PROJECT MANUAL FOR: Clydesdale Hall – Roof Replacement

PROJECT NUMBER: CP260961

AT
UNIVERSITY OF MISSOURI–**Columbia**
Columbia, MISSOURI

FOR:

THE CURATORS OF THE UNIVERSITY OF MISSOURI

PREPARED BY:

RMT | Roofing & Waterproofing Consultants, Inc.

RMT Roofing and Waterproofing Consultants, Inc
410 Sovereign Ct, Ste 18
Manchester, MO 63011

DATE: **November 5, 2026**

I hereby certify that these Drawings and/or Specifications have been prepared by me, or under my supervision. I further certify that to the best of my knowledge these Drawings and/or Specifications are as required by and in compliance with Building Codes of the University of Missouri.

Signature: Michelle Wells



10/8/24

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END OF SECTION

PLANNING DESIGN & CONSTRUCTION

General Services Bldg.
Columbia, Missouri 65211
Telephone: (573) 882-6800

ADVERTISEMENT FOR BIDS

Sealed bids for:

CLYDESDALE HALL –
ROOF REPLACEMENT
UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
PROJECT NUMBER: CP260961 CONSTRUCTION ESTIMATE $2,079,900 - $2,311,000

will be received by the Curators of the University of Missouri, Owner, through the bidding module in the UM System Construction Management Software bid module, until 1:30 p.m., C.S.T., December 8, 2026 and then immediately opened through an online Zoom https://umsystem.zoom.us/j/92614777324?pwd=1qIlnjHlERkFAb1EwSd7vN4waxq6Jn.1&from=addon and publicly read aloud. Upon registration, each bidder will have their own secure key to fill out the bid form and upload the bid security and appropriate Participation Forms.

Drawings, specifications, and other related contract information may be obtained through the UM System Construction Management software at the following link; https://app.e-builder.net/public/publicLanding.aspx?QS=03f1137b6865429b95b123393c68a2cc. Electronic bid sets are available through UM System Construction Management software at no cost and may be printed as desired by the plan holders. No paper copies will be issued. If paper copies are desired, it is the responsibility of the user to print the files or have them printed.

Helpful bidders' UM System Construction Management software portal instructional training video: *https://videos.trimble.com/construction/watch/kCSanAGnXaJoHgeQNz5mGe*

Questions regarding the scope of work and commercial conditions should be directed to Design Services Project Manager Mark Hoerstkamp at (573) 882-2957 or hoerstkampm@missouri.edu.

A prebid meeting will be held at 9:30 a.m., C.S.T., November 17, 2026 in the General Services Bldg., Rm 194B, University of Missouri, Columbia, Missouri, followed by a site walk-through. All interested bidders are invited to attend this meeting.

This project has participations goals for Service-Disabled Veteran Business Enterprises (SDVE) of three percent (3%) and Honorably Discharged Veteran-Owned Enterprises (HDVE) of three percent (3%). Please see the Information for Bidders and General Conditions for additional information about the SDVE/HDVE Participation Goals.

The Owner reserves the right to waive informalities in bids and to reject any and all bids.

Individuals with special needs as addressed by the Americans with Disabilities Act may contact (573) 882-6800.

Advertisement Date: November 5, 2026

SECTION 1.A

BID FOR LUMP SUM CONTRACT

Date:_____

BID OF _____
(hereinafter called "Bidder") a corporation or limited liability company* organized and existing under laws of the State of _____,
OR a partnership* consisting of _____,
OR an individual* trading as _____,
_____
OR a joint venture* consisting of _____.
*Insert information for corporation, limited liability company, partnership, individual, or joint venture as applicable.

TO: The Curators of the University of Missouri
Planning, Design, and Construction
General Services Building Room L100
University of Missouri Columbia, MO 65211

1. Bidder, in compliance with invitation for bids for construction work in accordance with Drawings and Specifications prepared by RMT Roofing and Waterproofing Consultants, Inc., entitled "Clydesdale Hall - Roof Replacement", project number CP260961, dated November 5, 2026 having examined Contract Documents and site of proposed work, and being familiar with all conditions pertaining to construction of proposed project, including availability of materials and labor, hereby proposes to furnish all labor, materials and supplies to construct project in accordance with Contract Documents, within time set forth herein at prices stated below. Prices shall cover all expenses, including taxes not covered by the University of Missouri's tax exemption status, incurred in performing work required under Contract documents, of which this Bid is a part.

Bidder acknowledges receipt of following addenda:

Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____

2. In the following Bid(s), amount (s) shall be written in both words and figures. In case of discrepancy between words and figures, words shall govern.

3. BID PRICING

a. Base Bid:

The Bidder agrees to furnish all labor, materials, tools, and equipment required to replace the roof at Clydesdale Hall; all as indicated on the Drawings and described in these Specifications for sum of:

_____

Refer to Bidder's Portal _____ DOLLARS (~~$As Entered in Bidder's Portal~~)

4. PROJECT COMPLETION

a. Contract Period - Contract period begins on the day the Contractor receives unsigned Contract, Performance Bond, Payment Bond, and "Instructions for Execution of Contract, Bonds, and Insurance Certificates." Bidder agrees to complete project within three hundred (300) calendar days from receipt of aforementioned documents. Fifteen (15) calendar days have been allocated in construction schedule for receiving aforementioned documents from Bidder.

b. Commencement - Contractor agrees to commence work on this project after the "Notice to Proceed" is issued by the Owner. "Notice to Proceed" will be issued within seven (7) calendar days after Owner receives properly prepared and executed Contract documents listed in paragraph 4.a. above.

5. SDVE PARTICIPATION

a. SDVE Bonus Preference: A three (3) point bonus preference will be given to a Bidder that is a certified Service-Disabled Veteran Business Enterprise (SDVE) doing business as Missouri firm, corporation, or individual, or that maintains a Missouri office or place of business, as stated in the Information for Bidders. By indicating "Yes" below, the Bidder certifies that the Bidder is certified as an SDVE by the State of Missouri, Office of Administration.

Yes_____ No _____

b. SDVE Participation Goal: The Bidder shall have a goal of providing participation in the contract of Service-Disabled Veteran Business Enterprises (SDVE) of three percent (3%) of the awarded contract price for the work to be performed.

c. Good Faith Effort Waiver: Requests for waiver of the SDVE goal due to good faith effort shall be submitted on the attached Application For Waiver form. A determination by the UM Executive Director of Facilities Planning and Development that a good faith effort has not been made by Bidder to achieve above stated goal may result in rejection of the bid.

d. The undersigned Bidder proposes to perform work with the SDVE participation level set forth below. An SDVE Compliance Evaluation form shall be submitted with this bid for each SDVE subcontractor to be used on this project.

SDVE PERCENTAGE PARTICIPATION: _____ percent (____%)

6. BIDDER'S ACKNOWLEDGMENTS

a. Bidder declares that he has had an opportunity to examine the site of the work and he has examined Contract Documents therefore; that he has carefully prepared his bid upon the basis thereof; that he has carefully examined and checked bid, materials, equipment and labor required thereunder, cost thereof, and his figures therefore. Bidder hereby states that amount, or amounts, set forth in bid is, or are, correct and that no mistake or error has occurred in bid or in Bidder's computations upon which this bid is based. Bidder agrees that he will make no claim for reformation, modifications, revisions or correction of bid after scheduled closing time for receipt of bids.

b. Bidder agrees that bid shall not be withdrawn for a period of 60 days after scheduled closing time for receipt of bids.

c. Bidder understands that Owner reserves right to reject any or all bids and to waive any informalities in bidding.

d. Accompanying the bid is a bid bond, or a certified check, or an irrevocable letter of credit, or a cashier's check payable without condition to "The Curators of the University of Missouri" which is an amount at least equal to five percent (5%) of amount of largest possible total bid herein submitted, including consideration of Alternates.

e. Accompanying the bid is a Bidder's Statement of Qualifications. Failure of Bidder to submit the Bidder's Statement of Qualifications with the bid may cause the bid to be rejected. Owner does not maintain Bidder's Statements of Qualifications on file.

f. It is understood and agreed that bid security of two (2) lowest and responsive Bidders will be retained until Contract has been executed and an acceptable Performance Bond and Payment Bond has been furnished. It is understood and agreed that if the bid is accepted and the undersigned fails to execute the Contract and furnish acceptable Performance/Payment Bond as required by Contract Documents, accompanying bid security will be realized upon or retained by Owner. Otherwise, the bid security will be returned to the undersigned.

7. BIDDER'S CERTIFICATE

Bidder hereby certifies:

a. The Bidder’s bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm or corporation, and is not submitted in conformity with any agreement or rules of any group, association or corporation.

b. The Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid.

c. The Bidder has not solicited or induced any person, firm or corporation to refrain from bidding.

d. The Bidder has not sought by collusion or otherwise to obtain any advantage over any other bidder or over Owner.

e. In connection with the furnishing of equipment, supplies, and/or services under the contract, if awarded, the Bidder and all subcontractors shall not discriminate against any recipients of services or employees or applicants for employment on the basis of race, color, national origin,

ancestry, religion, sex, pregnancy, age, disability, protected veteran status, or any other status protected by applicable state or federal law and federal funds, if any, may not be used for programs that discriminate based on any such protected status.

f. By virtue of policy of the Board of Curators, and by virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, mined or grown within the State of Missouri. By virtue of policy of the Board of Curators, preference will also be given to all Missouri firms, corporations, or individuals, all as more fully set forth in "Information For Bidders."

8. BIDDER'S SIGNATURE

Note: All signatures shall be original; not copies, photocopies, stamped, etc.

Authorized Signature	Date
Printed Name	Title
Company Name	
Mailing Address	
City, State, Zip	
Phone No.	Federal Employer ID No.
Fax No.	E-Mail Address
Circle one: Individual Partnership Corporation Joint Venture	
If a corporation, incorporated under the laws of the State of_____	
Licensed to do business in the State of Missouri? _____yes _____no	

(Each Bidder shall complete bid form by manually signing on the proper signature line above and supplying required information called for in connection with the signature. Information is necessary for proper preparation of the Contract, Performance Bond and Payment Bond. Each Bidder shall supply information called for in accompanying "Bidder's Statement of Qualifications.")

END OF SECTION

UNIVERSITY OF MISSOURI
BIDDER'S STATEMENT OF QUALIFICATIONS

Submit with Bid for Lump Sum Contract in separate envelope appropriately labeled. Attach additional sheet if necessary.

1. Company Name_____

   Phone# _____Fax #:_____

   Address _____

2. Number of years in business _____. If not under present firm name, list previous firm names and types of organization.

   _____

   _____

3. List contracts on hand (complete the following schedule, include telephone number).

Project & Address	Owner/Owner's Representative	Phone Number	Architect	Amount of your Contract	Percent Completed

4. General character of work performed by your company personnel.

   _____

5. List important projects completed in the last five (5) years on a type similar to the work now bid for, including approximate cost and telephone number.

Project & Address	Owner/Owner's Representative	Phone Number	Architect	Amount of your Contract	Percent Completed

6. Other experience qualifying you for the work now bid.

   _____

   _____

7. No default has been made in any contract complete or incomplete except as noted below:
   (a) Number of contracts on which default was made _____
   (b) Description of defaulted contracts and reason therefor

   _____

   _____

8. Are you or your company certified by the State of Missouri, Office of Administration as a Service-Disabled Veteran Business Enterprise (SDVE)?

Yes _____ No _____

9. Have you or your company been suspended or debarred from working at any University of Missouri campus?

Yes _____ No ____ (If the answer is "yes", give details.)

_____

_____

10. Have any administrative or legal proceedings been started against you or your company alleging violation of any wage and hour regulations or laws?

Yes _____ No ____ (If the answer is "yes", give details.)

_____

_____

11. Workers Compensation Experience Modification Rates (last 3 yrs): ____/____/____

Incidence Rates (last 3 years): ____/____/____

12. List banking references.

_____

_____

13. (a) Do you have a current confidential financial statement on file with Owner?

Yes _____ No ____ (If not, and if desired, Bidder may submit such statement with bid, in a separate sealed and labeled envelope.)

(b) If not, upon request will you file a detailed confidential financial statement within three (3) days?

Yes _____ No ____

Dated at _____this _____ day of _____ 20____

_____
Name of Organization

_____
Signature

_____
Printed Name

_____
Title of Person Signing

END OF SECTION

SDVE/HDVE COMPLIANCE EVALUATION FORM

This form shall be completed by Bidders and submitted with the Bidder's Statement of Qualifications form for each SDVE or HDVE firm that will perform work under the contract. The undersigned submits the following data with respect to this firm's proposed SDVE and HDVE Participation.

1. Project: _____

2. Name of General Contractor: _____

3. Name of SDVE/HDVE: _____

   Address: _____

   Phone No.: _____

4. Describe the work to be performed. (List Base Bid work and any Alternate work separately):

   Base Bid:

   _____

   _____

   _____

   _____

5. Dollar amount of contract to be subcontracted to the SDVE/HDVE:

   Base Bid: _____

   Alternate(s), (Identify separately):

   _____

   _____

   _____

   _____

6. Is the proposed firm certified as an SDVE or HDVE by the State of Missouri, Office of Administration?

   Yes _____ No _____

Signature: _____

Name: _____

Title: _____

Date: _____

APPLICATION FOR WAIVER

This form shall be completed and submitted with the Bidder's Statement of Qualifications. Firms wishing to be considered for award are required to demonstrate that a good faith effort has been made to meet the SDVE and HDVE Participation Goals for that project. This form will be used to evaluate the extent to which a good faith effort has been made. The undersigned submits the following data with respect to the Bidder's efforts to meet the SDVE and HDVE Participation Goals.

1. List pre-bid conferences your firm attended where SDVE and HDVE Participation Goals were discussed.

2. Identify advertising efforts undertaken by your firm which were intended to recruit potential SDVE or HDVE subcontractors or suppliers for various aspects of this project. Provide names of newspapers, dates of advertisements and copies of ads that were run.

3. Note specific efforts to contact in writing those SDVE or HDVE firms capable of and likely to participate as subcontractors or suppliers for this project.

4. Describe steps taken by your firm to divide work into areas in which SDVE or HDVE firms would be capable of performing.

