard Methods of Sampling and Testing Brick and Structural Clay Tile.
 - 2. ASTM C126, Standard Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units.
 - 3. ASTM C212, Standard Specification for Structural Clay Facing Tile.
- C. Contractor Qualifications:
 - 1. All work shall be performed by mechanics experienced in the handling and setting of the material having not less than five (5) years satisfactory experience in comparable installation of new Terra Cotta including work on at least two (2) projects similar in scope and scale to this Project. Submit references with name of contact person and telephone number for the two (2) submitted similar projects.
- D. Manufacturer's Qualifications:
 - 1. All Terra Cotta work shall be by a manufacturing firm normally in business of producing work of the type indicated and shall be capable of submitting proof to the Architect as follows:
 - a. Length of time in this type of manufacturing: Five (5) years minimum.
 - b. Project experience portfolio: Three (3) projects minimum.
- E. Installer's Qualifications:
 - 1. All Terra Cotta work shall be installed by a firm normally in business of installing work of the type indicated and shall be capable of submitting proof to the Architect as follows:
 - a. Length of time in this type of installation: Five (5) years minimum.
 - b. Project experience portfolio: Three (3) projects minimum.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Packing and crating of the architectural Terra Cotta shall be done by the manufacturer to prevent damage to the units in transit by normal handling methods.
- B. Contractor shall inspect delivered material for damage. If any pieces of Terra Cotta are damaged in transit, the manufacturer shall be immediately notified in writing by contractor and proceed with the remaking of the pieces. The responsibility for the cost of such replacements

shall be determined by the point of delivery outlined. Contractor shall assume responsibility for the necessary proof of damage.

C. Storage at Job Site or Production Facility:

1. Units shall stay in their original packing material until ready for use. Crates shall not be stacked and shall remain in an upright position. Store units on firm, level and smooth surface. The units shall be protected from weather before setting, to prevent staining.
2. The manufacturer is responsible for providing the architectural Terra Cotta only. All other materials, products, and equipment necessary to setting and installation the units to the architectural drawing and specification, and the labor to do so, must be provided by the Customer.

PART 2 - PRODUCTS

2.01 ARCHITECTURAL TERRA COTTA

- A. Manufacturers: Boston Valley Terra Cotta, NBK Architectural Terracotta, Palagio Engineering USA, or approved equal.
- B. Terra Cotta units shall be outlined on Architectural Drawing with respect to exterior appearance and profile
1. Manufacture all pieces for particular installation conditions to minimize any cutting in the field. Contractor to adjust individual pieces to accommodate setting sequence. (In concrete or steel frame building, the veneer or facing material should be fully and continuously supported, at each floor level on shelf supports, of adequate strength and stiffness, rigidly connected to the structural frame, steel shelf angles or supports, in all cases, should be located in mortar joints. The strength of the Terra Cotta should not be unnecessarily reduced by cutting the webs to receive the steel.
 2. Adjust Terra Cotta to accommodate relieving angles, vents, weeps, expansion joints, etc.
 - a. Proper provision should be made for expansion joints, at shelf supports, over column cases, etc., to prevent the development of disruptive stresses cause by deflection, wind pressure, temperature changes, settlement and like forces.
 - b. Properly constructed flashing should be provided.
 - c. Reglets shall be provided to receive gutter linings and flashing when the joints cannot be used for the purpose. Reglets shall be not less than 3/4' deep, unless otherwise specified.
 - d. The volume changes incident to the setting and hardening of concrete, and the variations in volume of concrete due to humidity and temperature conditions, require provisions to allow free movement of the supporting frame and make it undesirable to completely fill a facing applied to a concrete structure.
- C. Install by anchored method as required by referenced standards and as described on approved shop drawings. All anchors, hangers, bolts, clips, straps, rods, and pins for securing terra cotta shall be of stainless steel or galvanized steel.
- D. Material Physical Performance Requirements:
1. Compressive Strength (ASTM C67): 6000 psi minimum.
 2. Absorption (5 hour boil) (ASTM C67): 11.5% maximum.
 3. Absorption (24 hour soak) (ASTM C67): 7.5% maximum.
 4. Chemical Resistance (ASTM C126): No change.

5. Glaze Absorption (ASTM C67): 0.15%
 6. Freeze/Thaw Resistance (ASTM C67): 300 cycles.
- E. Tolerances:
1. Face Dimension from Approved Shop Drawings: All dimensions 0.0105± inches per length, expect diamond say cut dimensions 1/16± inch.
 2. Warpage: Exposed face of hand made terra cotta shall not vary from a true plane more than the existing original material. Exposed face of machine extruded ceramic veneer shall not vary from a true plane by more than 0.005 inch per inch of length.
 3. Finished faces that will be exposed when installed shall be free from chips, blisters or other imperfections detracting from the appearance of the finished wall when viewed from a normal viewing distance or of a minimum of 15 feet.

2.02 MORTAR AND GROUT MATERIALS

- A. Mortar: Comply with ASTM C270.
- B. Grouts: Comply with ASTM C476.
- C. Cementitious Materials:
1. Portland Cement: ASTM C150, Type I or II, low-alkali per ASTM C150, Table 2.
 2. Hydrated Lime: ASTM C207, Type S.
- D. Aggregates:
1. Sand: Clean, washed natural or manufactured silica sand graded according to ASTM C114, shall contain no more than 50 parts per million of chloride ions and shall be free of organic contaminates.
 2. Course Aggregates: ASTM C404 with a maximum size of 3/8" diameter. Aggregate shall contain no more than 50 parts per million of chloride ions and shall be free of organic contaminates.
- E. Water: Potable, clean and free from injurious amount of oil, alkali, organic matter, or other deleterious material.

2.03 FABRICATION

- A. Walls shall not be less than one inch thick and partitions shall be of such thickness and so spaced as to perform their proper functions with regard to form and structure. Necessary anchor holes and hand holds shall be provided in accordance with shop drawings so formed as to properly engage the structure. Beds generally shall be not less than 4 inches deep.
- B. All joints shall be straight and true. All Terra Cotta shall be laid out at the factory to check for uniformity of joint widths and over-all dimensions. Where necessary to secure accurate dimensions and uniform joint widths, the material shall be sized straight and true.

PART 3 - EXECUTION

3.01 PROJECT CONDITIONS

- A. Hot and Cold Weather: Perform work in accordance with ACI 530.1 current edition.

- B. At end of the working day, or during rainy weather, cover masonry work exposed to weather with waterproof coverage and securely anchor as necessary.
- C. Protection: Adequately protect and do not damage existing construction to remain.

3.02 EXAMINATION

- A. Examine the areas and conditions under which architectural terra cotta work is to be installed. Notify Architect in writing of defects or conditions that will prevent satisfactory tile installation. Do not proceed with the work until unsatisfactory conditions have been corrected. Beginning of tile work shall imply acceptance of substrate conditions.

3.03 PREPARATION

- A. Establish lines, levels, and coursing. Protect from disturbance.
- B. Clean new unit prior to setting, leaving edges and surfaces free of dirt or foreign material. Do not use wire brushes or implements that mark or damage exposed surfaces.
- C. Soak units in a vat or box of clean water for one hour or more just prior to installation. Units shall be noticeably damp at the time of setting. Units shall be drained sufficiently to eliminate surface water.
- D. At the beginning of setting each day, soak all walls to be faced with clean water applied by a hose and spray nozzle. Soak again with water not more than one hour before setting of unit.

3.04 INSTALLATION

- A. Install materials per approved submittals and manufacturer's recommendations.
- B. In connection with Structural Steel: Beams, channels, angles, T's, plates and fabricated members for supporting terra cotta and which are not secured to the structural steel by fixed connections, as shown on drawings, together with all anchors, hangers, bolts, clips straps, rods and pins for securing terra cotta, shall be furnished and installed by the terra cotta Installation Contractor.
- C. In Connections with Structural Concrete: The contractor for structural concrete shall furnish and install all supporting metal work imbedded in the concrete and all shelf angles and continuous supports. All such metal work shall conform to the requirements of the terra cotta structural support drawing and setting drawing prepared by the terra cotta manufacturer.
- D. All other loose anchors, such as clamps, hangers, clips, straps, and pins shall be furnished and installed by the terra cotta Installation Contractor.
- E. Proper care should be exercised to prevent the corrosion of all steel supports, ties, etc. Where such protection cannot be permanently secured through encasement with mortar or concrete, or through the use of corrosion resistant metallic coating, non-corrosive metals should be employed.

- F. Exposed free-standing construction, subject to the absorption of water through mortar joints and liable to injury from subsequent freezing, or the expansion of improper filling material, should generally be left unfilled and should be ventilated by means of small, inconspicuously placed weep-holes as indicated on the shop drawings.
- G. Maintain uniform joint widths to match existing.
- H. Erection Tolerances:
 - 1. Variation from Plumb: In accordance with ACI 530.1 current edition.
 - 2. Variation from Level: In accordance with ACI 530.1 current edition.
 - 3. Variation from True Plane: In accordance with ACI 530.1 current edition.