5. What efforts were taken to negotiate with prospective SDVE or HDVE firms? Include the names, addresses, and telephone numbers of SDVE and HDVE firms contacted, a description of the information given to SDVE and HDVE firms regarding plans and specifications for the assigned work, and a statement as to why additional agreements were not made with SDVE or HDVE firms.

6. List reasons for rejecting an SDVE or HDVE firm which has been contacted.

7. Describe the follow-up contacts with SDVE or HDVE firms made by your firm after the initial solicitation.

8. Describe the efforts made by your firm to provide interested SDVE and HDVE firms with sufficiently detailed information about the plans, specifications and requirements of the contract.

9. Describe your firm's efforts to locate SDVE and HDVE firms.

Based on the above stated good faith efforts made to meet the SDVE and HDVE Participation Goals, the Bidder hereby requests that the original goal be waived and that the percentage goal for this project be set at _____ percent.

The undersigned hereby certifies, having read the answers contained in the foregoing Application for Waiver, that they are true and correct to the best of his/her knowledge, information and belief.

Signature: _____

Name: _____

Title: _____

Company: _____

Date: _____

AFFIDAVIT

"The undersigned swears that the foregoing statements are true and correct and include all material information necessary to identify and explain the operation of _____ (name of firm) as well as the ownership thereof. Further, the undersigned agrees to provide through the prime contractor or directly to the Contracting Officer current, complete and accurate information regarding actual work performed on the project, the payment therefore and any proposed changes, if any, of the project, the foregoing arrangements and to permit the audit and examination of books, records and files of the named firm. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal or state laws concerning false statements."

Note - If, after filing this information and before the work of this firm is completed on the contract covered by this regulation, there is any significant change in the information submitted, you must inform the UM Executive Director of Facilities Planning and Development of the change either through the prime contractor or directly.

Signature: _____

Name: _____

Title: _____

Company: _____

Date: _____

Corporate Seal (where appropriate)

Date: _____

State of _____

County of _____

On this _____ day of _____ 20____, before me appeared _____ _____ to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by _____ to execute the affidavit and did so as his or her own free act and deed.

(Seal)

_____
Notary Public

Commission expires: _____

AFFIDAVIT OF SDVE PARTICIPATION

The apparent low Bidder shall complete and submit this form within 48 hours of bid opening for each Service-Disabled Veteran Business Enterprise (SDVE) that will participate in the performance of the contract.

1. Name of SDVE Firm:_____

   Contact Name: _____

   Address:_____

   Phone No.:_____

2. Is the proposed SDVE firm certified by the State of Missouri, Office of Administration
   Yes □ No □

   Certification Number:_____

3. SDVE firm scope work and dollar amount of participation (List Base Bid and Alternate work separately):

	Scope of Work	Bid/Contract Amount	Final Dollar Amount **(Complete at Project Closeout)**
Base Bid			
Alternate #1			
Alternate #2			
Alternate #3			
Alternate #4			
Alternate #5			
Alternate #6			

Signature Page Follows

The undersigned certifies that the information contained herein (i.e. Scope of Work and Bid/Contract Amount) is true and correct to the best of their knowledge, information and belief.

General Contractor: _____ SDVE Firm:_____

Signature: _____ Signature:_____

Name:_____ Name:_____

Title:_____ Title:_____

Date: _____ Date: _____

Sign at Project Close Out

The undersigned certified that the information contained herein (i.e. Scope of Work and Final Dollar Amount) is true and correct to the best of their knowledge, information and belief. If the Final Dollar Amount is different than the Bid/Contract Amount, then attach a written justification for the difference.

General Contractor: _____ SDVE Firm:_____

Signature: _____ Signature:_____

Name:_____ Name:_____

Title:_____ Title:_____

Date: _____ Date: _____

University of Missouri
INFORMATION FOR BIDDERS

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January 2026 Edition

1. Contract Documents and Definitions

1.1 The "Drawings," "Specifications," and "Contract Documents" are defined in the "General Conditions of the Contract for Construction."

1.2 The Drawings, Specifications, and other Contract Documents may be obtained as indicated in the Advertisement for Bids.

1.3 As used herein, "Bid" refers to an offer or proposal submitted to the Owner to enter into a contract for the work identified in the Drawings, Specifications and other Contract Documents.

1.4 As used herein, "Bidder" means an individual or business entity that submits a Bid to the Owner as a prime bidder or general contractor.

1.5 All other terms used herein shall have the meanings defined herein or in the General Conditions of the Contract for Construction or other Contract Documents.

2. Bidder Obligations

2.1 Before submitting a Bid, each Bidder shall carefully examine the Drawings and Specifications and related Contract Documents, visit the site of the work, and fully inform themselves as to all existing conditions, facilities, restrictions, and other matters that could affect the work or the cost thereof.

2.2 Each Bidder shall include in their Bid the cost of all work and materials required to complete the contract in a first-class manner, as specified in the Drawings, Specifications, and other Contract Documents. All work shall be done as defined in the Specifications and as indicated on the Drawings.

2.3 Failure or omission of any Bidder to receive or to examine any form, instrument, addendum, or other document, or to visit the site of the work and acquaint themselves with existing conditions, shall in no way relieve the Bidder from any obligation with respect to their Bid or any awarded contract. No extra compensation will be allowed concerning any matter about which the Bidder should have fully informed themselves prior to submitting a Bid.

2.4 Submission of a Bid shall be deemed acceptance by the Bidder of the above obligations and every obligation required by the Contract Documents in the event the Bid is accepted by the Owner.

3. Interpretation of Documents

3.1 If any prospective Bidder is in doubt about the meaning of any part of the Drawings, Specifications, or other Contract Documents, the Bidder shall submit a written request to the Architect for an interpretation.

3.2 Any request for interpretation shall be delivered to the Architect at least one (1) week prior to time for receipt of bids.

3.3 A Bid shall be based only on an interpretation issued in the form of an addendum mailed to each person or business entity that is on the Architect's record as having received a set of the Contract Documents.

3.4 Bidders shall not be entitled to rely on oral interpretations or written statements not issued in an addendum from either the Architect or a representative, agent, or employee of the Owner.

4. Bids

4.1 Bids shall be submitted on a single "Bid for Lump Sum Contract" form ("Bid Form") as furnished by the Owner or Architect. Bids shall be received separately or in combination as required by Bid Form

4.2 In addition to the Bid Form, the Bid shall include any documents or information required to be submitted by this Information for Bidders or the Contract Documents.

4.3 Bids shall include amounts for alternate bids, unit prices, and cost accounting data where required by the Bid Form.

4.4 Bidders shall apportion each base Bid between various phases of the work, where stipulated in the Bid Form.

4.5 Bids shall be presented in sealed envelopes, which shall be plainly marked "Bids for (indicate name of project from cover sheet)" and mailed or delivered to the building and room number specified in the Advertisement for Bids.

4.6 Each Bidder shall be responsible for actual delivery of their bid during business hours, and it shall not be sufficient to show that a Bid was mailed in time to be received before scheduled closing time for receipt of bids, nor shall it be sufficient to show that a Bid was somewhere in a university facility.

4.7 The Bidder's price shall include all federal sales, excise, and similar taxes that may be lawfully assessed in connection with their performance of work and purchase of materials to be incorporated in the work. City and State taxes shall not be included as stated in the General Conditions of the Contract for Construction.

4.8 No Bidder shall stipulate in their Bid any conditions not contained in the Bid Form or Contract Documents. Inclusion of any additional conditions or taking exception to any terms may result in rejection of the Bid.

4.9 The Owner reserves the right to waive informalities in bids and to reject any or all bids.

5. Modification and Withdrawal of Bids

5.1 A Bidder may withdraw their Bid at any time before the scheduled closing time for receipt of bids. No Bidder may withdraw their Bid after the scheduled closing time for receipt of bids.

5.2 Only a written request for modification or correction of a previously submitted Bid, contained in a sealed envelope that is plainly marked "Modification of Bid on (name of project on cover sheet)," which is addressed in the same manner as a Bid and

received by Owner before the scheduled closing time for receipt of bids, will be accepted and the Bid modified in accordance with such written request.

6. Signing of Bids

6.1 All bids shall be signed manually, by an individual authorized to sign on behalf of the Bidder. The title or office held by the person signing for the Bidder shall appear below the signature.

6.2 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.

6.3 A Bid from a partnership or joint venture shall be signed in the name of the partnership or joint venture by at least one partner or joint venturer or by an Attorney-in-Fact. If signed by Attorney-in-Fact there should be attached to the Bid, a Power of Attorney evidencing authority to sign the Bid executed by all partners or joint venturers.

6.4 A Bid from a corporation shall be signed by an officer of the corporation.

6.5 A Bid from a limited liability company (LLC) shall be signed by a manager or a managing member of the LLC.

6.6 A Bid from an individual or sole proprietor shall be signed in the name of the individual by the individual or an Attorney-in-Fact. If signed by Attorney-in-Fact there should be attached to the Bid, a Power of Attorney evidencing authority to sign the Bid executed by the individual.

7. Bid Security

7.1 Each Bid shall be accompanied by a Bid Bond, certified check, or cashier's check, acceptable to and payable without condition to "The Curators of the University of Missouri" in an amount at least equal to five percent (5%) of the Bidder's Bid including additive alternates ("Bid Security").

7.2 Bid security is required as a guarantee that the Bidder will enter into a written contract and furnish a Performance Bond within the time and in form as specified herein or in the Contract Documents; and, if successful Bidder fails to do so, the Bid Security will be realized upon or retained by the Owner. The apparent low Bidder shall notify the Owner in writing within forty-eight (48) hours of the Bid opening of any circumstance that may affect the Bid Security including, but not limited to, an error in the Bid. This notification will not guarantee release of the Bidder's security and/or the Bidder from the Bidder's obligations.

7.3 If a Bid Bond is given as a Bid Security, the amount of the Bid Bond may be stated as an amount equal to at least five percent (5%) of the Bid, including additive alternates, described in the Bid. The Bid Bond shall be executed by the Bidder and a responsible surety licensed in the State of Missouri with a Best's rating of no less than A-/XI.

7.4 It is specifically understood that the Bid Security is a guarantee and shall not be considered as liquidated damages for failure of Bidder to execute and deliver the contract and Performance Bond, nor limit or fix the Bidder's liability to the Owner for any damages sustained because of failure to execute and deliver the required contract and Performance Bond.

7.5 The Bid Security of the two (2) lowest, responsive, responsible bidders will be retained by the Owner until a contract has been executed and an acceptable Performance Bond has been furnished, as required hereby, when such Bid Security will be returned. The Bid Bonds of all other Bidders will be destroyed and all other alternative forms of Bid Security will be returned to them within ten (10) days after the Owner has determined the two (2) lowest, responsive, responsible bids.

8. Bidder's Statement of Qualifications

8.1 Each Bidder shall present evidence of their experience, qualifications, financial responsibility, and ability to carry out the terms of the contract by completing and submitting with their Bid the "Bidder's Statement of Qualifications" form included with the Bid documents.

8.2 Financial information required to be included with the Statement of Qualifications may be submitted by the Bidder in a separately sealed envelope, which will not be opened by the Owner during the public Bid opening.

8.3 The Bidder's Statement of Qualifications will be treated as confidential information by the Owner to the extent permitted by the Missouri Sunshine Law, Section 610.010, RSMo et seq.

8.4 Bids not accompanied by the Bidder's Statement of Qualifications may be rejected.

9. Award of Contract

9.1 The Owner reserves the right to let other contracts in connection with the work, including, but not limited to, contracts for furnishing and installation of furniture, equipment, machines, appliances, and other apparatus.

9.2 In awarding the contract, the Owner may take into consideration the ability of the Bidder, and their subcontractors, to handle promptly the additional work; the skill, facilities, capacity, experience, ability, responsibility, previous work, and financial standing of Bidder; the Bidder's ability to provide the required bonds and insurance; the quality, efficiency and construction of equipment proposed to be furnished; the period of time within which equipment is proposed to be furnished and delivered; success in achieving the specified /SDVE Participation Goals or demonstrating a good faith effort to do so as described in Article 15 of this document; and the Bidder's status as suspended or debarred. Inability of any Bidder to meet the requirements mentioned above may be cause for rejection of their Bid.

10. Contract Execution

10.1 The awarded Bidder shall submit within fifteen (15) days from receipt of notice of award, the documents required in Article 9 of the General Conditions of the Contract for

Construction.

10.2 No bids will be considered binding upon the Owner until all such required documents have been furnished. Failure of Contractor to execute and submit such documents within the time specified will be treated, at the option of the Owner, as a breach of the Bidder's Bid Security and the Owner shall be under no further obligation to the Bidder.

11. Contract Security

11.1 When the Contract Sum exceeds $50,000, the Contractor shall procure and furnish a Performance Bond and a Payment Bond in the form prepared by the Owner. Each bond shall be in the amount equal to one hundred percent (100%) of the Contract Sum, as well as adjustments to the Contract Sum. The Performance Bond shall secure and guarantee the Contractor's faithful performance of the Contract, including but not limited to the Contractor's obligation to correct any defects after final payment has been made as required by the Contract Documents. The Payment Bond shall secure and guarantee payment of all persons performing labor on the Project under the Contract and furnishing materials in connection with the Contract in accordance with Section 107.170, RSMo. These bonds shall be in effect through the duration of the Contract plus any Guaranty Period required by the Contract Documents.

11.2 The bonds required hereunder shall meet all requirements of Article 11 of the General Conditions of the Contract for Construction.

11.3 If the surety of any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to conduct business in the State of Missouri is terminated, or it ceases to meet the requirements of this Article 11, the Contractor shall within ten (10) days substitute another bond and surety, both of which must be acceptable to the Owner. If the Contractor fails to make such substitution, the Owner may procure such required bonds on behalf of Contractor at Contractor's expense.

12. Time of Completion

12.1 The awarded Contractor shall agree to commence work within five (5) days of the date "Notice to Proceed" is received from the Owner, and the entire work shall be completed by the completion date specified or within the number of consecutive calendar days stated in the Special Conditions. The duration of the construction period, when specified in consecutive calendar days, shall begin when the contractor receives notice requesting the documents required in Article 9 of the General Conditions of the Contract for Construction.

13. Number of Contract Documents

13.1 The Owner will furnish the Contractor a copy of the executed contract, Performance Bond, and Payment Bond.

13.2 The Owner will furnish the Contractor the number of copies of complete sets of Drawings and Specifications for the work, as well as clarification and change order Drawings pertaining to change orders required during construction as set forth in the Special Conditions.