3.05 CUTTING AND FITTING

- A. Obtain Architect approval prior to job site cutting and fitting any item not indicated on drawing. Cutting and fitting of the Terra Cotta that may be required at the building, including all fitting around anchors, steel and ironwork and reinforced concrete, shall be done by the contractor for setting Terra Cotta. Do not impair appearance or strength of Terra Cotta.
- B. All necessary face cutting of Terra Cotta at the job site shall be done with a saw using a water-cooled diamond blade. Face cutting shall not disturb the glaze.

3.06 MORTAR AND GROUT

- A. Mix and proportion cementitious materials for site-made setting beds and grout:
 - 1. Setting Mortar: Type N mortar; in accordance with ASTM C270 with the following material mix proportion by volume:
 - a. Portland Cement: 1 part.
 - b. Hydrated Lime: 1 part.
 - c. Sand: 6 parts.
 - d. Color of mortar shall match building's existing cleaned mortar.
 - e. Use colored sand to obtain desired mortar color.
 - 2. Pointing Mortar: Use setting mortar for new construction. If new construction is adjacent to existing, match color of mortar. If new terra cotta is to replace existing, comply with Section 04 01 20.
 - 3. Terra Cotta Pointing Mortar:
 - a. Type: N Harder compression strength.
 - b. Portland Cement: 1 part.
 - c. Hydrated Lime: 1 part.
 - d. Sand: 6 parts.
 - e. Color of mortar shall match building's existing cleaned mortar.
 - f. Use colored sand to obtain desired mortar color.
 - 4. Terra Cotta Pointing Mortar:
 - a. Type: O Softer compression strength.
 - b. Portland Cement: 1 part.
 - c. Hydrated Lime: 2 parts.
 - d. Sand: 9 parts.

- e. Color of mortar shall match building's existing cleaned mortar.
- f. Use colored sand to obtain desired mortar color.

3.07 POINT JOINTS

A. Pointing:

- 1. Comply with ACI 530.1 current edition for Hot and Cold Weather Construction.
- 2. Wet joint thoroughly and repeatedly prior to pointing and between pointing lifts. Allow water to soak in so that no freestanding water is visible.
- 3. Point in two lifts: pack joints to within 3/8 inch of surface on first lift, allow first lift to set prior to pointing second lift.
- 4. As soon as mortar has taken its initial set, tool joint surfaces to be slightly concave, or to match existing sound mortar joint surfaces. Do not allow mortar to extend over edges of Terra Cotta units.
 - a. After initial 24 hour set, moisten until cured. Allow mortar to cure completely prior to cleaning operations, minimum 30 days.
 - b. Clean up after pointing operations are complete. Remove mortar stains, excess mortar, etc., from all surrounding surfaces. Do not use acids; rinse thoroughly after clean up operations. All joints in overhanging Terra Cotta, balustrades, parapets and free standing features shall have joints raked out 1/2 inch, backer rod, sealant and lead "T" installed.

B. Re-Pointing:

- 1. Comply with Section 04 05 13.
- 2. General: Do not re-point in temperatures over 90° F. or under 40° F. Provide cover so that re-pointing may be accomplished without direct sunlight on the joints for up to eight (8) hours after re-pointing.
- 3. Clean up after re-pointing operations are complete. Remove mortar stains, excess mortar, etc., from all surrounding surfaces. Do not use acids; rinse thoroughly after clean-up operations.

3.08 CLEANING

- A. Remove excess mortar from all surrounding surfaces upon completion of setting to prevent stains.
- B. Clean area of work as specified.

3.09 PROTECTION

- A. Protect and do not damage existing adjacent work to remain.
- B. Protect new work from damage or staining due to construction operations. All uncompleted walls including Terra Cotta and backing shall be protected by waterproof covering at night and at any time when liable to injury from storms or freezing.
- C. On completion of construction, remove all temporary protection.

3.010 ACCEPTANCE

- A. The completed installation shall have the acceptance of the Architect. Remove and replace units that are chipped, cracked, or otherwise damaged which do not conform to the Specification Requirements.

END OF SECTION 04 21 29

SECTION 07 19 00
WATER REPELLENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide water repellents for vertical and horizontal exposed surfaces where indicated:
 - 1. Exterior masonry.
 - 2. Exterior insulation finish systems (EIFS).

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Product Data: Submit manufacturer's product technical data and installation instructions.
- C. Warranty: Submit specified manufacturer's warranty.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for five years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Provide five year warranty for water repellent coating, guaranteeing the installation waterproofing and watertight, except for structural cracks or opening caused by settling, expansion or contraction.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Manufacturers (Horizontal Surfaces): Master Builders "MasterProtect H 400", ProSoCo SureKleen "Weather Seal Siloxane WB", Sonneborn "Penetrating Sealer 40", L & M "Aqualpel Plus" or approved equal.
- B. Manufacturers (Vertical Surfaces): "MasterProtect H 200", ProSoCo SureKleen "Weather Seal Siloxane WB", Sonneborn "Penetrating Sealer 40", L & M "Hydropel WB" or approved equal.
- C. Water Repellents:
 - 1. Appearance: Clear, non-gloss, non-yellowing.
 - 2. Vapor Transmission: Breathing type, non vapor barrier.
 - 3. Penetrating Sealers (Not Visible): Water-based.
 - 4. Application Rate: (2) Coats suitable for substrate and project conditions.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions. Install materials with uniform appearance. Coordinate with work of other sections.
- B. Clean substrate of substances which might interfere with penetration/adhesion of water repellents. Test for moisture content in accordance with repellent manufacturer's instructions to ensure that surface is sufficiently dry.
- C. Coordinate with sealants where feasible, delay application of water repellents until installation of sealants has been completed in joints adjoining surfaces to be coated.
- D. Do not proceed with the application (except with the written recommendation of the manufacturer) when ambient temperature is less than 50 degrees F; or when rain or temperatures below 40 degrees F are predicted for a period of 24 hours; or within 3 days after surfaces become wet from rainfall or other moisture sources.
- E. First Coat: Apply heavy, saturation-type, flood coat from bottom up with sufficient material applied to produce a 6 inch to 8 inch rundown below contact point of spray pattern with surface. Apply in overlapping pattern and coverage controlled to approximate recommendation by manufacturer. Allow first coat application to penetrate surface (approximately 3 to 5 minutes).
- F. Second Coat: Apply in same saturating manner as first coat.

END OF SECTION

SECTION 07 24 00

EXTERIOR INSULATION AND FINISH SYSTEMS

PART 1 – GENERAL

1.01 SUMMARY

- A. Provide exterior insulation and finish systems:
 - 1. Applications over exterior plywood sheathing.
 - 2. Applications over fiberglass reinforced exterior sheathing.
 - 3. Applications over masonry or concrete substrates.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Product Data: Submit manufacturer's technical data, test reports, and installation instructions.
- C. Shop Drawings: Submit manufacturer's sections and details, including joints, edges, flashing, and transitions with adjacent materials.
- D. Samples: Submit manufacturer's full range of textures and colors to Architect for selection.
- E. Warranty: Submit manufacturer's warranty.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Installer shall have been trained and approved in installation of systems by manufacturer prior to bidding and shall have performed at least three installations of similar size, scope, and complexity in each of past two years.
- C. Testing and Inspections:
 - 1. Where Required: Where weather barrier components are installed over sheathing substrates and/or as required by building official.
 - 2. Owner shall provide services of qualified independent testing agency to perform required testing and inspections.

1.04 TEST PROCEDURES AND PERFORMANCE

- A. System shall have been tested to meet or exceed the following:
 - 1. Acceptance Testing Criteria: ASTM E2568 and ASTM E2570.

2. Physical Test:
 - a. Abrasion Resistance: ASTM D968, no deleterious effects after 114 gallons of sand.
 - b. Absorption Freeze: ASTM C6781.
 - c. Accelerated Weathering: ASTM G153, 5,000 hours, no deterioration.
 - d. Impact Resistance: ASTM E2486, no cracks up to 6 ft.
 - e. Mildew Resistance: ASTM D3273, no growth.
 - f. Salt Spray Resistance: ASTM D2247, 5% concentration for 300 hours, no deleterious effects.
 - g. Water Infiltration: ASTM E331, full scale mock-up test.
 - h. Water Vapor Transmission: ASTM E96, Water Method Procedure.
 - i. Drainage Efficiency: ASTM E 2273, 90% minimum.
3. Structural Test:
 - a. Full Scale Structural Test: ASTM E330.
4. Fire Test:
 - a. ASTM E84, on Coating and Insulation Board
 - 1). Flame Spread Rating: 25 or less.
 - 2). Smoke Development Rating: 450 or less.
 - b. Modified ASTM E108 (Diversified Fire Test).
 - c. ASTM E119 (Standard Methods of Fire Test of Building Construction and Materials).
 - d. Multistory Fire Test (Full Scale, End Use Configuration Test).

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Manufacturers: Dryvit “Outsulation Plus MD System” (Basis of design) drainage type specified in compliance with ASTM E2568. Equivalent products by Sto Corp or Master Builders are acceptable.
- B. Weather Barrier Components: Type and components as recommended by manufacturer for project substrate conditions in compliance with ASTM E2570. Comply with Section 07 27 26.
- C. Finish Coating over Molded Polystyrene Board:
 1. Type: EIMA Class PB.
 2. Adhesive Base & Finish Coats: Factory blended single component modified polymer Portland cement based adhesive from single manufacturer.
 3. Finish Coat: Factory mixed acrylic based textured wall finish with graded marble aggregate.
 4. Color and Texture Finish: Match existing.
- D. Thermal Insulation:
 1. Manufacturers: Amoco, Dow Chemical, GAF, Johns Manville, Owens-Corning, StarRfoam, U.C. Industries, or approved equal.
 2. Expanded polystyrene (EPS) insulation board, drainage type in compliance with ASTM E2273, nominal 1.0 lb/cu.ft., in compliance with ASTM E2430 and ASTM C578 Type I requirements. Flame spread rating less than 25 and smoke development rating less than 450 in compliance with ASTM E84.
 5. Attachment: Adhesive and mechanical anchors.

- a. Adhesive: As recommended by manufacturer for specific substrate attachment.
- b. Mechanical Anchors: As recommended by manufacturer for specific substrate attachment. Non-rusting, self tapping screws appropriate for substrate, or nails specifically designed for system. 1-1/2 or 1-3/4 inch approved nylon or corrosion-protected metal washers, separate or forming integral part of fastener. Place at spacing as recommended by manufacturer.
- 6. Trim Accessories: Provide casing beads, corner beads, starter track, drainage strips, expansion joint assemblies, and control joint assemblies per manufacturer's recommendations.
 - a. Comply with ASTM C1063.
 - b. Material: Vinyl, conforming to ASTM D1784.
- 7. Reinforcing Fabric:
 - a. Standard Weight: Standard Impact Classification, nominal 4.5 ounces per square yard, symmetrical, interfaced open-weave glass fiber fabric made with alkaline resistant coating for compatibility with manufacturer's base coat material. (Over 6' -0" above finish floor).
 - b. Heavy Weight: Ultra High Impact Classification, nominal 15 ounces per square yard ultra-high impact, double strand, interwoven, open-weave glass fiber fabric with alkaline resistant coating for compatibility with manufacturer's base coat material. (From below finish floor to 6' -0" above finish floor).

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Comply with system manufacturer's instructions for installation of system for specific job conditions. Admixtures shall not be used. Inspect substrate and report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
- B. Environmental Requirements:
 - 1. Ambient air temperature shall be 40° F minimum and rising at time of installation and for 24 hours thereafter.
 - 2. Temperature of substrate shall be above 40° F during application.
- C. Weather Barrier and Flashing Systems:
 - 1. Where indicated and/or recommended by EIFS Manufacturer for project substrate conditions, verify proper installation of weather barrier and flashing systems prior to installation of EIFS system. Installation shall comply with Section 07 27 26.
- D. Adhesively attach insulation horizontally with joints staggered and tightly butted and corners interlocked. Mechanically attach to degree specified by manufacturer.
 - 1. Make aesthetic "V" grooves where indicated on drawings.
 - 2. Apply base coat over insulation board, imbed mesh into wet base coat per manufacturer's recommendations.
 - 3. Detail work to carefully follow manufacturer's recommendations.
- E. Expansion joints shall occur at:
 - 1. Expansion joints in substrate.
 - 2. Expansion joints in building.
 - 3. Where finish system abuts other materials.

4. At floor lines of wood framed construction.
 5. Where substrate change.
 6. Changes in roof lines, building shape, or structural system.
- F. Minor Openings: Where openings are minor and control joints impracticable, reinforce corners with mesh strips at 45-degree angle to corners.
- G. Provide reinforced base and finish coats to provide a uniform appearance. Completely cover all insulation board including edges. Install areas of special patterns where indicated on drawings. Ensure continuous application, free of cold joints, scaffold lines, texture variations, etc.
- H. Clean and protect work as recommended by manufacturer.

END OF SECTION

SECTION 07 27 26

FLUID APPLIED WEATHER BARRIERS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide fluid applied, vapor-permeable, membrane air and water resistive weather barriers and accessories, complete, where indicated.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Product Data: Submit manufacturer's product data and installation instructions.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for ten years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards:
 - 1. ASTM D412; Standard Test Methods for Rubber Properties in Tension.
 - 2. ASTM D4541; Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - 3. ASTM E84; Test Method for Surface Burning Characteristics of Building Materials.
 - 4. ASTM E96; Test Method for Water Vapor Transmission of Materials.
 - 5. ASTM E283; Test Method for Determining the Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors under Specified Pressure Differences across the Specimen.
 - 6. ASTM E779, Standard Test Method for Determining Air Leakage Rate by Fan Pressurization.
 - 7. ASTM E2178; Test Method for Air Permeance of Building Materials.
 - 8. ASTM E2357; Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
 - 9. AAMA 714, Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal around Exterior Openings in Buildings.

1.04 WARRANTY

- A. Provide Manufacturer's minimum five (5) year materials warranty. Comply with Manufacturer's applicator registration requirements and notification procedures to assure qualification for warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. General: The fluid applied vapor-permeable, air/water-resistive barrier membrane, sheathing fabric, transition membrane and flashing primer shall be obtained or approved as a single-source from the membrane manufacturer to ensure system compatibility and integrity and compatible with project conditions.
- B. Manufacturers:
 - 1. Dryvit: "Backstop".
 - 2. Master Builders: "Senershield-R", "Finestop-RA", and MasterSeal AWB 600".
 - 3. Equal products by DuPont, Prosoco, Sika, Tremco, or W.R. Meadows are acceptable.

2.02 MATERIALS

- A. General: Air/water-resistive barrier shall be capable of performing as a continuous vapor-permeable air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. At wall cladding transitions, the air/water-resistive barrier shall form a continuous air barrier and shall make provision for water drainage, either by creation of an unobstructed drainage plane that extends across the cladding transition or by flashing to discharge to the exterior at the transition. Air barrier assemblies shall be capable of accommodating substrate movement and sealing substrate expansion and control joints, construction material changes, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits, or interruption of the drainage plane.
- B. Fluid-Applied Membrane Performance Requirements:
 - 1. Air Leakage of Air Barrier Assemblies, ASTM E2357: Maximum 0.007 l/sm sq.
 - 2. Air Permeance of Building Materials, ASTM E2178: Maximum 0.02 l/sm sq. @ 75 Pa.
 - 3. Rate of Air Leakage, ASTM E283: Maximum 0.02 l/sm sq. @ 75 Pa.
 - 4. Pull-Off Strength of Coatings, ASTM D4541: Minimum 110 kPa (15.9 psf), adhesion or substrate failure.
 - 5. Surface Burning, ASTM E84: Flame spread < 25, Smoke developed < 450.
 - 6. Nail Sealability, ASTM D1970: No water penetration at galvanized roofing nail penetration under 127 mm (5") head of water after 3 days at 4 deg. C (40 deg. F).
 - 7. Water Vapor Transmission, ASTM E96 Method B: Minimum 10 perms.
 - 8. Volatile Organic Compounds (VOC), ASTM D2369: Maximum 50 g/l.

2.03 ACCESSORIES

- A. Sealants:
 - 1. Comply with Section 07 92 00.
 - 2. General: Provide sealants that comply with ASTM C920, AAMA 714, and as recommended by manufacturer for project conditions to maintain watertight assemblies.
 - 3. Sealant Products: Equal to Master Builders "MaxFlash", "MasterSeal AWB 900", Sonneborn "Sonolastic", Tremco "830" and "Butyl".
- B. Reinforcing Fabric: Non-woven polyester reinforcing fabric as recommend by manufacturer for project conditions.
- C. Flashing: (As recommended by manufacturer for project conditions).

1. Primer: Water-based primer compatible with substrate and flashing materials.
2. Transition Membranes: Polyester-faced 30 mil. thick self-sealing, self-healing rubberized asphalt coating or 20 mil. thick self-sealing rubberized asphalt coating laminated to polyethylene film.