14. Missouri Products and Missouri Firms

14.1 The Curators of the University of Missouri have adopted a policy which is binding upon all employees and departments of the University of Missouri, and which by contract, shall be binding upon independent contractors and subcontractors with the University of Missouri whereby all other things being equal, and when the same can be secured without additional cost over foreign products, or products of other states, a preference shall be granted in all construction, repair and purchase contracts, to all products, commodities, materials, supplies, and articles mined, grown, produced, and manufactured in marketable quantity and quality in the State of Missouri, and to all firms, corporations or individuals doing business as Missouri firms, corporations, or individuals. Each Bidder submitting a Bid agrees to comply with and be bound by the foregoing policy.

15. SDVE Participation

15.1 Award of Contract

15.1.1 Pursuant to Section 34.074, RSMo (and the implementing regulations adopted by the State of Missouri, Office of Administration), the University of Missouri System sets a goal for the participation of Service-Disabled Veteran Business Enterprise (SDVE) Firms (as defined in Article 1 of the General Conditions of the Contract for Construction) in its construction projects. The SDVE goal for University projects is three percent (3%) of the total contract cost. Only firms certified by the State of Missouri, Office of Administration as SDVE firms will be accepted pursuant to the goal requirements described herein.

15.1.2 The Bidder shall have a minimum goal of providing participation of Service-Disabled Veteran Business Enterprise (SDVE) Firms in the project, through self-performance, if a SDVE Firm, or by subcontracting with SDVE Firms as subcontractors, suppliers, or manufacturers, in the amount of three percent (3%) total contract price ("SDVE Participation Goals"). The Owner will take into consideration the Bidder's success in achieving the SDVE Participation Goal in awarding the contract. Inability of any Bidder to meet the SDVE Participation Goal shall be cause for rejection of their Bid, unless the Bidder has demonstrated that they made a good faith effort to comply as set forth below.

15.1.3 In addition to the SDVE Participation Goal, a three (3) point bonus preference will be given to a Bidder that is a certified Service-Disabled Veteran Enterprises (SDVE) business doing business as Missouri firm, corporation, or individual, or that maintains a Missouri office or place of business. The bonus preference will **not** be given to a Bidder for the use of SDVE subcontractors, suppliers, or manufacturers. The bonus preference shall be calculated and applied by reducing the Bid amount of the SDVE Bidder by three percent (3%) of the apparent low, responsive Bidder's Bid. Based on this calculation, if the SDVE Bidder's resulting total Bid valuation is less than the Bid of the apparent low, responsive Bidder, the SDVE 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 SDVE Bidder's Bid or the amount(s) of any contract awarded.

15.2 List of SDVE Firms

15.2.1 The Bidder shall submit, within forty-eight (48) hours

of the receipt of bids to the University Contracting Officer, a list of SDVE Firms that will be performing as contractor, subcontractor, supplier, or manufacturer on the project. The list shall separately identify each SDVE Firm by name and address. If acceptance or non-acceptance of alternates will affect the designation of a subcontractor, supplier, or manufacturer, the Bidder shall provide information for each affected category.

15.2.2 Failure to include a complete list of SDVE Firms that will be used to meet the SDVE Participation Goal may be grounds for rejection of the Bid.

15.2.3 The list of SDVE Firms shall be submitted in addition to any other listing of subcontractors required in the Bid Form or elsewhere in this document.

15.3 SDVE Participation Computation

15.3.1 The Bidder may count toward the Goal only expenditures to SDVE Firms that perform a commercially useful function in the work of a contract. An SDVE Firm is considered to perform a commercially useful function when it is responsible for executing a distinct element of the work or contract and is carrying out its responsibilities by actually performing managing and supervising the work.

15.3.2 The Bidder may count toward its SDVE Participation Goals work granted to a second or subsequent tier subcontractor that is an SDVE Firm provided the SDVE Firm assumes the actual and contractual responsibility for performing work on the project. The Bidder may count toward its SDVE Participation Goal expenditures for materials and/or supplies obtained from an SDVE Firm, provided the SDVE Firm assumes the actual and contractual responsibility for the provision of the materials and/or supplies. To perform a commercially useful function, a supplier or manufacturer that is an SDVE Firm must be responsible for negotiating price, determining quality and quantity, ordering the material, installing (where applicable) and paying for the material itself.

15.3.3 An SDVE Firm does not perform a commercially useful function if its role is solely that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of participation. In determining whether a firm is such an extra participant, the Owner will examine similar transactions, particularly those in which SDVE Firms do not participate.

15.3.4 If the Bidder is a joint venture and the joint venture itself is certified as an SDVE Firm, the joint venture may count toward the SDVE Participation Goal that portion of the total dollar value of the work equal to the percentage of the ownership and control of the SDVE Firm that is a participant in the joint venture. When an SDVE Firm performs work as a participant in a joint venture where the joint venture is **not** separately certified as an SDVE Firm, only the portion of the Contract Sum equal to the distinct, clearly defined portion of the work that the SDVE Firm performs with its own forces shall count toward the SDVE Participation Goal.

15.4 Certification of SDVE Firms

15.4.1 The Bidder shall submit, within forty-eight (48) hours of the time for receipt of bids, to the University Contracting Officer, the information requested in the "SDVE Compliance Evaluation Form" for every SDVE Firm the Bidder intends to award work to under the contract to meet the SDVE Participation Goal.

15.4.2 The Bidder is responsible for obtaining information regarding the certification status of an SDVE Firm. Firms must be certified as an SDVE, as applicable, by the State of Missouri, Office of Administration as of the date of bid opening.

15.5 SDVE Participation Waiver

15.5.1 The Bidder is required to make a good faith effort to locate and contract with SDVE Firms. If a Bidder has made a good faith effort to secure the required SDVE Participation and has failed, the Bidder shall submit within forty-eight (48) hours of the time for receipt of bids, to the University Contracting Officer the information requested in "Application for SDVE Participation Waiver." The Contracting Officer will review the Bidder's actions as set forth in the Bidder's "Application for Waiver" and any other factors deemed relevant by the Contracting Officer to determine if a good faith effort has been made to meet the SDVE Participation Goal. If the Bidder is judged not to have made a good faith effort, the Bid may be rejected. Bidders who demonstrate that they have made a good faith effort to meet the SDVE Participation Goal may be awarded the contract regardless of the actual percent of SDVE Participation, provided that the Bid is otherwise acceptable and is determined to be the lowest, responsive, responsible Bid.

15.5.2 To determine the good faith effort of the Bidder, the Contracting Officer may evaluate factors including, but not limited to, the following:

15.5.2.1 The Bidder's attendance at pre-bid conferences for the solicitation;

15.5.2.2 The Bidder's efforts and methods to provide SDVEs with full sets of plans, specifications, or appropriate information in a timely manner to assist the SDVE in responding to the Bidder's solicitation. This could include conducting market research to identify SDVEs, and providing emails or written notices to all certified SDVEs listed in OA's directory that specialize in the areas of work desired and which are located in the applicable area or surrounding areas as early in the acquisition process as practicable. Pro forma mailings to SDVEs requesting bids are not alone sufficient to satisfy good faith efforts;

15.5.2.3 The Bidder's efforts to make initial contact with at least three (3) SDVEs for each category of work to be performed, its follow up with those contacted, and whether the Bidder received a proposal for those categories of work;

15.5.2.4 The Bidder's efforts to assist interested SDVEs in obtaining bonding, lines of credit, or insurance or the efforts made to assist in obtaining necessary equipment,

supplies, materials, or related assistance or services;

15.5.2.5 The extent to which the Bidder divided work into projects suitable for subcontracting to SDVEs including, where appropriate, breaking out contract work items into economically feasible units, for example, smaller tasks or quantities to facilitate SDVE participation, even when the Bidder might otherwise prefer to perform the work with its own forces. Prime contractors are not, however, required to accept higher quotes from SDVEs if the price difference is excessive or unreasonable, but the fact that there may be some additional costs involved in finding and using SDVEs is not in itself sufficient reason for a Bidder's failure to meet the contract SDVE percentage, as long as such costs are reasonable;

15.5.2.6 The Bidder's ability to provide sufficient evidence in the form of documentation that supports the information provided;

15.5.2.7 The reasons provided by the Bidder for the inability to reach a contract percentage and the ability of other bidders to meet the percentages, if applicable;

15.5.2.8 Actual past participation of SDVEs achieved by the Bidder; and

15.5.2.9 The rejection of an SDVE solely because its quotation for work was not the lowest received is not a sufficient good faith effort. However, a Bidder is not required to accept an excessive or unreasonable quote in order to satisfy contract percentages.

15.6 Submittal of Forms

15.6.1 Within forty-eight (48) hours of the time for receipt of bids, the apparent low Bidder shall submit to the University Contracting Officer all SDVE Compliance Evaluation Form(s), and/or Application for Waiver with supporting information, and an "Affidavit of SDVE Participation" for every SDVE Firm the Bidder intends to award work on the contract. The affidavit will be signed by both the Bidder and the SDVE Firm. Failure to submit the documents in the time indicated may result in rejection of the Bid.

15.7 Additional Bid/Proposer Information

15.7.1 The Contracting Officer reserves the right to request from the apparent low Bidder additional, clarifying information regarding the Bidder's SDVE Participation and supporting documentation. The Bidder shall respond in writing to the Contracting Officer within twenty-four (24) hours of a request.

15.7.2 The Contracting Officer reserves the right to request additional information after the Bidder has responded to prior requests. This information may include follow-up and/or clarification of the information previously submitted.

15.7.3 The Bidder shall provide to the Owner information related to the SDVE Participation included in the Bidder's proposal, including, but not limited to, the complete Application for Waiver, evidence of certification of participating SDVE Firms, dollar amount of participation of SDVE Firms, information supporting a good faith effort as described above, and a list of all SDVE Firms that submitted bids to the Bidder with the SDVE Firm's price, and the name and the price of the firm awarded the scope of work.

16. List of Subcontractors

16.1 If a list of subcontractors is required on the Bid Form, the Bidder shall list the name, city, and state of the firm(s) that will accomplish that portion of the contract requested in the space provided. This list is separate from both the list of SDVE Firms required in Section 15.2 and the complete list of subcontractors required in Section 10.1 of this document. Should the Bidder choose to perform any of the listed portions of the work with its own forces, the Bidder shall enter its own name, city, and state in the space provided. If acceptance or non-acceptance of alternates will affect the designation of a subcontractor, the Bidder shall provide that information on the Bid Form.

16.2 Failure of the Bidder to supply the list of subcontractors required or the listing of more than one subcontractor for any category without designating the portion of the work to be performed by each, shall be grounds for the rejection of the Bid. The Bidder can petition the Owner to change a listed subcontractor within forty-eight (48) hours of the Bid opening. The Owner reserves the right to make the final determination on a petition to change a subcontractor. The Owner will consider factors such as clerical and mathematical errors in the Bid, a listed subcontractor's inability to perform the work, etc. Any request to change a listed subcontractor shall include at a minimum, a Bid sheet showing tabulation of the Bid; all subcontractor bids with documentation of the time they were received by the contractor; and a letter from the listed subcontractor on their letterhead stating why they cannot perform the work if applicable. The Owner reserves the right to ask for additional information.

16.3 Upon award of the contract, the requirements of Article 10 herein and Article 5 of the General Conditions of the Contract for Construction will apply.

University of Missouri

General Conditions

of the

Contract

for

Construction

January 2026 Edition

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ARTICLE 1
GENERAL PROVISIONS

1.1 Basic Definitions
As used in the Contract Documents, the following terms shall have the meanings and refer to the parties designated in these definitions.

1.1.1 Owner
The Owner is The Curators of the University of Missouri. The Owner may act through its Board of Curators or any duly authorized committee or representative thereof. The Owner may also be referred to herein as "University".

1.1.2 Contracting Officer
The Contracting Officer is the duly authorized representative of the Owner with the authority to execute contracts. Communications to the Contracting Officer shall be forwarded via the Owner's Representative.

1.1.3 Owner's Representative
The Owner's Representative is authorized by the Owner as the administrator of the Contract and will represent the Owner during the progress of the Work. Communications from the Architect to the Contractor and from the Contractor to the Architect shall be through the Owner's Representative, unless otherwise indicated in the Contract Documents.

1.1.4 Architect
When the term "Architect" is used herein, it shall refer to the Architect or the Engineer specified and defined in the Contract for Construction or its duly authorized representative. Communications to the Architect shall be forwarded to the address shown in the Contract for Construction.

1.1.5 Owner's Authorized Agent
When the term "Owner's Authorized Agent" is used herein, it shall refer to an employee or agency acting on the behalf of the Owner's Representative to perform duties related to code inspections, testing, operational systems check, certification or accreditation inspections, or other specialized work.

1.1.6 Contractor
The Contractor is the person or entity with whom the Owner has entered into the Contract for Construction. The term "Contractor" means the Contractor or the Contractor's authorized representative.

1.1.7 Subcontractor and Lower-tier Subcontractor
A Subcontractor is a person or organization who has a contract with the Contractor to perform any of the Work. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or its authorized representative. The term "Subcontractor" also is applicable to those furnishing materials to be incorporated in the Work whether performed at the Owner's site or off site, or both. A lower-tier Subcontractor is a person or organization who has a contract with a Subcontractor or another lower-tier Subcontractor to perform any of the Work at the site. Nothing contained in the Contract Documents shall create contractual relationships between the Owner or the Architect and any Subcontractor or lower-tier Subcontractor of any tier.

1.1.8 Service-Disabled Veteran Enterprise (SDVE)
Service-Disabled Veteran Enterprise (SDVE) shall have the same meaning as "Service-Disabled Veteran Business" set forth in Section 34.074, RSMo and the implementing regulations promulgated by the State of Missouri, Office of Administration.

1.1.9 SDVE Firm
SDVE Firm shall mean a business entity that is certified as an SDVE by the State of Missouri, Office of Administration.

1.1.10 Work
Work shall mean supervision, labor, equipment, tools, material, supplies, incidentals operations and activities required by the Contract Documents or reasonably inferable by the Contractor therefrom as necessary to produce the results intended by the Contract Documents in a safe, expeditious, orderly, and workmanlike manner, and in the best manner known to each respective trade.