PART 3 - EXECUTION

3.01 EXAMINATION / SITE CONDITIONS

- A. Verify substrate and surface conditions are in accordance with weather barrier manufacturer recommended tolerances prior to installation of weather barrier and accessories. Provide notice of unacceptable conditions and corrections required. Commencement of work means acceptance of conditions.
- B. Do not apply materials in ambient temperatures below 4 deg. C (40 deg. F). Provide properly vented, supplementary heat during installation and drying period when temperatures less than 4 deg. C (40 deg. F) prevail. Do not apply materials to frozen surfaces. Maintain ambient temperature at or above 4 deg. C (40 deg. F) during and at least 24 hours after application of all materials and until dry.
- C. Examine surfaces to receive air/water-resistive barrier and verify that substrate and adjacent materials are dry, clean, and free of releasing agents, paint, or other residue or coatings. Verify substrate is flat, free of fins or planar irregularities greater than ¼" in 10'. Verify that no excess mortar exists on masonry ties, shelf angles and other obstructions. Verify concrete is visibly dry and free of moisture. Verify masonry joints are struck flush and completely filled with mortar.
- D. Flashings: Verify primary flashings installed in accordance with specified design standards at wall bottoms, openings, and vertical to horizontal conditions.

3.02 INSTALLATION

- A. General: Install weather barrier over substrate conditions in accordance with manufacturer recommendations and written instructions. Install weather barrier prior to installation of windows and doors.
- B. Mixing: No additives are permitted unless specified in product mixing instructions. Close containers when not in use. Prepare in container that is clean and free of foreign substances. Do not use a container which has contained or been cleaned with a petroleum-based product. Mix with a clean, rust-free paddle and drill until thoroughly blended. Do not add water to mix.
- C. Application: Apply products in accordance with manufacturer's application procedures for project conditions. Prime substrates and wrap openings and joints with reinforcing fabric as necessary for continuous, void and wrinkle free membrane application. Spot prime fasteners. Install reinforcing fabric over sheathing substrates and lap 2 ½" minimum at intersections.
- D. Coverage Rate: Rate and thickness of material shall not be less than manufacturer's recommendations for substrate conditions. Apply fluid vapor membrane by means of roller, brush, trowel, or spray gun to a consistent, minimum 10 wet mil. thickness that is free of voids and pin holes. Allow product time to properly cure. Provide second coat to a consistent, minimum 10 wet mil. thickness free of defects. Two coats minimum required over OSB, plywood, and CMU.

- E. Limit weather exposure for installed weather barrier membrane to a maximum of 180 days.
- F. Install transition materials and flashings per manufacturer's recommendations.

3.03 PROTECTION

- A. Protect installed weather barrier assemblies from damage. Clean and repair per manufacturer's recommendations.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide joint sealers at exterior vertical and horizontal joints. Work includes joints around openings in exterior walls, joints at penetrations of walls, decks, roofs, and floors by piping and other services and equipment, joints between items of equipment and other construction, joints at plumbing fixtures, joints at dissimilar material transitions, expansion and contraction joints, and other joints indicated to be sealed.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Product Data: Submit manufacturer's specifications, recommendations and installation instructions for each type of sealant and miscellaneous materials. Include certifications or test laboratory reports indicating that each material complies with the requirements and is intended for the application indicated.
- C. Samples: Submit minimum 2" long sample of each color required for each type of sealant exposed to view. Samples will be viewed for color only.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.
- B. Colors: As selected by Architect from Manufacturer's standard colors or match color of material applied, unless otherwise indicated.

2.02 ELASTOMERIC JOINT SEALANTS

- A. Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements, including those for type, grade class, and uses.
- B. One-Component Nonsag Urethane Sealant: Type M, Grade NS, Class 25, Sonneborn

“Sonolastic NP 1”, Tremco “Dymonic”, Bostik “Chem-Calk 900”, Pecora “Dynatrol 1”, Mameco “Vulkem 116”, or approved equal.

- C. Two-or-More Component Nonsag Urethane Sealant: Type M, Grade NS, Class 25. Tremco “Dymonic”, Sonneborn “Sonolastic NP 2”, Bostik “Chem-Calk 500”, Pecora “Dynatrol II”, or approved equal.
- D. Two-Component Pourable Urethane Sealant: Type M, Grade P, Class 25. Tremco “THC 900”, Sonneborn “Sonolastic SL-2”, Bostik “Chem-Calk 550”, Pecora “NR-200 Urexpan”, or approved equal.
- E. One-Component Pourable Urethane Sealant: Type S, Grade P, Class 25. Sonneborn “SL-1”, Bostik “Chem-Calk 550”, Pecora “NR-201 Urexpan”, Maneco “Vulken 45”, or approved equal.
- F. One-Component Mildew-Resistant Silicone Sealant: Type S, Grade NS, Class 25. GE “SCS 1702”, Dow Corning “786”, Tremco “Proglaze White”, Pecora “863 #345”, or approved equal.

2.03 MISCELLANEOUS MATERIALS

- A. Joint Cleaner: Type of joint cleaning compound recommended by sealant manufacturer for the joint surfaces to be cleaned.
- B. Joint Primer/Sealer: Type recommended by the sealant manufacturer for the joint surfaces to be primed or sealed.
- C. Bond Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to the substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape wherever applicable.
- D. Sealant Backer Rod: Compressible rod stock polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant by the sealant manufacturer. Provide size and shape of rod which will control the joint depth for sealant placement, break bond of sealant at bottom of joint, form optimum shape of sealant bead on back side, and provide a highly compressible backer to minimize the possibility of sealant extrusion when joint is compressed.

PART 3 - EXECUTION

3.01 JOINT TYPES AND USAGE

- A. Elastomeric Sealants: Use single or multi-component urethane at all exterior joints and all interior joints with aluminum or metal. Use minimum 35 Shore A hardness single or multi-component pourable polyurethane sealant for horizontal joints subject to pedestrian and vehicular traffic.

3.02 JOINT SURFACE PREPARATION

- A. Clean joint surfaces immediately before installation of sealant. Remove dirt, insecure coatings, moisture, and other substances which would interfere with bond of sealant.

- B. Preform preparation in accordance with ASTM C804 for solvent release or ASTM C790 for latex base sealants.
- C. For elastomeric sealants, do not proceed with installation of sealant over joint surface which have been painted, lacquered, waterproofed or treated with water repellent or other treatment or coating. Remove coating or treatment from joint surfaces before installing sealant.
- D. Etch cementitious joint surfaces to remove excess alkalinity. Etch with 5% solution of muriatic acid; neutralize with dilute ammonia solution, rinse thoroughly with water and allow to dry before sealant installation.
- E. Rough joint surfaces on vitreous coated and similar non-porous materials, wherever sealant manufacturer's data indicates lower bond strength than for porous surfaces. Rub with fine abrasive cloth or wool to produce a dull sheen.

3.03 INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- B. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.
- C. Clean and prime joints, and install bond breakers, backer rods and sealant as recommended by manufacturers.
- D. Do not apply sealant at temperatures below 40 deg F.
- E. Apply sealant with hand-caulking gun with nozzle of proper size to fit joints. Use sufficient pressure to insure full contact to both sides of joint to full depth of joint. Employ only proven installation techniques, which will ensure that sealants will be deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of the joint bond surfaces equally on opposite sides. Except as otherwise indicated, fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt.
- F. Install sealants to depths as shown or, if not shown, as recommended by the sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead.
 - 1. For normal moving joints sealed with elastomeric sealants, but not subject to traffic, fill joints to a depth equal to 50% of joint width, but neither more than ½ inch deep nor less than 1/4 inch deep.
 - 2. For joints sealed with non-elastomeric sealants, fill joints to a depth in the range of 75% to 125% of joint width.
- G. Do not allow sealants or compounds to overflow or spill onto adjoining surfaces. Use masking

tape or other precautionary devices to prevent staining of adjoining surfaces, by either primer/sealer or the sealant.

- H. Tool joints immediately after application of sealant if required to achieve full bedding to substrate or to achieve smooth sealant surface.
- I. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

END OF SECTION

SECTION 09 30 00

TILE

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide Exterior Tile complete.

1.02 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Submit for approval samples, product data.
- C. Deliver 5% of each type and color of extra materials to Owner. Furnish extra material that match products installed, packaged with protective covering for storage and identification with labels clearly describing contents. Provide manufacturer's literature for cleaning and maintenance.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Tile: ANSI A 137.1.
- C. Tile Setting Materials: ANSI 118 series standard specifications.
- D. Tile Installation: ANSI 108 series standard specifications and Tile Council of America, Handbook for Ceramic Tile Installation.

PART 2 - PRODUCTS

2.01 MORTAR AND GROUT

- A. Manufacturers: Laticrete products specified (Basis of design); equivalent materials by Bonsal, C Cure, Mapei Corp., L & M, and PCI are acceptable.
- B. Mortar: (As recommended by manufacturer for specific project conditions). Laticrete #272 "Premium Latex Adhesive Floor N' Wall" factory prepared thin-set cement mortar mix with Laticrete #333 "Super Flexible Additive" tile setting liquid in proportions as recommended by manufacturer.
- C. Grout – Exterior Wet Locations: (As recommended by manufacturer for specific project conditions). Laticrete "Latapoxy SP-100 Stainless Epoxy" grout with Laticrete admix in proportions as recommended by manufacturer.

- D. Grout – Exterior Wet Locations: (As recommended by manufacturer for specific project conditions): Laticrete “Tri-Poly Fortified Unsanded Grout (1600 Series)” with Laticrete admix in proportions as recommended by manufacturer, in standard custom color as selected by Architect.
- E. Colors: Standard or custom colors to be selected by Architect from manufacturer’s standard samples.

2.02 TILE

- A. Manufacturers: American Olean, Dal-Tile, Summitville Tiles, United States Ceramic Tile Co, or approved equal.
- B. Tile Materials:
 - 1. Glazed Exterior Mosaic Wall Tile:
 - a. Type: Exterior, mosaic tile (match existing).
 - b. Size: (Match existing)
 - c. Color: Mosaic (match existing)

2.03 MISCELLANEOUS MATERIALS

- A. Setting Accessories (Per manufacturer’s recommendations for project conditions):
 - 1. Cementitious backer board: ½" minimum thickness complying with ANSI A118.9. Provide non-corrosive self-chamfering screws in size and locations per board manufacturer’s recommendations.
 - 2. Membrane waterproofing: Laticrete #9235 complying with ANSI A118.10. Provide reinforcing fabric as recommended by manufacturer for specific project conditions.
 - 3. Joint Spacers: Pre-manufactured with tolerances per grout manufacturer’s recommendations. Remove prior to grouting.
- B. Sealants: Conform to material and installation requirements of Section 07 92 00. Color to match grout.
- C. Grout Sealer: Per grout manufacturer’s recommendations, minimum two coats of sealer in joints

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which tile work is to be installed. Notify Architect in writing of defects or conditions that will prevent satisfactory tile installation. Do not proceed with the work until unsatisfactory conditions have been corrected. Beginning of tile work shall imply acceptance of substrate conditions.
- B. Neutralize and seal substrates in accordance with mortar manufacturer’s instructions.

3.02 INSTALLATION

- A. Comply with Tile Council of America and ANSI Standard Specifications for Installation for

substrate and installation required. Maintain minimum temperature limits, moisture conditions, and installation practices as recommended by mortar and grout materials manufacturer.

- B. Waterproofing: At all locations subject to periodic exposure to water apply two coats of waterproofing membrane with one layer reinforcing fabric over substrate per manufacturer's recommendations.
- C. Mortaring: Comply with the manufacturer's instructions for mixing and installation of materials. Set tile by thin-set method using specified mortar. Fill out mortar bed to thickness as required. Provide leveling coat at floors where variation exceeds 1/8" in 10 feet.
- D. Joint Pattern: Extend tile work to form a complete covering without interruptions. Terminate work neatly at obstructions, edges, and corners without disruption of pattern or joint alignment. Lay tile in straight grid pattern with alignment perpendicular and parallel with wall construction or in pattern indicated on drawings. Provide joint widths indicated. Center and balance areas of tile if possible. Layout to provide uniform joint widths and to minimize cutting. Hold cuts to a minimum with no cut pieces smaller than ½ tile size unless otherwise absolutely necessary.
- E. Cutting: Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight, aligned joints. Make cuts on outer edges of field. Smooth cut edges. Install tile without jagged or flaked edges. Fit tile closely where edges will be covered by trim, escutcheons, or similar devices. Splitting of tile is expressly prohibited except where no alternative is possible. Make corners of tile flush and level with corners of adjacent tile, with due allowance to tolerance for tile as specified in ANSI A137.1.
- F. Tile Placement: Comply with applicable requirements of ANSI A108.5 standards for installation, and manufacturer's instructions for materials.
- G. Grouting: Apply specified grout per manufacturer's recommendations. Clean tile surfaces free of excess grout and haze. Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective tile work.
- H. Expansion joint: Provide expansion joint widths to match grout widths using specified sealant. Use polyethylene foam rod filler or other bond breaker as required to provide sealant joint approximately 1/4" deep and width of grout joint. Tool sealant slightly concave. Extend joint through the mortar bed. Locate expansion joints as indicated and required for project conditions.
- I. Grout Sealer: Provide two coats of specified sealer in joints per manufacturer's instructions.
- J. Protections: Protect installed work with kraft paper or other heavy covering during the construction period to prevent damage and wear. Before final inspection, remove protective covering.

END OF SECTION 09 30 00

APPENDIX “A”

INFORMATION AVAILABLE TO BIDDERS

1. The following items are included herein for Bidder information.
 - a. Hazardous Materials Testing Report (Dated July 10, 2019), Project No. B5197023.
 - b. Drone Survey photos of building exterior façade existing conditions are available for Contractor review and may be obtained as indicated in Section 00 11 16 (Reference of Availability Only – Not Included Herein).

END OF DOCUMENT

Hazardous Materials Testing Report

Landers State Office Building
149 Park Central Square
Springfield, Missouri

July 10, 2019

Terracon Project No. B5197023

Prepared for:

Buddy Webb & Company
Springfield, Missouri

Prepared by:

Terracon Consultants, Inc.
Springfield, MO

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

July 10, 2019

Buddy Webb & Company
3057 E. Cairo St.
Springfield, Missouri 65802-6204



Attn: Lesley Guillot
P: (417) 877-1385
E: lesley@webbarch.com

Re: Hazardous Materials Testing Report
Landers State Office Building
149 Park Central Square
Springfield, Missouri 65806
Terracon Project No. B5197023

Dear Ms. Guillot:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the above referenced site to Buddy Webb & Company. The purpose of this report is to present the results of an hazardous materials survey performed on June 17, 2019. This survey was conducted in accordance with our proposal dated May 9, 2019. We understand that this survey was requested due to planned renovation of the above referenced building.

Terracon appreciates the opportunity to provide this service to Buddy Webb & Company. If you have any questions regarding this report please contact the undersigned at 417-864-5100.

Sincerely,
Terracon Consultants, Inc.


Kameron L Long
Field Scientist


FOR Cindy A. Baldwin, CIH, FAIHA
Senior Industrial Hygienist



TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Project Objective	1
1.2	Reliance	1
2.0	BUILDING DESCRIPTION.....	1
3.0	FIELD ACTIVITIES.....	2
3.1	Visual Assessment	2
3.1.1	Asbestos	2
3.1.2	Lead Paint	2
3.2	Physical Assessment.....	3
3.2.1	Asbestos.....	3
3.2.2	Lead Paint	3
3.3	Sample Collection.....	3
3.3.1	Asbestos.....	3
3.3.2	Lead Paint	3
3.4	Sample Analysis.....	3
3.4.1	Asbestos.....	3
3.4.2	Lead Paint	4
4.0	REGULATORY OVERVIEW	4
5.1	Asbestos	4
4.2	Lead Paint.....	5
5.0	FINDINGS AND RECOMMENDATIONS.....	6
5.1	Asbestos	6
5.2	Lead-Based Paint.....	6
6.0	LIMITATIONS/GENERAL COMMENTS.....	7

APPENDIX A	IDENTIFIED ASBESTOS CONTAINING MATERIAL SUMMARY
APPENDIX B	ASBESTOS SURVEY SAMPLE SUMMARY
APPENDIX C	LEAD-BASED PAINT SURVEY SAMPLE SUMMARY
APPENDIX D	ASBESTOS AND LEAD PAINT ANALYTICAL LAB DATA
APPENDIX E	LICENSES AND CERTIFICATIONS

HAZARDOUS MATERIALS TESTING
Landers State Office Building
149 Park Central Square, Springfield, Missouri
Terracon Project No. B5197023
July 10, 2019

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos survey and limited lead-based paint survey of the building located at 149 Park Central Square, Springfield, Missouri. The survey was conducted on June 14 and 17, 2019, by a State of Missouri certified asbestos building inspector and State of Missouri licensed lead risk assessor in accordance with Terracon Proposal No. Proposal Number PB5197023 dated May 9, 2019.

1.1 Project Objective

We understand this hazardous materials survey was requested due to the planned renovation of the on-site building.

1.2 Reliance

This report is for the exclusive use of Buddy Webb & Company for the project being discussed. Reliance by any other party on this report is prohibited without written authorization of Terracon and Buddy Webb & Company. Reliance on this report by Buddy Webb & Company and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, this report, and Terracon's Agreement for Services. The limitations of liability defined in Terracon's Agreement for Services is the aggregate limit of Terracon's liability to Buddy Webb & Company.

2.0 BUILDING DESCRIPTION

The building consists of a 10-story structure constructed in 1914 and a 2-story addition constructed in 1955. The building, with addition, encompasses 96,251 square feet in total area. The exterior construction of the building is a mix of terra cotta, brick, and stucco/exterior insulation and finish system (EIFS).