1.1.11 Approved
The terms "approved", "equal to", "directed", "required", "ordered", "designated", "acceptable", "compliant", "satisfactory", and similar words or phrases will be understood to have reference to action on the part of the Architect and/or the Owner's Representative.

1.1.12 Contract Documents
The Contract Documents consist of (1) the executed Contract for Construction, (2) these General Conditions of the Contract for Construction, (3) any Supplemental Conditions or Special Conditions identified in the Contract for Construction, (4) the Specifications identified in the Contract for Construction, (5) the Drawings identified in the Contract for Construction, (6) Addenda issued prior to the receipt of bids, (7) Contractor's bid addressed to Owner, including Contractor's completed Qualification Statement, (8) Contractor's Performance Bond and Contractor's Payment Bond, (9) Notice to Proceed, (10) and any other exhibits and/or post bid adjustments identified in the Contract for Construction, (11) Advertisement for Bid, (12) Information for Bidders, and (13) Change Orders issued after execution of the Contract. All other documents and technical reports and information are not Contract Documents, including without limitation, Shop Drawings, and Submittals.

1.1.13 Contract
The Contract Documents form the Contract and are the exclusive statement of agreement between the parties. The Contract represents the entire and integrated agreement

between the parties hereto and supersedes prior representations or agreements, either written or oral. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and a Subcontractor or any lower-tier Subcontractor.

1.1.14 Change Order
The Contract may be amended or modified without invalidating the Contract only by a Change Order, subject to the limitations in Article 7 and elsewhere in the Contract Documents. A Change Order is a written instrument signed by the Owner and the Contractor stating their agreement to a change in the Work, the amount of the adjustment to the Contract Sum, if any, and the extent of the adjustment to the Contract Time, if any. Agreement to any Change Order shall constitute a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments of the Contract Sum, time and schedule.

1.1.15 Substantial Completion
The terms "Substantial Completion" or "substantially complete" as used herein shall be construed to mean the completion of the entire Work, including all submittals required under the Contract Documents, except minor items which in the opinion of the Architect, and/or the Owner's Representative will not interfere with the complete and satisfactory use of the facilities for the purposes intended.

1.1.16 Final Completion
The date when all punch list items are completed, including all closeout submittals and approval by the Architect is given to the Owner in writing.

1.1.17 Supplemental and Special Conditions
The terms "Supplemental Conditions" or "Special Conditions" shall mean the part of the Contract Documents which amend, supplement, delete from, or add to these General Conditions.

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

1.1.19 Knowledge
The terms "knowledge," "recognize" and "discover" their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows or should know, recognizes, or should recognize and discovers or should discover in exercising the care, skill, and diligence of a diligent and prudent contractor familiar with the Work. Analogously, the expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a diligent and prudent contractor familiar with the Work.

1.1.20 Punch List
"Punch List" means the list of items, prepared in connection with the inspection(s) of the Project by the Owner's Representative or the Architect in connection with Substantial Completion of the Work or a portion of the Work, which the Owner's Representative or the Architect has designated as remaining to be performed, completed, or corrected before the Work will be accepted by the Owner.

1.1.21 Force Majeure
An event or circumstance that could not have been reasonably anticipated and is out of the control of both the Owner and the Contractor.

1.2 Specifications and Drawings

1.2.1 The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction system, standards and workmanship and performance of related services for the Work identified in the Contract for Construction. Specifications are separated into titled divisions for convenience of reference only. Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Such separation will not operate to make the Owner or the Architect an arbiter of labor disputes or work agreements.

1.2.2 The Drawings herein referred to, consist of drawings prepared by the Architect, and are enumerated in the Contract Documents.

1.2.3 Drawings are intended to show general arrangements, design, and dimensions of work and are partly diagrammatic. Dimensions shall not be determined by scale or rule. If figured dimensions are lacking, they shall be supplied by the Architect on the Contractor's written request to the Owner's Representative.

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

1.2.5 In the event of inconsistencies within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes and ordinances, the Contractor shall (1) provide the better quality or greater quantity of Work or (2) comply with the more stringent requirement; either or both in accordance with the Owner's Representative's interpretation. On the Drawings, given

dimensions shall take precedence over scaled measurements and large-scale drawings over small scale drawings. Before ordering any materials or doing any Work, the Contractor and each Subcontractor shall verify measurements at the Work site and shall be responsible for the correctness of such measurements. Any difference which may be found shall be submitted to the Owner's Representative and the Architect for resolution before proceeding with the Work. If a minor change in the Work is found necessary due to actual field conditions, the Contractor shall submit detailed drawings of such departure for the approval by the Owner's Representative and the Architect before making the change.

1.2.6 Data in the Contract Documents concerning lot size, ground elevations, present obstructions on or near the site, locations and depths of sewers, conduits, pipes, wires, etc., position of sidewalks, curbs, pavements, etc., and nature of ground and subsurface conditions have been obtained from sources the Architect believes reliable, but the Architect and the Owner do not represent or warrant that this information is accurate or complete. The Contractor shall verify such data to the extent possible through normal construction procedures, including but not limited to contacting utility owners and by prospecting.

1.2.7 Only Work included in the Contract Documents is authorized, and the Contractor shall do no work other than that described therein.

1.2.8 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. The Contractor represents that it has performed its own investigation and examination of the Work site and its surroundings and satisfied itself before entering into this Contract as to:

.1 conditions bearing upon transportation, disposal, handling, and storage of materials;

.2 the availability of labor, materials, equipment, water, electrical power, utilities and roads;

.3 uncertainties of weather, river stages, flooding and similar characteristics of the site;

.4 conditions bearing upon security and protection of material, equipment, and Work in progress;

.5 the form and nature of the Work site, including the surface and sub-surface conditions;

.6 the extent and nature of Work and materials necessary for the execution of the Work and the remedying of any defects therein; and

.7 the means of access to the site and the accommodations it may require and, in general, shall be deemed to have obtained all information as to risks, contingencies and other circumstances.

.8 the ability to complete work without disruption to normal campus activities, except as specifically allowed in the Contract Documents.

The Owner assumes no responsibility or liability for the physical condition or safety of the Work site, or any improvements located on the Work site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or Contract Time concerning any failure by the Contractor or any Subcontractor to comply with the requirements of this Paragraph.

1.2.9 Drawings, specifications, and copies thereof furnished by the Owner are and shall remain the Owner's property. They are not to be used on another project and, with the exception of one contract set for each party to the Contract, shall be returned to the Owner's Representative on request, at the completion of the Work.

1.3 Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein; and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the written application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 2
OWNER

2.1 Information and Services Required of Owner

2.1.1 Permits and fees are the responsibility of the Contractor under the Contract Documents, unless specifically stated in the Contract Documents that the Owner will secure and pay for specific necessary approvals, easements, assessments, and charges required for construction, use or occupancy of permanent structures, or for permanent changes in existing facilities.

2.1.2 When requested in writing by the Contractor, information or services under the Owner's control, which are reasonably necessary to perform the Work, will be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

2.2 Owner's Right to Stop the Work

2.2.1 If the Contractor fails to correct Work which is not in strict accordance with the requirements of the Contract Documents or fails to carry out Work in strict accordance with the Contract Documents, the Owner's Representative may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work will not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. The Owner's lifting of Stop Work Order shall not prejudice the Owner's right to enforce any provision of this Contract.

2.3 Owner's Right to Carry Out the Work

2.3.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) day period after receipt of a written notice from the Owner to correct such default or neglect, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's additional services and expenses made necessary by such default or neglect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to Owner. However, such notice shall be waived in the event of an emergency with the potential for property damage or the endangerment of students, faculty, staff, the public or construction personnel, at the sole discretion of the Owner.

2.3.2 In the event the Contractor has not satisfactorily completed all items on the Punch List within thirty (30) days of its receipt, the Owner reserves the right to complete the Punch List without further notice to the Contractor or its surety. In such case, the Owner shall be entitled to deduct from payments then or thereafter due the Contractor the cost of completing the Punch List items, including compensation for the Architect's additional services. If payments then or thereafter due Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

2.4 Extent of Owner Rights

2.4.1 The rights stated in Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner (1) granted in the Contract Documents, (2) at law or (3) in equity.

2.4.2 In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.

ARTICLE 3
CONTRACTOR

3.1 Contractor's Warranty

3.1.1 The Contractor warrants all equipment and materials furnished, and work performed, under this Contract, against defective materials and workmanship for a period of twelve months after acceptance as provided in this Contract, unless a longer period is specified, regardless of whether the same were furnished or performed by the Contractor or any Subcontractors of any tier. Upon written notice from the Owner of any breach of warranty during the applicable warranty period due to defective material or workmanship, the affected part or parts thereof shall be repaired or replaced by the Contractor at no cost to the Owner. Should the Contractor fail or refuse to make the necessary repairs, replacements, and tests when requested by the Owner, the Owner may perform, or cause the necessary work and tests to be performed, at the Contractor's expense, or exercise the Owner's rights under Article 14.

3.1.2 Should one or more defects mentioned above appear within the specified period, the Owner shall have the right to continue to use or operate the defective part or apparatus until the Contractor makes repairs or replacements or until such time as it can be taken out of service without loss or inconvenience to the Owner.

3.1.3 The above warranties are not intended as a limitation but are in addition to all other express warranties set forth in this Contract and such other warranties as are implied by law, custom, and usage of trade. The Contractor, and its surety or sureties, if any, shall be liable for the satisfaction and full performance of the warranties set forth herein.

3.1.4 Neither the final payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner, nor expiration of warranty stated herein, will constitute an acceptance of Work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any responsibility for non-conforming work. The Contractor shall immediately remedy any defects in the Work and pay for any damage to other Work resulting therefrom upon written notice from the Owner. Should the Contractor fail or refuse to remedy the non-conforming work, the Owner may perform, or cause to be performed all actions necessary to bring the Work into conformance with the Contract Documents at the Contractor's expense.

3.1.5 The Contractor agrees to defend, indemnify, and save harmless The Curators of the University of Missouri, their officers, agents, employees, and volunteers, from and against all loss or expense from any injury or damages to property of others suffered or incurred on account of any breach of the aforesaid obligations and covenants. The Contractor agrees to investigate, handle, respond to and provide defense for and defend against any such liability, claims, and demands at the sole expense of the Contractor, or at the option of the University, agrees to pay to or reimburse the University for the defense costs incurred by the University in connection with any such liability claims, or demands. The parties hereto understand and agree that the University is relying on and does not waive or intend to waive by any provision of this Contract, any monetary limitations or any other rights, immunities, and protections provided by the State of Missouri, as from time to time amended, or otherwise available to the University, or its officers, employees, agents or volunteers.

3.2 Compliance with Laws, Regulations, Permits, Codes, and Inspections

3.2.1 The Contractor shall, without additional expense to the Owner, comply with all applicable laws, ordinances, rules, permit requirements, codes, statutes, and regulations (which may be collectively referred to as "laws").

3.2.2 Since the Owner is an instrumentality of the State of Missouri, municipal, or political subdivision, ordinances, zoning ordinances, and other like ordinances are not applicable to construction on the Owner's property, and the Contractor will not be required to submit plans and specifications to any municipal or political subdivision authority to obtain construction permits or any other licenses or permits from or submit to, inspection by any municipality or political subdivision relating to the construction on the Owner's property, unless required by the Owner in these Contract Documents or otherwise in writing.

3.2.3 All fees, permits, inspections, or licenses required by municipality or political subdivision for operation on property not belonging to the Owner, shall be obtained by and paid for by the Contractor. The Contractor, of its own expense, is responsible to ensure that all inspections required by said permits or licenses on property, easements, or utilities not belonging to the Owner are conducted as required therein. All connection charges, assessments or transportation fees as may be imposed by any utility company or others are included in the Contract Sum and shall be the Contractor's responsibility.

3.2.4 If the Contractor has knowledge that any Contract Documents are at variance with any laws, including Americans with Disabilities Act – Standards for Accessible Design, ordinances, rules, regulations, or codes applying to the Work, Contractor shall promptly notify the Architect and the Owner's Representative, in writing, and any necessary changes will be adjusted as provided in the Contract Documents. However, it is not the Contractor's primary responsibility to ascertain that the Contract Documents are in accordance with applicable laws, unless such laws bear upon performance of the Work.

3.3 Anti-Kickback

3.3.1 No member or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

3.3.2 No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction, or material supply contract or any Subcontract of any tier in connection with the construction of the Work shall have a financial interest in this Contract or in any part thereof, any material supply contract, Subcontract of any tier, insurance contract, or any other contract pertaining to the Work.

3.4 Supervision and Construction Procedures

3.4.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract. The Contractor shall supply sufficient and competent supervision and personnel, and sufficient material, plant, and equipment to prosecute the Work with diligence to ensure completion thereof within the time specified in the Contract Documents, and shall pay when due any laborer, Subcontractor of any tier, or supplier.

3.4.2 The Contractor, if an individual, shall give the Work an adequate amount of personal supervision, and if a partnership, corporation, r joint venture or other business entity, the Work shall be given an adequate amount of personal supervision by a partner or executive officer, as determined by the Owner's Representative.

3.4.3 The Contractor and each of its Subcontractors of any tier shall submit to the Owner such schedules of quantities and costs, progress schedules in accordance with 3.18this document, payrolls, reports, estimates, records, and other data as the Owner may request concerning Work performed or to be performed under the Contract.

3.4.4 The Contractor shall be represented at the site by a competent superintendent from the beginning of the Work until its final acceptance, whenever Contract Work is being performed, unless otherwise permitted in writing by the Owner's Representative. The superintendent for the Contractor shall exercise general supervision over the Work and such superintendent shall have decision making authority of the Contractor. Communications given to the superintendent shall be binding as if given to the Contractor. The superintendent shall not be changed by the Contractor without approval from the Owner's Representative.

3.4.5 The Contractor shall establish and maintain a permanent benchmark to which access may be had during progress of the Work, and Contractor shall establish all lines and levels, and shall be responsible for the correctness of such. The Contractor shall be fully responsible for all layout work for the proper location of Work in strict accordance with the Contract Documents.

3.4.6 The Contractor shall establish and be responsible for wall and partition locations. If applicable, separate contractors shall be entitled to rely upon these locations and for setting their sleeves, openings, or chases.

3.4.7 The Contractor's scheduled outage/tie-in plan, time, and date for any utilities is subject to approval by the Owner's Representative. Communication with the appropriate entity and planning for any scheduled outage/tie-in of utilities shall

be the responsibility of the Contractor. Failure of the Contractor to comply with the provisions of this Paragraph shall cause the Contractor to forfeit any right to an adjustment of the Contract Sum or Contract Time for any postponement, rescheduling or other delays ordered by the Owner in connection with such Work. The Contractor shall follow the following procedures for all utility outages/tie-ins or disruption of any building system:

.1 All shutting of valves, switches, etc., shall be by the Owner's personnel.

.2 The Contractor shall submit its preliminary outage/tie-in schedule with its baseline schedule.

.3 The Contractor shall request an outage/tie-in meeting at least two weeks before the outage/tie-in is required.

.4 The Owner's Representative will schedule an outage/tie-in meeting at least one week prior to the outage/tie-in.

3.4.8 The Contractor shall coordinate all Work so there shall be no prolonged interruption of existing utilities, systems, and equipment of the Owner. Any existing plumbing, heating, ventilating, air conditioning, or electrical disconnection necessary, which affect portions of this construction or building or any other building, must be scheduled with the Owner's Representative to avoid any disruption of operation within the building under construction or other buildings or utilities. In no case shall utilities be left disconnected at the end of a workday or over a weekend. Any interruption of utilities, either intentionally or accidentally, shall not relieve the Contractor from repairing and restoring the utility to normal service. Repairs and restoration shall be made before the workers responsible for the repair and restoration leave the job.

3.4.9 The Contractor shall be responsible for repair of damage to property on or off the project occurring during construction of project, and all such repairs shall be made to meet code requirements or to the satisfaction of the Owner's Representative if code is not applicable.

3.4.10 The Contractor shall be responsible for all shoring required to protect the Work or adjacent property and shall pay for any damage caused by failure to shore or by improper shoring or by failure to give proper notice. Shoring shall be removed only after completion of permanent supports.

3.4.11 The Contractor shall maintain at the Contractor's own cost and expense, adequate, safe and sufficient walkways, platforms, scaffolds, ladders, hoists and all necessary, proper, and adequate equipment, apparatus, and appliances useful in carrying on the Work and which are necessary to make the place of Work safe and free from avoidable danger for students, faculty, staff, the public and construction personnel, and as may be required by safety provisions of applicable laws, ordinances, rules regulations and building and construction codes.

3.4.12 During the performance of the 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 shall give proper and understandable warning to all persons of danger of entry onto land, structure, or equipment, within the limits of the Contractor's work area.

3.4.13 The Contractor shall pump, bail, or otherwise keep any general excavations free of water. The Contractor shall keep all areas free of water before, during and after concrete placement. The Contractor shall be responsible for protection, including weather protection, and proper maintenance of all equipment and materials installed, or to be installed by the Contractor.

3.4.14 The Contractor shall be responsible for care of the Work and must protect same from damage of defacement until acceptance by the Owner. All damaged or defaced Work shall be repaired or replaced to the Owner's satisfaction, without cost to the Owner.

3.4.15 When requested by the Owner's Representative, the Contractor, at no extra charge, shall provide scaffolds or ladders in place as may be required by the Architect or the Owner for examination or inspection of Work in progress or completed.

3.4.16 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors of any tier and their agents and employees, and any other entity or persons performing portions of the Work.

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

3.4.18 The Contractor shall be responsible for inspection of portions of the Work already performed under this Contract to determine that such portions are compliant and in proper condition to receive subsequent Work.

3.5 Use of Site

3.5.1 The Contractor shall limit operations and storage of material to the area within the Work limit lines shown on Drawings, except as necessary to connect to exiting utilities, shall not encroach on neighboring property, and shall exercise caution to prevent damage to existing structures.

3.5.2 Only materials and equipment that are to be used directly in the Work shall be brought to and stored on the Work site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Work site. Protection of construction materials and equipment stored at the Work site from weather, theft, damage and all other adversity is solely the responsibility of the Contractor.

3.5.3 No project signs shall be erected without the written approval of the Owner's Representative.

3.5.4 The Contractor shall ensure that the Work is at all times performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. Particular attention shall be paid to access for emergency vehicles, including fire trucks. Wherever there is the possibility of interfering with normal emergency vehicle operations, the Contractor shall obtain permission from both campus and municipal emergency response entities prior to limiting any access. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials and equipment likely to cause hazardous conditions. Without limitation of any other provision of the Contract Documents, the Contractor shall not interfere with the occupancy or beneficial use of (1) any areas and buildings adjacent to the site of the Work or (2) the Work in the event of partial occupancy. The Contractor shall assume full responsibility for any damage to the property comprising the Work or to the owner or occupant of any adjacent land or areas resulting from the performance of the Work.

3.5.5 The Contractor shall not permit any workers to use any existing facilities at the Work site, including, without limitation, lavatories, toilets, entrances, and parking areas other than those designated by Owner. The Contractor, Subcontractors of any tier, suppliers and employees shall comply with instructions or regulations of the Owner's Representative governing access to, operation of, and conduct while in or on the premises and shall perform all Work required under the Contract Documents in such a manner as not to unreasonably interrupt or interfere with the conduct of the Owner's operations. Any request for Work, a suspension of Work or any other request or directive received by the Contractor from occupants of existing buildings shall be referred to the Owner's Representative for determination.

3.5.6 The Contractor and the Subcontractor of any tier shall have its' name, acceptable abbreviation or recognizable logo and the name of the city and state of the mailing address of the principal office of the company, on each motor vehicle and motorized self-propelled piece of equipment which is used in connection with the project. The signs are required on such vehicles during the time the Contractor is working on the project.

3.6 Review of Contract Documents and Field Conditions by Contractor

3.6.1 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Architect and the Owner and shall at once report in writing to the Architect and the Owner's Representative any errors, inconsistencies or omissions discovered. If the Contractor performs any construction activity which it knows or should have known involves a recognized error, inconsistency, or omission in the Contract Documents without such written notice to the Architect and the Owner's Representative, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

3.6.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported in writing to the Architect and the Owner's Representative within twenty-four (24) hours. During the progress of the Work, the Contractor shall verify all field measurements prior to fabrication of building components or equipment and proceed with the fabrication to meet field conditions. The Contractor shall consult all Contract Documents to determine the exact location of all work and verify spatial relationships of all work. Any question concerning said location or spatial relationships shall be submitted to the Owner's Representative. Specific locations for equipment, pipelines, ductwork and other such items of work, where not dimensioned on plans, shall be determined in consultation with the Owner's Representative and the Architect. The Contractor shall be responsible for the proper fitting of the Work in place.

3.6.3 The Contractor shall provide, at the proper time, such material as required for support of the Work. If openings or chases are required, whether shown on Drawings or not, the Contractor shall see they are properly constructed. If required openings or chases are omitted, the Contractor shall cut them at the Contractors own expense, but only as directed by the Architect, through the Owner's Representative.

3.6.4 Should the Contract Documents fail to particularly describe materials or goods to be used, it shall be the duty of the Contractor to inquire of the Architect and the Owner's Representative what is to be used and to supply it at the Contractor's expense, or else thereafter replace it to the Owner's Representative's satisfaction. At a minimum, the Contractor shall provide the quality of materials as generally specified throughout the Contract Documents.

3.7 Cleaning and Removal

3.7.1 The Contractor shall keep the Work site and surrounding areas free from accumulation of waste materials, rubbish, debris, and dirt resulting from the Work and shall clean the Work site and surrounding areas as requested by the Architect and the Owner's Representative, including mowing of grass greater than six (6) inches high. The Contractor shall be responsible for the cost of clean up and removal of debris from premises. The building and premises shall be kept clean, safe, in a workmanlike manner, and in compliance with OSHA standards and code at all times. At completion of the Work, the Contractor shall remove from and about the Work site tools, construction equipment, machinery, fencing, and

surplus materials. Further, at the completion of the Work, all dirt, stains, and smudges shall be removed from every part of the building, all glass in doors and windows shall be washed, and entire Work shall be left broom clean in a finished state ready for occupancy. The Contractor shall advise his Subcontractors of any tier of this provision, and the Contractor shall be fully responsible for leaving the premises in a finished state ready for use to the satisfaction of the Owner's Representative. If the Contractor fails to comply with the provisions of this Paragraph, the Owner may do so, and the cost thereof shall be charged to the Contractor.

3.8 Cutting and Patching

3.8.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

3.8.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.8.3 If the Work involves renovation and/or alteration of existing improvements, the Contractor acknowledges that cutting and patching of the Work is essential for the Work to be successfully completed. The Contractor shall perform any cutting, altering, patching, and/or fitting of the Work necessary for the Work and the existing improvements to be fully integrated and to present the visual appearance of an entire, completed, and unified project. In performing any Work which requires cutting or patching, the Contractor shall use its best efforts to protect and preserve the visual appearance and aesthetics of the Work to the reasonable satisfaction of both the Owner's Representative and the Architect.

3.9 Indemnification

3.9.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Owner, the Architect, the Architect's consultants, and the agents, employees, representatives, insurers and re-insurers of any of the foregoing (hereafter collectively referred to as the "Indemnitees") from and against claims, damages (including loss of use of the Work itself), punitive damages, penalties and civil fines unless expressly prohibited by law, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from performance of the Work to the extent caused in whole or in part by negligent acts or omissions or other fault of the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by the negligent acts or omissions or other fault of a party indemnified hereunder. The Contractor's obligations hereunder are in addition to and shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that the Owner may possess. If one or more of the Indemnitees demand performance by the Contractor of obligations under this Paragraph or other provisions of the Contract Documents and if the Contractor refuses to assume or perform, or delays in assuming or performing the Contractor's obligations, Contractor shall pay each Indemnitee who has made such demand its respective attorneys' fees, costs, and other expenses incurred in enforcing this provision. The defense and indemnity required herein shall be a binding obligation upon the Contractor whether or not an Indemnitee has made such demand. Even if a defense is successful to a claim or demand for which the Contractor is obligated to indemnify the Indemnitees from under this Paragraph, the Contractor shall remain liable for all costs of defense.

3.9.2 The indemnity obligations of the Contractor under this Section 3.9 shall survive termination of this Contract or final payment thereunder. In the event of any claim or demand made against any party which is entitled to be indemnified hereunder, the Owner may in its sole discretion reserve, return or apply any monies due or to become due the Contractor under the Contract for the purpose of resolving such claims; provided, however, that the Owner may release such funds if the Contractor provides the Owner with reasonable assurance of protection of the Owner's interests. The Owner shall in its sole discretion determine if such assurances are reasonable. The Owner reserves the right to control the defense and settlement of any claim, action or proceeding which the Contractor has an obligation to indemnify the Indemnitees against.

3.9.3 In claims against any person or entity indemnified under this Section 3.9 by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.9 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor of any tier under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

3.9.4 The obligations of the Contractor under Paragraph 3.9.1 shall not extend to the liability of the Architect, the Architect's agents or employees, arising out of the preparation and approval of maps, drawings, opinions, reports, surveys, Change Orders, designs, or Specifications.

3.10 Patents

3.10.1 The Contractor shall hold and save harmless the Owner and its officers, agents, servants, and employees from liability of any nature or kind, including cost and expense, for,

or on account of, any patented or otherwise protected invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.

3.10.2 If the Contractor uses any design, device, or material 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 Sum include, and the Contractor shall pay all royalties, license fees or costs arising from the use of such design, device, or material in any way involved in the Work. The Contractor and/or sureties shall indemnify and save harmless the Owner from any and all claims for infringement by reason of the use of such patented or copyrighted design, device, or material 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 obligated to pay by reason of such infringement at any time during the prosecution of the Work or after completion of the Work.

3.11 Delegated Design

3.11.1 If the Contract Documents specify the Contractor is responsible for the design of any Work as part of the project, then the Contractor shall procure all design services and certifications necessary to complete the Work as specified, from a design professional licensed in the State of Missouri. The signature and seal of that design professional shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals related to the Work. The design professional shall maintain insurance as required per Article 11.

3.12 Materials, Labor, and Workmanship

3.12.1 Materials and equipment incorporated into the Work shall strictly conform to the Contract Documents and representations and approved Samples provided by Contractor and shall be of the most suitable grade of their respective kinds for their respective uses and shall be fit and sufficient for the purpose intended, merchantable, of good new material and workmanship, and free from defect. Workmanship shall be in accordance with the highest standard in the industry and free from defect in strict accordance with the Contract Documents.

3.12.2 Materials and fixtures shall be new and of latest design unless otherwise specified and shall provide the most efficient operating and maintenance costs to the Owner. All Work shall be performed by competent workers and shall be of best quality.

3.12.3 The Contractor shall carefully examine the Contract Documents and shall be responsible for the proper fitting of his material, equipment, and apparatus into the building.

3.12.4 The Contractor shall base its bid only on the Contract Documents.

3.12.5 Materials and workmanship shall be subject to inspection, examination, and testing by the Architect and the Owner's Representative at any and all times during manufacture, installation, and construction of any of them, at places where such manufacture, installation, or construction is performed.

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

3.12.7 Unless otherwise specifically noted, the Contractor shall provide and pay for supervision, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.12.8 Substitutions

3.12.8.1 A substitution is a Contractor proposal of an alternate product or method in lieu of what has been specified or shown in the Contract Documents, which is not an "or equal" as set forth in Section 3.13.

3.12.8.2 The Contractor may make a proposal to the Architect and the Owner's Representative to use substitute products or methods as set forth herein, but the Architect's and the Owner's Representative's decision concerning acceptance of a substitute shall be final. The Contractor must do so in writing and setting forth the following:

.1 Full explanation of the proposed substitution and submittal of all supporting data including technical information, catalog cuts, warranties, test results, installation instructions, operating procedures, and other like information necessary for a complete evaluation of the substitution.

.2 Reasons the substitution is advantageous and necessary, including the benefits to the Owner and the Work in the event the substitution is acceptable.

.3 The adjustment, if any, in the Contract Sum, in the event the substitution is acceptable.

.4 The adjustment, if any, in the time of completion of the Contract and the construction schedule in the event the substitution is acceptable.