3.0 FIELD ACTIVITIES

The assessment was limited to visually accessible exterior areas of the proposed renovation. The survey was conducted by Kameron Long, an AHERA¹ accredited and State of Missouri certified asbestos inspector and a State of Missouri accredited lead risk assessor. Copies of Mr. Long's asbestos inspector certificate and lead inspector certificate are attached in Appendix E. A summary of survey activities is provided below.

3.1 Visual Assessment

3.1.1 Asbestos

The survey was conducted in accordance with the sample collection protocols established in United States Environmental Protection Agency (USEPA) regulation 40 Code of Federal Regulations Part 763-Asbestos, Subpart E-Asbestos-Containing Materials in Schools (40 CFR 763; known as AHERA).

Terracon began the asbestos sampling activities with a visual assessment, identification, and inventory of readily visible and accessible exterior homogeneous areas (HA) of suspect asbestos-containing materials (ACM). A homogeneous area consists of building materials that appear similar throughout in terms of color and texture. Building materials identified as concrete (not including cement panels or pipe), glass (includes fiberglass), wood, masonry, metal, and plastic were not considered suspect ACM.

3.1.2 Lead Paint

Terracon conducted a visual survey and collected paint chip samples of exterior suspect LBP on the painted north side of the larger subject structure scheduled for renovation. The visual survey of the painted surface was conducted to assess if the paint was intact or damaged. Damaged paint appears as cracked, chipped, and/or peeling away from the substrate as a result of moisture, wear, heat, and/or age. Paint that did not exhibit these conditions was identified as intact.

¹ AHERA = Asbestos Hazard Emergency Response Act

3.2 Physical Assessment

3.2.1 Asbestos

A physical assessment of each HA of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the USEPA as a material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.2.2 Lead Paint

A physical assessment of the suspect painted component and/or surface coating was conducted to assess its condition. The painted surface was assessed as intact, fair, or damaged depending on degree of damage.

3.3 Sample Collection

3.3.1 Asbestos

Based on results of the visual observation bulk samples of suspect ACM were collected in accordance with USEPA sampling protocols. Random samples of suspect materials were collected in each HA. Bulk samples of suspect ACMs were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Terracon collected 15 samples from 5 homogeneous areas. A summary of the samples collected is provided in Appendix B.

3.3.2 Lead Paint

One paint chip sample was collected from the north side painted surface of the taller subject building.

A summary of the samples collected is provided in Appendix C.

3.4 Sample Analysis

3.4.1 Asbestos

Samples of suspect ACM were delivered under proper chain-of-custody protocol to International Asbestos Testing Laboratories (IATL) of Mt. Laurel, New Jersey for analysis by polarized light

microscopy (PLM) with dispersion staining techniques per USEPA's *Method for the Determination of Asbestos in Bulk Building Materials* (600/R-93/116)). IATL is accredited by the National Voluntary Laboratory accreditation Program (NVLAP; Lab Code: 101165-0) under the National Institute of Standards and Technology (NIST) for analysis by PLM. The percentage of asbestos, if present, was determined by microscopical visual estimation.

3.4.2 Lead Paint

The sample of suspect lead paint was delivered under proper chain-of-custody to EMSL Analytical, Inc. of St. Louis, Missouri. The sample was analyzed by USEPA SW-846 Methods 3050B *Acid Digestion of Sediments, Sludges, and Soils* and 7000B *Flame Atomic Absorption Spectrophotometry*. EMSL is accredited by the AIHA® Laboratory Accreditation Programs, LLC under the Environmental Lead Laboratory Accreditation Program (ELLAP, Lab Code 102636).

4.0 REGULATORY OVERVIEW

5.1 Asbestos

The Missouri Department of Natural Resources (MDNR) Air Pollution Control Program, enforces the asbestos NESHAP as adopted by reference at 10 Code of State Regulations (CSR) 10-6.080. The owner or operator must provide MDNR with written notification at least 10 working days prior to the commencement of asbestos abatement activities that will disturb regulated ACM (RACM) in amounts greater than or equal to 160 square feet, 260 linear feet, or 35 cubic feet.

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. The asbestos NESHAP regulation also requires the identification and classification of existing ACM according to friability prior to demolition or renovation activity. Friable ACM is a material containing more than 1% asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. All friable ACM is considered RACM.

The asbestos NESHAP regulation classifies material subject to demolition or renovation as RACM, Category I nonfriable ACM, or Category II nonfriable ACM. RACM includes all friable ACMs (pre-disturbance); Category I nonfriable ACMs that become friable (during disturbance); Category I nonfriable ACMs subject to sanding, grinding, cutting, or abrading; or Category II nonfriable ACMs with a high probability of becoming crumbled, pulverized, or reduced to powder by forces expected to act on the material during disturbance. Category I nonfriable ACMs are exclusively asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products that contain more than 1% asbestos. Category II nonfriable ACMs are all other nonfriable materials (other than Category I nonfriable ACM) that contain more than 1% asbestos. Category

II nonfriable ACM generally includes (but is not limited to) cementitious material such as cement pipes, cement siding, cement panels, glazing, mortar, and grouts.

The United States Occupational Safety and Health Administration (OSHA) asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the permissible exposure limits (PELs) of 0.1 asbestos fiber per cubic centimeter of air (0.1 f/cc) as an 8-hour time-weighted average (TWA) or 1.0 f/cc as a 30-minute excursion limit. The OSHA standard classifies construction and maintenance activities that could disturb ACM and specifies work practices and precautions that employers must follow when engaging in each class of regulated work.

4.2 Lead Paint

Lead is regulated by USEPA and OSHA. USEPA regulates lead use, removal, and disposal and OSHA regulates worker exposure to lead. USEPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 milligram per square centimeter (mg/cm^2), 5,000 milligrams per kilogram (mg/kg), or 0.5% by dry weight as determined by laboratory analysis. For the purpose of the OSHA lead standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The OSHA standard does not define the amount of lead in paint that constitutes lead-based paint.

USEPA regulates disposal of hazardous materials. The USEPA has stated that components removed with intact LBP that is not delaminating from the substrate may be disposed as general demolition debris. If the LBP is stripped from components, or if it is delaminating from the substrate, the waste may be subject to hazardous waste rules [i.e., Toxicity Characteristics Leaching Procedure (TCLP)].

The OSHA lead standard for construction (29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The lead standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead;
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead;

Hazardous Materials Survey

Landers State Office Building ■ Springfield, Missouri

July 8, 2019 ■ Terracon Project No. B5197023



- Installation of products containing lead;
- Lead contamination/emergency clean-up;
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and
- Maintenance operations associated with construction activities described above.

Employers must assure that no employee will be exposed to lead at concentrations greater than the PEL of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as an 8-hr TWA without adequate protection. The OSHA standard also establishes an action level of $30 \mu\text{g}/\text{m}^3$, which if exceeded, triggers certain requirements, including periodic exposure monitoring and medical monitoring.

5.0 FINDINGS AND RECOMMENDATIONS

5.1 Asbestos

The following ACMs were identified as a result of laboratory analysis:

Material Description	Material Location	Estimated Quantity ²
Grey/white cement fiber board cement siding	Around exterior windows	3,500 Sq. Ft.

A summary of the classification, condition and approximate quantity of identified ACM is presented in Appendix A. The summary of sample locations is presented in Appendix B. Laboratory analytical reports are included in Appendix D.

Materials containing less than 1% asbestos are not regulated by NESHAP; however the OSHA regulations for asbestos apply when materials containing 1% asbestos or less are disturbed during renovations or demolitions. A listing of materials that contain 1% asbestos or less is provided in Appendix A to enable the renovation contractor to make appropriate decisions concerning compliance issues with applicable OSHA regulations.

5.2 Lead-Based Paint

The paint chip sample collected did not contain lead in concentrations greater than the laboratory reporting limit. The results of the limited lead-based paint inspection is outlined in Appendix C. Laboratory analytical results are included in Appendix D.

² Estimated quantities are based on a cursory field evaluation, and actual quantities may vary significantly, especially if ACMs are present in hidden and/or inaccessible areas not evaluated as part of this survey.

6.0 LIMITATIONS/GENERAL COMMENTS

This asbestos and limited lead-based paint survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by Buddy Webb & Company for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories, or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.



APPENDIX A

Landers State Office Building 149 Park Central Square, Springfield Missouri

Identified Asbestos Containing Materials by Homogeneous Area (HA)

The materials listed in this table have been sampled and determined to contain asbestos in concentrations greater than 1%. When disturbed, various federal, state and local regulations may apply. These materials should be monitored for damage over time and repaired as necessary by appropriately trained personnel. Removal may be necessary before renovations and in most cases before a demolition. See Appendix B for a summary of samples collected. See Appendix C for detailed analytical results.