.5 An affidavit stating that (a) the proposed substitution conforms to and meets all of the Contract Document requirements and is code compliant, except as specifically disclosed and set forth in the affidavit and (b) the Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified by the Architect. Proposals for substitutions shall be submitted to the Architect and the Owner's Representative in sufficient time to allow the Architect and the Owner's Representative no less than

ten (10) working days for review. No substitution will be considered or allowed without the Contractor's submittal of complete substantiating data and information as stated herein.

3.12.8.3 Substitutions may be rejected without explanation at the Owner's sole discretion and will be considered only under one or more of the following conditions:

.1 Required for compliance with interpretation of code requirements or insurance regulations then existing;

.2 Unavailability of specified products, through no fault of the Contractor;

.3 Material delivered fails to comply with the Contract Documents;

.4 Subsequent information discloses inability of specified products to perform properly or to fit in designated space;

.5 Manufacturer/fabricator refuses to certify or guarantee performance of specified product as required; or

.6 When in the judgment of the Owner or the Architect, a substitution would be substantially to the Owner's best interests, in terms of cost, time, or other considerations.

3.12.8.4 Whether or not any proposed substitution is accepted by the Owner or the Architect, the Contractor shall reimburse the Owner for any fees charged by the Architect or other consultants for evaluating each proposed substitution.

3.13 Approved Equal

3.13.1 Whenever in the Contract Documents any article, appliance, device, or material is designated by the name of a manufacturer, vendor, or by any proprietary or trade name, the words "or approved equal," shall automatically follow and shall be implied unless specifically indicated otherwise. The 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's Representative and the Architect they are equal in design, appearance, spare parts availability, strength, durability, usefulness, serviceability, operation cost, maintenance cost, and convenience for the purpose intended. Any general listings of approved manufacturers in any Contract Document shall be for informational purposes only and it shall be the Contractor's sole responsibility to ensure that any proposed "or equal" complies with the requirements of the Contract Documents and is code compliant.

3.13.2 The Contractor shall submit to the Architect and the Owner's Representative a written and full description of the proposed "or equal" including all supporting data, including technical information, catalog cuts, warranties, test results, installation instructions, operating procedures, and similar information demonstrating that the proposed "or equal" strictly complies with the Contract Documents. The Architect or the Owner's Representative shall take appropriate action with respect to the submission of a proposed "or equal" item. If Contractor fails to submit proposed "or equals" as set forth herein, it shall waive any right to supply such items. The Contract Sum and Contract Time shall not be adjusted as a result of any failure by Contractor to submit proposed "or equals" as provided for herein. All documents submitted in connection with preparing an "or equal" shall be clearly and obviously marked as a proposed "or equal" submission.

3.13.3 No approvals or action taken by the Architect or Owner's Representative shall relieve the Contractor from its obligation to ensure that an "or equal" article, appliance, devise, or material strictly complies with the requirements of the Contract Documents. The Contractor shall not propose "or equal" items in connection with Shop Drawings or other Submittals, and the Contractor acknowledges and agrees that no approvals or action taken by the Architect or Owner's Representative with respect to Shop Drawings or other Submittals shall constitute approval of any "or equal" item or relieve the Contractor from its sole and exclusive responsibility. Any changes required in the details and dimensions indicated in the Contract Documents for the incorporation or installation of any "or equal" item supplied by the Contractor shall be properly made and approved by the Architect at the expense of the Contractor. No "or equal" items will be permitted for components of or extensions to existing systems when, in the opinion of the Architect, the named manufacturer must be provided in order to ensure compatibility with the existing systems, including, but not limited to, mechanical systems, electrical systems, fire alarms, smoke detectors, etc. No action will be taken by the Architect with respect to proposed "or equal" items prior to receipt of bids, unless otherwise noted in the Special Conditions.

3.14 Shop Drawings, Product Data, Samples, and Coordination Drawings/BIM Models

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

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

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

3.14.4 Coordination Drawings are drawings for the integration of the Work, including work first shown in detail on Shop Drawings or product data. Coordination Drawings show sequencing and relationship of separate units of work which must interface in a restricted manner to fit in the space provided, or function as indicated. Coordination Drawings are the responsibility of the Contractor and are submitted for informational purposes. The Special Conditions will state

whether Coordination Drawings are required. BIM models may be used for coordination in lieu of Coordination Drawings at the Contractor's discretion, unless required in the Special Conditions. The final Coordination Drawings/BIM Model will not change the Contract Documents, unless approved by a fully executed Change Order describing the specific modifications that are being made to the Contract Documents.

3.14.5 Shop Drawings, Coordination Drawings/BIM Models, Product Data, Samples, and similar submittals (collectively referred to as "Submittals") are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

3.14.6 The Contractor shall schedule submittal of Shop Drawings and Product Data to the Architect so that no delays will result in delivery of materials and equipment, advising the Architect of priority for checking of Shop Drawings and Product Data, but a minimum of two weeks shall be provided for this purpose. Because time is of the essence in this Contract, unless noted otherwise in the Special Conditions or Technical Specifications, all Submittals, Shop Drawings and Samples must be submitted as required to maintain the Contractor's plan for proceeding but must be submitted within ninety (90) days of the Notice to Proceed. If the Contractor believes that this milestone is unreasonable for any submittal, the Contractor shall request an extension of this milestone, within sixty (60) days of Notice to Proceed, for each submittal that cannot meet the milestone. The request shall contain a reasonable explanation as to why the ninety (90)-day milestone is unrealistic and shall specify a date on which the submittal will be provided, for approval by the Owner's Representative. Failure of the Contractor to comply with this Section may result in delays in the submittal approval process and/or charges for expediting approval, both of which will be the responsibility of the Contractor.

3.14.7 The Contractor, at its own expense, shall submit Samples required by the Contract Documents with reasonable promptness as to cause no delay in the Work or the activities of separate contractors and no later than twenty (20) days before materials are required to be ordered for scheduled delivery to the Work site. Samples shall be labeled to designate material or products represented, grade, place of origin, name of producer, name of the Contractor and the name and number of the Owner's project. Quantities of Samples shall be twice the number required for testing so that the Architect can return one set of the Samples. Materials delivered before receipt of Architect's approval may be rejected by the Architect and in such event, the Contractor shall immediately remove all such materials from the Work site. When requested by the Architect or the Owner's Representative, Samples of finished masonry and field applied paints and finishes shall be located as directed and shall include sample panels built at the site of approximately twenty (20) square feet each.

3.14.8 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples, or similar submittals until the respective submittal has been approved by the Architect. Such Work shall be in accordance with approved Submittals.

3.14.9 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents such Submittals strictly comply with the requirements of the Contract Documents and that the Contractor has determined and verified field measurements and field construction criteria related thereto, that materials are fit for their intended use and that the fabrication, shipping, handling, storage, assembly and installation of all materials, systems and equipment are in accordance with best practices in the industry and are in strict compliance with any applicable requirements of the Contract Documents. The Contractor shall also coordinate each Submittal with other Submittals.

3.14.10 The Contractor shall be responsible for the correctness and accuracy of the dimensions, measurements and other information contained in the Submittals.

3.14.11 Each Submittal will bear a stamp or specific indication that the Submittal complies with the Contract Documents and the Contractor has satisfied its obligations under the Contract Documents with respect to the Contractor's review and approval of that Submittal. Each Submittal shall bear the signature of the representative of the Contractor who approved the Submittal, together with the Contractor's name, Owner's name, number of the Project, and the item name and specification section number.

3.14.12 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by the Architect's approval thereof. Specifically, but not by way of limitation, the Contractor acknowledges that the Architect's approval of Shop Drawings shall not relieve the Contractor for responsibility for errors and omissions in the Shop Drawings since the Contractor is responsible for the correctness of dimensions, details and the design of adequate connections and details contained in the Shop Drawings.

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

3.14.14 The Contractor represents and warrants that all Shop Drawings shall be prepared by persons and entities possessing expertise and experience in the trade for which the Shop Drawing is prepared and, if required by the Architect or

applicable laws, by a licensed engineer or other design professional.

3.15 Record Drawings

3.15.1 The Contractor shall maintain a set of Record Drawings on site in good condition and shall use colored pencils to mark up said set with "record information" in a legible manner to show: (1) bidding addendums, (2) executed Change Orders, (3) deviations from the Drawings made during construction; (4) details in the Work not previously shown; (5) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (6) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings, and stub-outs; and (7) such other information as either the Owner or the Architect may reasonably request. The prints for Record Drawing use will be a set of "blue line" prints provided by the Architect to the Contractor at the start of construction. Upon Substantial Completion of the Work, the Contractor shall deliver all Record Drawings to the Owner and the Architect for approval. If not approved, the Contractor shall make the revisions requested by the Architect or the Owner's Representative. Final payment and any retainage shall not be due and owing to the Contractor until the final Record Drawings marked by the Contractor as required above are delivered to the Owner.

3.16.1 Operating Instructions and Service Manuals

3.16.1 The Contractor shall submit four (4) volumes of operating instructions and service manuals to the Architect before completing 50% of the adjusted contract amount. Payments beyond 50% of the adjusted contract amount may be withheld until all operating instructions and service manuals are received. The operating instructions and service manuals shall contain:

.1 Start-up and Shutdown 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 include model number, capacities, flow rate, and name-plate data.

.4 Service Instructions: The Contractor shall be required to provide the following information for all pieces of equipment.

.4.1 Recommended spare parts including catalog number and name of local suppliers or factory representative.

.4.2 Belt sizes, types, and lengths.

.4.3 Wiring diagrams.

.5 Manufacturer's Certificate of Warranty: Manufacturer's certificates of warranty shall be obtained for all major equipment. Warranty shall be obtained for at least one year from the date of Substantial Completion. Where longer period is required by the Contract Documents, the longer period shall govern.

.6 Parts catalogs: For each piece of equipment furnished, a parts catalog or similar document shall be provided which identifies the components by number for replacement ordering.

3.16.2 Submission

.1 Manuals shall be bound into volumes of standard 8 1/2" x 11" hard binders. Large drawings too bulky to be folded into 8 1/2" x 11" shall be separately bound or folded and in brown envelopes, cross-referenced and indexed with the manuals.

.2 The manuals shall identify the Owner's project name, project number, and include the name and address of the Contractor and major Subcontractors of any tier who were involved with the activity described in that particular manual.

3.17 Taxes

3.17.1 The Contractor shall pay all applicable sales, consumer, use, and similar taxes for the Work which are legally enacted when the bids are received, whether or not yet effective or scheduled to go into effect. However, certain purchases by the Contractor of materials incorporated in or consumed in the Work are exempt from certain sales tax pursuant to Section 144.062, RSMo. The Contractor shall be issued a Project Tax Exemption Certificate for this Work to obtain the benefits of Section 144.062, RSMo.

3.17.2 The Contractor shall furnish this certificate to all Subcontractors, and any person or entity purchasing materials for the Work shall present such certificate to all material suppliers as authorization to purchase, on behalf of the Owner, all tangible personal property and materials to be incorporated into or consumed in the Work and no other on a tax-exempt basis. Such suppliers shall provide to the purchasing party invoices bearing the name of the exempt entity and the project identification number. Nothing in this Section shall be deemed to exempt from any sales or similar tax the purchase of any construction machinery, equipment or tools used in construction, repairing or remodeling facilities for the Owner. All invoices for all personal property and materials purchased under a Project Tax Exemption Certificate shall be retained by the Contractor for a period of five years and shall be subject to audit by the Director of Revenue.

3.17.3 Any excess resalable tangible personal property or materials which were purchased for the project under this Project Tax Exemption Certificate but which were not incorporated into or consumed in the Work shall either be returned to the supplier for credit or the appropriate sales or use tax on such excess property or materials shall be reported on a return and paid by such purchasing party not later than the due date of the purchasing party's Missouri sales or use tax return following the month in which it was determined that the materials were not used in the Work.

3.17.4 If it is determined that sales tax is owed by the Contractor on property and materials due to the failure of the Owner to revise the certificate expiration date to cover the applicable date of purchase, the Owner shall be liable for the tax owed.

3.17.5 The Owner shall not be responsible for any tax liability due to the Contractor's neglect to make timely orders, payments, etc. or the Contractor's misuse of the Project Tax Exemption Certificate. The Contractor represents that the Project Tax Exemption Certificate shall be used in accordance with Section 144.062, RSMo and the terms of the Project Tax Exemption Certificate. The Contractor shall indemnify the Owner for any loss or expense, including but not limited to, reasonable attorneys' fees, arising out of the Contractor's use of the Project Tax Exemption Certificate.

3.18 Contractor's Construction Schedules

3.18.1 The Contractor, within fifteen (15) days after the issuance of the Notice to Proceed, shall prepare and submit for the Owner's and the Architect's information the Contractor's construction schedule for the Work and shall set forth interim dates for completion of various components of the Work and Work Milestone Dates as defined herein. The schedule shall not exceed time limits current under the Contract Documents, shall be revised on a monthly basis or as requested by the Owner's Representative as required by the conditions of the Work, and shall provide for expeditious and practicable execution of the Work. The Contractor shall conform to the most recent schedule.

3.18.2 The construction schedule shall be in a detailed format satisfactory to the Owner's Representative and the Architect and in accordance with the detailed schedule requirements set forth in this document and the Special Conditions. If the Owner's Representative or the Architect has a reasonable objection to the schedule submitted by Contractor, the construction schedule shall be promptly revised by the Contractor. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays.

3.18.3 As time is of the essence to this Contract, the University expects that the Contractor will take all necessary steps to ensure that the project construction schedule shall be prepared in accordance with the specific requirements of the Special Conditions to this Contract. At a minimum, the Contractor shall comply with the following:

.1 The schedule shall be prepared using Primavera P3, Oracle P6, Microsoft Project or other software acceptable to the Owner's Representative.

.2 The schedule shall be prepared and maintained in CPM format, in accordance with Construction CPM Scheduling, published by the Associated General Contractors of American (AGC).

.3 Prior to submittal to the Owner's Representative for review, the Contractor shall obtain full buy-in to the schedule from all major Subcontractors, in writing if so, requested by Owner's Representative.

.4 Schedule shall be updated, in accordance with Construction CPM Scheduling, published by the AGC, on a monthly basis at minimum, prior to, and submitted with, the monthly pay application or as requested by the Owner's Representative.

.5 Along with the update the Contractor shall submit a narrative report addressing all changes, delays and impacts, including weather to the schedule during the last month, and explain how the end date has been impacted by same.

.6 The submission of the updated schedule certifies that all delays and impacts that have occurred on or to the project during the previous month have been factored into the update and are fully integrated into the schedule and the projected completion date.

Failure to comply with any of these requirements will be considered a material breach of this Contract. See Special Conditions for detailed scheduling requirements.

3.18. 4 In the event the Owner's Representative or the Architect determines that the performance of the Work, as of a Milestone Date, has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, facilities, (3) expediting delivery of materials, and (4) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule. The Contractor shall not be entitled to an adjustment in the Contract Sum concerning Extraordinary Measures required by the Owner under or pursuant to this Paragraph. The Owner may exercise the rights furnished the Owner under or pursuant to this Paragraph as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date or completion date set forth in the Contract Documents.

ARTICLE 4
ADMINISTRATION OF THE CONTRACT

4.1 Rights of the Owner

4.1.1 The Owner's Representative will administer the Construction Contract. The Architect will assist the Owner's Representative with the administration of the Contract as indicated in these Contract Documents.

4.1.2 If, in the judgment of the Owner's Representative, it becomes necessary to accelerate the Work, the Contractor, when directed by the Owner's Representative in writing, shall

cease work at any point and transfer its workers to such point or points and execute such portions of the Work as may be required to enable others to hasten and properly engage and carry out the Work, all as directed by the Owner's Representative. The additional cost of accelerating the Work, if any, will be borne by the Owner, unless the Contractor's work progress is behind schedule as shown on the most recent progress schedule.

4.1.3 If the Contractor refuses, for any reason, to proceed with what the Owner believes to be Contract Work, the Owner may issue a Construction Directive, directing the Contractor to proceed. The Contractor shall be obligated to promptly proceed with such work. If the Contractor feels that it is entitled to additional compensation as a result of a Construction Directive, it may file a claim for additional compensation and/or time, in accordance with 4.4 of this Contract.

4.1.4 The Owner's Representative may, by written notice, require the Contractor to remove from involvement with the Work, any of the Contractor's personnel or the personnel of its Subcontractors of any tier whom the Owner's Representative may deem abusive, incompetent, careless, or a hindrance to proper and timely execution of the Work. The Contractor shall comply with such notice promptly, but without detriment to the Work or its progress.

4.1.5 The Owner's Representative will schedule Work status meetings that shall be attended by representatives of the Contractor and appropriate Subcontractors of any tier. Material suppliers shall attend status meetings if required by the Owner's Representative. These meetings shall include preconstruction meetings.

4.1.6 The Owner does not allow smoking on University property.

4.2 Rights of the Architect

4.2.1 The Architect will interpret requirements of the Contract Documents with respect to the quality, quantity, and other technical requirements of the Work itself within a reasonable time after written request of the Contractor. The Contractor shall provide Owner's Representative a copy of such written request.

4.3 Review of the Work

4.3.1 The Architect, the Owner's Representative, and the Owner's Authorized Agent shall, at all times, have access to the Work; and the Contractor shall provide proper and safe facilities for such access.

4.3.2 The Owner's Representative shall have authority to reject Work that does not strictly comply with the requirements of the Contract Documents. Whenever the Owner's Representative considers it necessary or advisable for implementation of the intent of the Contract Documents, Owner's Representative shall have the authority to require additional inspection or testing of the Work, whether or not such Work is fabricated, installed, or completed.

4.3.3 The fact that the Architect or the Owner's Representative observed, or failed to observe, faulty Work, or Work done which is not in accordance with the Contract Documents, regardless of whether or not the Owner has released final payment, shall not relieve the Contractor from responsibility for all damages and additional costs of the Owner as a result of defective or faulty Work.

4.4 Claims

4.4.1 A Claim is a demand or assertion by the Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or any other relief with respect to the terms of the Contract. The term "Claim(s)" also includes demands and assertions of the Contractor arising out of or relating to the Contract Documents, including Claims based upon breach of contract, mistake, misrepresentation, or other cause for Contract Modification or rescission. Claims must be made by written notice. The Contractor shall have the responsibility to substantiate Claims.

4.4.2 Claims by the Contractor must be made promptly, and no later than within fourteen (14) days after occurrence of the event giving rise to such Claim. Claims must be made by written notice. Such notice shall include a detailed statement setting forth all reasons for the Claim and the amount of additional money and additional time claimed by the Contractor. The notice of Claims shall also strictly comply with all other provisions of the Contract Documents. The Contractor shall not be entitled to rely upon any grounds or basis for additional money on additional time not specifically set forth in the notice of Claim. All Claims not made in the manner provided herein shall be deemed waived and of no effect. The Contractor shall furnish the Owner and the Architect such timely written notice of any Claim provided for herein, including, without limitation, those in connection with alleged concealed or unknown conditions, and shall cooperate with the Owner and the Architect in any effort to mitigate the alleged or potential damages, delay or other adverse consequences arising out of the condition which is the cause of such a Claim.

4.4.3 Pending final resolution of a Claim, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments that are not in dispute in accordance with the Contract Documents.

4.5 Claims for Concealed or Unknown Conditions

4.5.1 If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the Contractor shall be given to the Owner's Representative promptly before conditions are

disturbed, and in no event later than three (3) days after first observance of the conditions. The Owner's Representative will promptly investigate such conditions. If such conditions differ materially, as provided for above and cause an increase or decrease in the Contractor's cost, or time, required for performance of the Work, an equitable adjustment in the Contract Sum or Contract Time, or both, shall be made, subject to the provisions and restrictions set for herein. If the Owner's Representative determines that the conditions at the site are not materially different from those indicated in the Contract Documents, and that no change in the terms of the Contract is justified, the Owner's Representative will so notify the Contractor in writing. If the Contractor disputes the finding of the Owner's Representative that no change in the terms of the Contract terms is justified, the Contractor shall proceed with the Work, taking whatever steps are necessary to overcome or correct such conditions so that Contractor can proceed in a timely manner. The Contractor may have the right to file a Claim in accordance with the Contract Documents.

4.5.2 It is expressly agreed that no adjustment in the Contract Time or Contract Sum shall be permitted, however, in connection with a concealed or unknown condition which does not differ materially from those conditions disclosed or which reasonably should have been disclosed by the Contractor's (1) prior inspections, tests, reviews and preconstruction investigations for the Project, or (2) inspections, tests, reviews and preconstruction inspections which the Contractor had the opportunity to make or should have performed in connection with the Project.

4.6 Claim for Additional Cost

4.6.1 If the Contractor makes a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. In addition to all other requirements for notice of a Claim, said notice shall detail and itemize the amount of all Claims and shall contain sufficient data to permit evaluation of same by the Owner.

4.7 Claims for Additional Time

4.7.1 If the Contractor makes a Claim for an increase in the Contract Time, written notice as provided herein shall be given. In addition to other requirements for notice of a Claim, the Contractor shall include an estimate of the probable effect of delay upon the progress of the Work, utilizing a CPM Time Impact Schedule Analysis, (TIA) as defined in the AGC Scheduling Manual. In the case of a continuing delay, only one Claim is necessary.

.1 Time extensions will be considered for excusable delays only. That is, delays that are beyond the control and/or contractual responsibility of the Contractor.

4.7.2 If weather days are the basis for a Claim for additional time, such Claim shall be documented by the Contractor by data acceptable to the Owner's Representative substantiating that weather conditions for the period of time in question, had an adverse effect on the critical path of the scheduled construction. Weather days shall be defined as days on which critical path work cannot proceed due to weather conditions (including but not limited to rain, snow, etc.), in excess of the number of days shown on the anticipated weather day schedule in the Special Conditions. To be considered a weather day, at least four (4) working hours must be lost due to the weather conditions on a critical path scope item for that day. Weather days and anticipated weather days listed in the Special Conditions shall only apply to Monday through Friday. A weather day claim cannot be made for Saturdays, Sundays, New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving Day and Christmas Day, unless that specific day was approved in writing for work by the Owner's Representative.

.1 The Contractor must have fulfilled its contractual obligations with respect to temporary facilities and protection of its work, and worker protection for hot and cold weather per OSHA guidelines.

.2 If the contractual obligations have been satisfied, the Owner will review requests for non-compensable time extensions for critical path activities as follows:

.2.1 If the Contractor cannot work on a critical path activity due to adverse weather, after implementing all reasonable temporary weather protection, the Contractor will so notify the Owner's Representative. Each week, the Contractor will notify the Owner's Representative of the number of adverse weather days that it believes it has experienced in the previous week. As provided in the Contract, until such time as the weather days acknowledged by the Owner's Representative exceed the number of days of adverse weather contemplated in the Special Conditions, no request for extension of the Contract Time will be considered.

.2.2 If the Contractor has accumulated in excess of the number of adverse weather days contemplated in the Special Conditions due to the stoppage of work on critical path activities due to adverse weather, the Owner will consider a time extension request from the Contractor that is submitted in accordance with the Contract requirements. The Owner will provide a Change Order extending the time for contract completion or direct an acceleration of the Work in accordance with the Contract terms and conditions to recover the time lost due to adverse weather in excess of the number of adverse weather working days contemplated in the Special Conditions.

4.7.3 A Force Majeure event or circumstance shall not be the basis of a claim by the Contractor seeking an adjustment in the Contract amount for costs or expenses of any type. With the exception of weather delays, which are administered under Article 4, and not withstanding other requirements of the Contract, all Force Majeure events resulting in a delay to the critical path of the project shall be administered as provided in Article 8.

4.7.4 The Owner will consider and evaluate requests for time extensions due to changes or other events beyond the control of the Contractor on a monthly basis only, with the

submission of the Contractor's updated schedule, in conjunction with the monthly application for payment.

4.8 Resolution of Claims and Disputes

4.8.1 The Owner's Representative will review Claims and take one or more of the following preliminary actions within ten days of receipt of a Claim: (1) request additional supporting data from the Contractor, (2) reject the Claim in whole or in part, (3) approve the Claim, or (4) suggest a compromise.

4.8.2 If a Claim has not been resolved, the Contractor shall, within ten (10) days after the Owner's Representative's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested, (2) modify the initial Claim, or (3) notify the Owner's Representative that the initial Claim stands.

4.8.3 If a Claim has not been resolved after consideration of the foregoing and of further information presented by the Contractor, the Contractor has the right to seek administrative review as set forth in Section 4.9. However, Owner's Representative's decisions on matters relating to aesthetics will be final.

4.9 Administrative Review

4.9.1 Claims not resolved pursuant to the procedures set forth in the Contract Documents except with respect to Owner's Representative's decision on matters relating to aesthetic effect, and except for claims which have been waived by the making or acceptance of final payment, or the Contractor's acceptance of payments in full for changes in work may be submitted to administrative review as provided in this Section. All requests for administrative review shall be made in writing.

4.9.2 Upon written request from the Contractor, the Owner's Review Administrator authorized by the Campus Contracting Officer will convene a review meeting between the Contractor and Owner's Representative within fifteen (15) days of receipt of such written request. The Contractor and Owner's Representative will be allowed to present written documentation with respect to the Claim(s) before or during the meeting. The Contractor and Owner's Representative will be allowed to present the testimony of any knowledgeable person regarding the Claim at the review meeting. The Owner's Review Administrator will issue a written summary of the review meeting and decision to resolve the Claim within fifteen (15) days. If the Contractor is in agreement with the decision the Contractor shall notify the Owner's Review Administrator in writing within five (5) days, and appropriate documentation will be signed by the parties to resolve the Claim.

4.9.3 If the Contractor is not in agreement with the proposal of the Owner's Review Administrator as to the resolution of the Claim, the Contractor may file a written appeal with the UM System Contracting Officer, [in care of the Executive Director of Facilities Planning and Development, University of Missouri, 130 General Services Building, University of Missouri, Columbia, Missouri 65211] within fifteen (15) days after receipt of the Owner's Review Administrator's proposal. The UM System Contracting Officer will call a meeting of the Contractor, the Owner's Representative, and the Owner's Review Administrator by written notice, within thirty (30) days after receipt of the Contractor's written appeal. The Owner's Review Administrator shall provide the UM System Contracting Officer with a copy of the written decision and summary of the review meeting, the Contractor's corrections, or comments regarding the summary of the review meeting, and any written documentation presented by the Contractor and the Owner's Representative at the initial review meeting. The parties may present further documentation and/or present the testimony of any knowledgeable person regarding the Claim at the meeting called by the UM System Contracting Officer.

4.9.4 The UM System Contracting Officer will issue a written decision to resolve the claim within fifteen (15) days after the meeting. If the Contractor is in agreement with the UM System Contracting Officer's proposal, the Contractor shall notify the UM System Contracting Officer in writing within five (5) days, and the Contractor and the Owner shall sign appropriate documents. The issuance of the UM System Contracting Officer's written proposal shall conclude the administrative review process even if the Contractor is not in agreement. However, proposals and any opinions expressed in such proposals issued under this Section will not be binding on the Contractor nor will the decisions or any opinions expressed be admissible in any legal actions arising from the Claim and will not be deemed to remove any right or remedy of the Contractor as may otherwise exist by virtue of Contract Documents or Law. The Contractor and the Owner agree that the Missouri Circuit Court for the County where the Work is located shall have exclusive jurisdiction to determine all issues between them. The Contractor agrees not to file any complaint, petition, lawsuit or legal proceeding against the Owner except with such Missouri Circuit Court.

ARTICLE 5
SUBCONTRACTORS

5.1 Award of Subcontracts

5.1.1 Pursuant to Article 9, the Contractor shall furnish the Owner and the Architect, in writing, with the name, and trade for each Subcontractor and the names of all persons or entities proposed as manufacturers of products, materials and equipment identified in the Contract Documents and where applicable, the name of the installing contractor. The Owner's Representative will reply to the Contractor in writing if the Owner has reasonable objection to any such proposed person or entity. The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and timely objection.

5.1.2 The Contractor may request to change a Subcontractor. Any such request shall be made in writing to the Owner's Representative. The Contractor shall not change a Subcontractor, person, or entity previously disclosed if the Owner makes reasonable objection to such change.

5.1.3 The Contractor shall be responsible to the Owner for acts, defaults, and omissions of its Subcontractors of any tier.