HA No.	Material Description	Material Location	% and Type Asbestos ³	NESHAP Classification	Condition	Estimated Quantity ⁴
05	Grey/white cement fiber board cement siding	Around exterior windows	20-25% Chrysotile	Cat. II Nonfriable	Good (no damage)	3,500 Sq. Ft.

³ % & Type Asbestos = this column contains both the analytical result of the sample with the highest concentration of asbestos detected in the samples that make up the HA and the types of asbestos identified.

⁴ Estimated quantities are based on a cursory field evaluation, and actual quantities may vary significantly, especially if asbestos containing materials are present in hidden and/or inaccessible areas not evaluated as part of this survey.

Hazardous Materials Survey

Landers State Office Building ■ Springfield, Missouri

July 8, 2019 ■ Terracon Project No. B5197023



Materials Containing 1% or Less Asbestos by HA

Materials containing less than 1% asbestos are not regulated by NESHAP; however the OSHA regulations for asbestos apply when materials containing 1% asbestos or less are disturbed during renovations or demolitions. A listing of materials that contain 1% asbestos or less is provided above to enable the renovation/demolition contractor to make appropriate decisions concerning compliance issues with applicable OSHA regulations.

HA No.	Material Description	Material Location	% and Type Asbestos	Condition	Estimated Quantity
01	White/tan wall caulk wall caulk	Southwest exterior corner of building near windows	PC ⁵ 0.25% Chrysotile	Good (no damage)	20 Linear Ft.
04	White wall caulk wall caulk	Between cement board siding around exterior walls of building	PC <1% Chrysotile	Good (no damage)	100 Linear Ft.

⁵ PC = point count

APPENDIX B

Landers State Office Building 149 Park Central Square, Springfield Missouri

ASBESTOS SURVEY SAMPLE LOCATION SUMMARY

HA No.	Material Description	Sample Number	Sample Location	Lab Results	Material Location	Estimated Quantity
01	White/tan wall caulk	01-CA3-01	SW corner of building near windows	PC ¹ <1 Chrysotile - white caulk	01	20 Ln. Ft.
01	White/tan wall caulk	01-CA3-02	SW corner of building near windows	PC <1 Chrysotile - white caulk	01	20 Ln. Ft.
01	White/tan wall caulk	01-CA3-03	SW corner of building near windows	PC 0.25% Chrysotile - white caulk	01	20 Ln. Ft.
02	Dark brown wall caulk	02-CA3-04	NW corner near windows	None detected - brown caulk	02	20 Ln. Ft.
02	Dark brown wall caulk	02-CA3-05	NW corner near windows	None detected - brown caulk	02	20 Ln. Ft.
02	Dark brown wall caulk	02-CA3-06	NW corner near windows	None detected - brown caulk	02	20 Ln. Ft.
03	Clear wall caulk	03-CA3-07	N side of building around metal vents	None detected - clear caulk	03	20 Ln. Ft.
03	Clear wall caulk	03-CA3-08	N side of building around metal vents	None detected - clear caulk	03	20 Ln. Ft.
03	Clear wall caulk	03-CA3-09	N side of building around metal vents	None detected - clear caulk	03	20 Ln. Ft.
04	White wall caulk	04-CA3-10	NE corner of exterior wall	PC <1 Chrysotile - white caulk	04	100 Ln. Ft.
04	White wall caulk	04-CA3-11	E central exterior wall	PC <1 Chrysotile - white caulk	04	100 Ln. Ft.
04	White wall caulk	04-CA3-12	SE exterior wall	PC <1 Chrysotile - white caulk	04	100 Ln. Ft.
05	Grey/white cement fiber board siding	05-CP4-13	NW corner siding under windows	25% Chrysotile - white cement product None detected - grey/white fiberboard	05	3,500 ft ²
05	Grey/white cement fiber board siding	05-CP4-14	NW corner siding under windows	20% Chrysotile - white cement product	05	3,500 ft ²
05	Grey/white cement fiber board siding	05-CP4-15	NW corner siding under windows	None detected - white/grey cement product	05	3,500 ft ²

¹ PC = point count

APPENDIX C

Landers State Office Building 149 Park Central Square, Springfield Missouri

Paint Chip Sample Summary

Sample No.	Description	Sample Location	Result (% by wt.)
PC-1	White	North exterior side of taller building structure	<0.0080% ¹

¹ < means below laboratory reporting limit

APPENDIX D

ASBESTOS AND LEAD PAINT ANALYTICAL LAB DATA

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802

Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

Client: TER570

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6815893
Client No.: 01-CA3-01

Analyst Observation: White Caulk
Client Description:

Location: SW Corner Of Building Near Windows

Percent Asbestos:
PC Trace Chrysotile

Percent Non-Asbestos Fibrous Material:
1 Other

Facility:
Percent Non-Fibrous Material:
99

Lab No.: 6815894
Client No.: 01-CA3-02

Analyst Observation: White Caulk
Client Description:

Location: SW Corner Of Building Near Windows

Percent Asbestos:
PC Trace Chrysotile

Percent Non-Asbestos Fibrous Material:
1 Other

Facility:
Percent Non-Fibrous Material:
99

Lab No.: 6815895
Client No.: 01-CA3-03

Analyst Observation: White Caulk
Client Description:

Location: SW Corner Of Building Near Windows

Percent Asbestos:
PC 0.25 Chrysotile

Percent Non-Asbestos Fibrous Material:
1 Other

Facility:
Percent Non-Fibrous Material:
98.75

Lab No.: 6815896
Client No.: 02-CA3-04

Analyst Observation: Brown Caulk
Client Description:

Location: NW Corner Near Windows
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6815897
Client No.: 02-CA3-05

Analyst Observation: Brown Caulk
Client Description:

Location: NW Corner Near Windows
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6815898
Client No.: 02-CA3-06

Analyst Observation: Brown Caulk
Client Description:

Location: NW Corner Near Windows
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Please refer to the Appendix of this report for further information regarding your analysis.

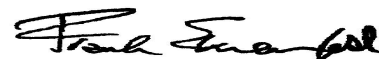
Date Received: 6/19/2019

Date Analyzed: 06/19/2019

Signature:

Analyst: Linda Price

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802


Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

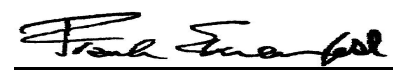
Client: TER570

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6815899 Client No.: 03-CA3-07	Analyst Observation: Clear Caulk Client Description:	Location: N Side Of Building Around Metal Vents Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6815900 Client No.: 03-CA3-08	Analyst Observation: Clear Caulk Client Description:	Location: N Side Of Building Around Metal Vents Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6815901 Client No.: 03-CA3-09	Analyst Observation: Clear Caulk Client Description:	Location: N Side Of Building Around Metal Vents Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6815902 Client No.: 04-CA3-10	Analyst Observation: White Caulk Client Description:	Location: NE Corner Of Exterior Wall Facility:
<u>Percent Asbestos:</u> <i>PC Trace Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> Trace Other	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6815903 Client No.: 04-CA3-11	Analyst Observation: White Caulk Client Description:	Location: E Central Exterior Wall Facility:
<u>Percent Asbestos:</u> <i>PC Trace Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> Trace Other	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6815904 Client No.: 04-CA3-12	Analyst Observation: White Caulk Client Description:	Location: SE Exterior Wall Facility:
<u>Percent Asbestos:</u> <i>PC Trace Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> Trace Other	<u>Percent Non-Fibrous Material:</u> 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/19/2019
Date Analyzed: 06/19/2019
Signature: 
Analyst: Linda Price

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802

Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

Client: TER570

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6815905
Client No.: 05-CP4-13

Analyst Observation: White Cement Product
Client Description:

Location: NW Corner Siding Under Windows

Percent Asbestos:
25 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Facility:
Percent Non-Fibrous Material:
75

Lab No.: 6815905(L2)
Client No.: 05-CP4-13

Analyst Observation: Grey/White Fiberboard
Client Description:

Location: NW Corner Siding Under Windows

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
40 Cellulose

Facility:
Percent Non-Fibrous Material:
60

Lab No.: 6815906
Client No.: 05-CP4-14

Analyst Observation: White Cement Product
Client Description:

Location: NW Corner Siding Under Windows

Percent Asbestos:
20 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Facility:
Percent Non-Fibrous Material:
80

Lab No.: 6815907
Client No.: 05-CP4-15

Analyst Observation: White/Grey Cement Product
Client Description:

Location: NW Corner Siding Under Windows

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
8 Cellulose

Facility:
Percent Non-Fibrous Material:
92

Please refer to the Appendix of this report for further information regarding your analysis.

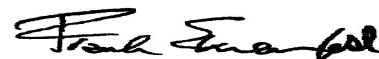
Date Received: 6/19/2019

Date Analyzed: 06/19/2019

Signature:

Analyst: Linda Price

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802

Client: TER570

Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

Appendix to Analytical Report

Customer Contact:

Method: 40 CFR Appendix E to Subpart E of Part 763, interim method for the Determination of Asbestos in Bulk Insulation Samples, and USEPA 600, R93-116 as needed.

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: wchampion@iatl.com

iATL Account Representative: Cassie Doherty

Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Bulk Building Materials

Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NYSDOH-ELAP No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. PC Trace represents a <0.25% amount. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802

Client: TER570

Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.
- 16) Note: This sample contains >10% vermiculite mineral. See Appendix for Recommendations for Vermiculite Analysis.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gänge, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

For New York State customers, NYSDOH requires disclaimers and qualifiers for various vermiculite containing samples that direct analysis via ELAP198.6 and ELAP198.8 for samples that contain >10% vermiculite mineral where ELAP198.6 may be used to evaluate the asbestos content of the material. However, any test result using ELAP198.6 will be reported with the following disclaimer: "ELAP198.6 method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing >10% vermiculite."

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116
Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.

2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

CERTIFICATE OF ANALYSIS

Client: Terracon
4765 W Junction Street
Springfield MO 65802

Client: TER570

Report Date: 6/19/2019
Report No.: 592860 - PLM
Project: Landers State Office Building
Project No.: B5197023

3)**Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.

4)**Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

5)**Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

Chain of Custody

–Bulk Asbestos –

Contact Information

Client Company: Terracon
Office Address: 4765 W. Junction St.
City, State, Zip: Springfield, MO 65802
Fax Number: _____
Email Address: kameron.l.long@terracon.com

Project Number: B5197023
Project Name: Landers State Office Building
Primary Contact: Kameron Long
Office Phone: 417-864-5100
Cell Phone: 417-818-3742

PLM Instructions:

- ☒ PLM: Bulk Asbestos Building Materials EPA 600 R-93/116, 1993
☐ PLM: Bulk Asbestos Building Materials EPA 600 M-4/82-020, 1982
☐ PLM: Bulk Asbestos Building Materials NIOSH 9002, 1985
☐ PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.1, 2002
☐ PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.6, 2010
☐ TEM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.4, 2009
- ☐ PLM: Point Counting
☐ PC: via ELAP 198.1
☐ PC: 400 Points
☐ PC: 800 Points *
☐ PC: 1600 Points *
- ☒ PLM: Instructions for Multi-Layered Samples
☒ Analyze and Report All Separable Layers per EPA 600
☐ Report Composite for Drywall Systems per NESHAP
☐ Report All Layers and Composite Where Applicable
☐ Only Analyze and Report Specifically Noted Layer
- ☐ PLM: Analyze Until Positive (Positive Stop)
☐ AUP: by Homogenous Area as Noted
☐ AUP: by Material Type as Noted
☐ PLM: NOB via 198.6
☐ PLM: Friable via EPA 600 2.3
☐ If <1% by PLM, to TEM via 198.4 *
☐ If <1% by PLM, Hold for Instructions
- ☐ PLM: Non-Building Material *** (Dust, Wipe, Tape)
☐ Soil or Vermiculite Analysis
☐ CARB 435

Special Instructions:

* Additional charge and turnaround may be required ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory

Turnaround Time

Preliminary Results Requested Date: _____
Specific date / time
☐ 10 Day ☒ 5 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***

Chain of Custody

Relinquished (Name/Organization): Kameron Long/Terracon Date: 6/17/19 Time: 11:00 A.M.
Received (Name / iATL): _____ Date: _____ Time: _____
Sample Login (Name / iATL): _____ Date: _____ Time: _____
Analysis(Name(s) / iATL): 6-19-19 Date: _____ Time: JUN 19 2019
QA/QC Review (Name / iATL): Kameron Long Date: 6/20/19 Time: _____
Archived / Released: _____ QA/QC InterLAB Use: _____ Date: _____ Time: _____

Sample Log

—Bulk Asbestos—

Client: Buddy Webb & Company Project: B5197023

Sampling Date/Time: 6-14 + 6-17, 2019

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
01- CA3 - 01	6815893	SW corner of building near windows	
01- CA3 - 02	6815894	I	
01- CA3 - 03	6815895		
02- CA3 - 04	6815896	NW corner windows	
02- CA3 - 05	6815897	I	
02- CA3 - 06	6815898		
03- CA3 - 07	6815899	N. side of building around metal vents	
03- CA3 - 08	6815900	I	
03- CA3 - 09	6815901		
04- CA3 - 10	6815902	NE corner exterior wall	
04- CA3 - 11	6815903	E central exterior wall	
04- CA3 - 12	6815904	SE exterior wall	
05- CP4 - 13	6815905	NW corner siding under windows	
05- CP4 - 14	6815906	I	
05- CP4 - 15	6815907		

**EMSL Analytical, Inc.**

3029 S. Jefferson, Saint Louis, MO 63118

Phone/Fax: (314) 577-0150 / (314) 776-3313

<http://www.EMSL.com>saintlouislaboratory@emsl.com

EMSL Order: 391906268

CustomerID: TCON34

CustomerPO: B5197023

ProjectID:

Attn: **Kameron Long**
Terracon
4765 W. Junction Street
Springfield, MO 65802

Phone: (417) 864-5100
Fax: (417) 864-0871
Received: 06/19/19 8:05 AM
Collected: 6/14/2019

Project: **B5197023****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client Sample Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
PC-1 391906268-0001	6/14/2019	6/21/2019	0.2598 g	0.0080 % wt	<0.0080 % wt

Jeff Siria, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Saint Louis, MO AIHA-LAP, LLC--ELLAP Accredited #102636

Initial report from 06/21/2019 17:08:20

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

PHONE: ()

FAX: ()

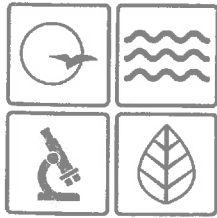
59906268

Company: Terracon Consultants, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 4765 W. Junction Street		Third Party Billing requires written authorization from third party	
City: Springfield	State/Province: MO	Zip/Postal Code: 65802	Country: USA
Report To (Name): Kameron Long		Telephone #: 417-864-5100	
Email Address: kameron.long@terracon.com		Fax #:	Purchase Order:
Project Name/Number: B5197023		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: MO		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour
<input type="checkbox"/> 72 Hour	<input checked="" type="checkbox"/> 96 Hour	<input type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide			
Matrix	Method	Instrument	Reporting Limit
Chips <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm (mg/kg)	SW846-7000B	Flame Atomic Absorption	0.01%
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter
	NIOSH 7300M/NIOSH 7303	ICP-OES	0.5 µg/filter
Wipe* <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM	SW846-7000B	Flame Atomic Absorption	10 µg/wipe
*If no box checked, non-ASTM Wipe assumed	SW846-6010B or C	ICP-OES	1.0 µg/wipe
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1311/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
SPLP	SW846-1312/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1312/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
TTLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)
	22 CCR App. II, SW846-6010B or C	ICP-OES	2 mg/kg (ppm)
STLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)
	22 CCR App. II, SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)
	SW846-6010B or C	ICP-OES	2 mg/kg (ppm)
Wastewater Unpreserved <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.7	ICP-OES	0.020 mg/L (ppm)
Drinking Water Unpreserved <input type="checkbox"/>	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter
Other:			
Name of Sampler:		Signature of Sampler:	
Sample #	Location	Volume/Area	Date/Time Sampled
PC-1	N. side of taller building		6/14/19 9:00 A. M.
Client Sample #s		Total # of Samples: 1	
Relinquished (Client):	Date: 6/17/19	Time: 11:00 A.M.	
Received (Lab):	Date: 6-19-19	Time: 8:05 F	
Comments:			

682238087096

APPENDIX E

LICENCES AND CERTIFICATIONS



Missouri Department of NATURAL RESOURCES

dnr.mo.gov

Michael L. Parson, Governor

Carol S. Comer, Director

November 27, 2018

Kameron L Long
4765 W Junction St
Springfield, MO 65802

RE: Missouri Asbestos Occupation Certification Card

Enclosed is your certification card for Asbestos Inspector, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7113110218MOIR18492

Course Training Date: November 02, 2018

Missouri Certification Approval Date: November 27, 2018

Missouri Certification Expiration Date: November 27, 2019

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
 - Sections 643.225 to 643.225, RSMo;
 - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements; and*
 - 10 CSR 10-6.250 *Asbestos Projects-Certification, Accreditation and Business Exemption Requirements.*
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at <http://dnr.mo.gov/env/apcp/asbestos/index.htm>.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program



Recycled paper

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Kameron L. Long

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Inspector
Category of License

Issuance Date: **9/29/2017**
Expiration Date: **9/29/2019**
License Number: **170929-300005405**



A handwritten signature in black ink, reading "Randall W. Williams, MD, FACOG".

Randall W. Williams, MD, FACOG
Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102