5.2 Subcontractual Relations

5.2.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor of any tier, to the extent of the Work to be performed by the Subcontractor of any tier, to be bound to the Contractor by terms of the Contract Documents and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect. Each subcontract agreement of any tier shall preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor of any tier so that subcontracting thereof will not prejudice such rights and shall allow to the Subcontractor of any tier, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with its sub-subcontractors. The Contractor shall make available to each proposed Subcontractor of any tier, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor of any tier shall be bound Subcontractors of any tier shall similarly make copies of applicable portions of such documents available to their respective proposed Subcontractors of any tier.

5.2.2 All agreements between the Contractor and a Subcontractor or supplier shall contain provisions whereby Subcontractor or supplier waives all rights against the Owner, Contractor, Owner's Representative, the Architect and all other Additional Insureds for all losses and damages caused by, arising out of, or resulting from any of the perils covered by property or builders risk insurance coverage required of the Contractor in the Contract Documents. If Contractor fails to include said provisions in all subcontracts, Contractor shall indemnify, defend and hold all the above entities harmless in the event of any legal action by Subcontractor or supplier. If insureds on any such policies require separate waiver forms to be signed by any Subcontractors of any tier or suppliers, Contractor shall obtain the same.

5.3 Contingent Assignment of Subcontract

5.3.1 No assignment by the Contractor of any amount or any part of the Contract or of the funds to be received thereunder will be recognized unless such assignment has had the written approval of the Owner, and the surety has been given due notice of such assignment and has furnished written consent hereto. 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 the Contract and to claims and to 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 6
SEPARATE CONTRACTS AND COOPERATION

6.1 The Owner reserves the right to let other contracts in connection with the Work.

6.2 It shall be the duty of each Contractor to whom Work may be awarded, as well as all Subcontractors of any tier employed by them, to communicate immediately with each other in order to schedule Work, locate storage facilities, etc., in a manner that will permit all Contractors to work in harmony in order that Work may be completed in the manner and within the time specified in the Contract Documents.

6.3 No Contractor shall delay another Contractor by neglecting to perform the Contractor's work at the proper time. Each Contractor shall be required to coordinate the Contractor's work with other Contractors to afford others reasonable opportunity for execution of their work. Any costs caused by defective, non-compliant, or ill-timed work, including actual damages and liquidated damages for delay, if applicable, shall be borne by the Contractor responsible therefor.

6.4 Each Contractor shall be responsible for damage to the Owner's or another Contractor's property done by the Contractor or the Contractor's employees, through his or their fault or negligence. If any Contractor shall cause damage to any other Contractor, the Contractor causing such damage shall upon notice of any claim, settle with such Contractor.

6.5 The Contractor shall not claim from the Owner money damages or extra compensation under this Contract when delayed in initiating or completing his performance hereunder, when the delay is caused by labor disputes, acts of God, or the failure of any other Contractor to complete the Contractor's performance under any Contract with the Owner, where any such cause is beyond the Owner's reasonable control.

6.6 Progress schedule of the Contractor for the Work shall be submitted to other Contractors as necessary to permit coordinating their progress schedules.

6.7 If Contractors or Subcontractors of any tier refuse to cooperate with the instructions and reasonable requests of

other contractors performing work for the Owner under separate contract, in the overall coordinating of the Work, the Owner's Representative may take such appropriate action and issue such instructions as in his judgement may be required to avoid unnecessary and unwarranted delay.

ARTICLE 7
CHANGES IN THE WORK

7.1 CHANGE ORDERS

7.1.1 A Change Order is a written instrument prepared by the Owner and signed by the Owner and the Contractor formalizing their agreement on the following:

.1 a change in the Work

.2 the amount of an adjustment, if any, in the Contract amount

.3 an adjustment, if any, in the Contract Time

7.1.2 The Owner may at any time, order additions, deletions, or revisions in the Work by a Change Order or a Construction Change Directive. Such Change Order or Construction Change Directive shall not invalidate the Contract and requires no notice to the surety. Upon receipt of any such document, or written authorization from the Owner's Representative directing the Contractor to proceed pending receipt of the document, the Contractor shall promptly proceed with the Work involved in accordance with the terms set forth therein.

7.1.3 Until such time as the Change Order is formalized and signed by both the Owner and the Contractor it shall be considered a Change Order Request.

7.1.4 The amount of adjustment in the Contract price for authorized Change Orders will be agreed upon before such Change Orders becomes effective and will be determined as follows:

.1 By a lump sum proposal from the Contractor and the Subcontractors of any tier, including overhead and profit.

.2 By a time and material basis with or without a specified maximum. The Contractor shall submit to the Owner's Representative itemized time and material sheets depicting labor, materials, equipment utilized in completing the Work on a daily basis for the Owner's Representative approval. If this pricing option is utilized, the Contractor may be required to submit weekly reports summarizing costs to date on time and material Change Order Requests not yet finalized.

.3 By unit prices contained in the Contractor's original bid and incorporated in the Construction Contract or subsequently agreed upon. Such unit prices contained in the Contractor's original proposal are understood to include the Contractor's overhead and profit. If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order that application of such unit prices to quantities of the Work proposed will cause substantial inequity to the Owner or to the Contractor, the applicable unit prices shall be equitably adjusted.

7.1.5 The Contractor shall submit all fully documented Change Order Requests with corresponding back-up documentation within the time requested by the Owner but no later than fourteen (14) working days following 1.) the Owner's request for pricing in the case of a lump sum; or 2.) the completion of unit price or time and material work.

7.1.6 The Contractor shall submit Change Order Requests in sufficient detail to allow evaluation by the Owner. Such requests shall be fully itemized by units of labor, material and equipment and overhead and profit. Such breakdowns shall be itemized as follows:

.1 Labor: The Contractor's proposal shall include breakdowns by labor, by trade, indicating number of hours and cost per hour for each Subcontractor as applicable. Such breakdowns shall only include employees in the direct employ of the Contractor or Subcontractors in the performance of the Work. Such employees shall only include laborers at the site, mechanics, craftsmen and foremen. Payroll cost shall include base rate salaries and wages plus the cost of fringe benefits required by agreement or custom and social security contributions, unemployment, payroll taxes and workers' or workmen's compensation insurance and other customary and legally required taxes paid by the Contractor or Subcontractors. Any item or expense outside of these categories is not allowed. The expense of performing Work after regular working hours, on Saturdays, Sundays or legal holidays shall not be included in the above, unless approved in writing and in advance by Owner.

.2 Material, supplies, consumables and equipment to be incorporated into the Work at actual invoice cost to the Contractor or Subcontractors; breakdowns showing all material, installed equipment and consumables fully itemized with number of units installed and cost per unit extended. Any singular item or items in aggregate greater than one thousand dollars ($1,000) in cost shall be supported with supplier invoices at the request of the Owner's Representative. Normal hand tools are not compensable.

.3 Equipment: Breakdown for required equipment shall itemize (at a minimum) delivery / pick-up charge, hourly rate and hours used. Operator hours and rate shall not be included in the equipment breakdown. Contractor must use the most cost-effective equipment available in the area and should not exceed the rates listed in the Rental Rate Blue Book for Construction Equipment (Blue Book). The Contractor shall submit documentation for the Blue Book to support the rate being requested.

7.2 Construction Change Directive

7.2.1 A construction change directive is a written order prepared and signed by the Owner, issued with supporting

documents prepared by the Architect (if applicable), directing a change in the Work prior to agreement on adjustment of the Contract amount or Contract Time, or both. A Construction Change Directive shall be used in the absence of complete agreement between the Owner and Contractor on the terms of a Change Order. If the Construction Change Directive allows an adjustment of the Contract amount or time, such adjustment amount shall be based on one of the following methods:

.1 A lump sum agreement, properly itemized and supported by substantiating documents of sufficient detail to allow evaluation.

.2 By unit prices contained in the Contractor's original proposal and incorporated in the Construction Contract or subsequently agreed upon.

.3 A method agreed to by both the Owner and the Contractor with a mutually agreeable fee for overhead and profit.

.4 In the absence of an agreement between the Owner and the Contractor on the method of establishing an adjustment of the Contract amount, the Owner, with the assistance of the Architect, shall determine the adjustment amount on the basis of expenditures by the Contractor for labor, materials, equipment, and other costs consistent with other provisions of the Contract. The Contractor shall keep and submit to the Owner an itemized accounting of all cost components, either expended or saved, while performing the Work covered under the Construction Change Directive.

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

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

7.3 Overhead and Profit

7.3.1 Overhead and Profit on Change Orders shall be applied as follows:

.1 The overhead and profit charged by the Contractor and Subcontractors shall be considered to include, but not limited to, job site office and clerical expense, normal hand tools, incidental job supervision, field supervision, payroll costs and other compensation for project manager, officers, executives, principals, general managers, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, time-keepers, and other personnel employed whether at the site or in principal or a branch office for general superintendent and administration of the Work.

.2 The percentages for overhead and profit charged on Change Orders shall be negotiated and may vary accordino the nature, extent, and complexity of the Work involved but in no case shall exceed the following:

15%	To the Contractor or the Subcontractor of any tier for Work performed with their respective forces or materials purchased
5%	To the Contractor on Work performed by other than the Contractor's forces
5%	To first tier Subcontractor on Work performed by his Subcontractor

.3 The Contractor will be allowed to add 2% for the cost of bonding and insurance to their cost of work. This 2% shall be allowed on the total cost of the added work, including overhead and profit.

.4 Not more than three mark-ups, not to exceed individual maximums shown above, shall be allowed regardless of the number of tier Subcontractors. Overhead and profit shall be shown separately for each Subcontractor of any tier and the Contractor.

.5 On proposals covering both increases and decreases in the amount of the Contract, the application of overhead and profit shall be on the net change in direct cost for the Contractor or Subcontractor of any tier performing the Work.

.6 The percentages for overhead and profit credit to the Owner on Change Orders that are strictly decreases in the quantity of work or materials shall be negotiated and may vary according to the nature of the Work involved, but shall not be less than the following:

Overhead and Profit

7.5%	Credit to the Owner from the Contractor or Subcontractor of any tier for Work performed with their respective forces or materials purchased
2.5%	Credit to the Owner from the Contractor on Work performed by other than his forces
2.5%	Credit to the Owner from the first tier Subcontractor on Work performed by his Subcontractor of any tier

7.4 Extended General Conditions

7.4.1 The Contractor acknowledges that the percentage mark-up allowed on Change Orders for overhead and profit cover the Contractor's cost of administering and executing the Work, inclusive of Change Orders that increase the Contract Time. The Contractor further acknowledges that no compensation beyond the specified mark-up percentages for extended overhead shall be due or payable as a result of an increase in the Contract Time.

7.4.2 The Owner may reimburse the Contractor for extended overhead if an extension of the Contract Time is granted by the Owner, in accordance with 4.7.1 and the Owner determines that the extension of the Contract Time creates an inequitable condition for the Contractor. If these

conditions are determined by the Owner to exist, the Contractor may be reimbursed by unit prices contained in the Contractor's original bid and incorporated in the Construction Contract or by unit prices subsequently agreed upon.

7.4.3 If unit prices are subsequently agreed upon, the Contractor's compensation shall be limited as follows:

.1 For the portion of the direct payroll cost of the Contractor's project manager expended in completing the Work and the direct payroll cost of other onsite administrative staff not included in Article 7.3.1. Direct payroll cost shall include base rate salaries and wages plus the cost of fringe benefits required by agreement or custom and social security contributions, unemployment, payroll taxes and workers' or workmen's compensation insurance and other customary and legally required taxes paid by the Contractor;

.2 Cost of the Contractor's temporary office, including temporary office utilities expense;

.3 Cost of temporary utilities required in the performance of the Work;

.4 Profit not to exceed 5% of the total extended overhead direct costs;

7.4.4 All costs not falling into one of these categories and costs of the Contractor's staff not employed onsite are not allowed.

7.5 Emergency Work

7.5.1 If, during the course of the Work, the Owner has need to engage the Contractor in emergency work, whether related to the Work or not, the Contractor shall immediately proceed with the emergency work as directed by the Owner under the applicable provisions of the Contract. In so doing, the Contractor agrees that all provisions of the Contract remain in full force and effect and the schedule for the Work is not impacted in any way unless explicitly agreed to in writing by the Owner.

ARTICLE 8
TIME

8.1 Progress and Completion

8.1.1 The Contractor acknowledges and agrees that time is of the essence of this Contract.

8.1.2 The Contract Time is the period of time set forth in the Contract for Construction required for Substantial Completion and Final Completion of the entire Work or portions of the Work as defined in the Contract Documents. Time limits stated in the Contract Documents are of the essence of the Contract. The Contract Time may only be changed by a Change Order. By executing the Contract, the Contractor confirms that the Contract Time is a sufficient period for performing the Work in its entirety.

8.1.3 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance and bonds required by Article 11 to be furnished by the Contractor.

8.1.4 The Contractor shall proceed expeditiously and diligently with adequate forces and shall achieve Substantial Completion and Final Completion within the time specified in the Contract Documents.

8.2 Delay in Completion

8.2.1 The Contractor shall be liable for all of the Owner's damages for delay in achieving Substantial Completion and/or Final Completion of the entire Work or portions of Work as set forth in the Contract Documents within the Contract Time unless liquidated damages are specifically provided for in the Contract Documents. If liquidated damages are specifically provided for in the Contract for Construction, the Contractor shall be liable for such liquidated damages as set forth in Section 8.3

8.2.2 All time limits stated in the Contract are of the essence of the Contract. However, if the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Owner or by the Owner's Representative, by changes ordered in the Work, Force Majeure including but not limited to war, armed conflict, riot, civil commotion or disorder, act of terrorism or sabotage; epidemic, pandemic, outbreaks of infectious disease or any other public health crisis, including quarantine or other employee restrictions, compliance with any law or governmental order, rule, regulation or direction, curfew restriction, act of God or natural disaster such as earthquake, volcanic activity, landslide, tidal wave, tsunami, flood, damage or destruction by lightning, drought; explosion, fire, destruction of machines, equipment, prolonged break-down of transport, telecommunication or electric current; general labor disturbance such as but not limited to boycott, strike and lock-out, occupation of factories and premises, or any other causes beyond the Contractor's reasonable control which the Owner's Representative determines may justify delay then, upon submission of the Time Impact Schedule Analysis (TIA) justifying the delay called out in Section 4.7 of these General Conditions, the Contract Time may be extended for a reasonable time to the extent such delay will prevent the Contractor from achieving Substantial Completion and/or Final Completion within the Contract Time and if performance of the Work is not, was not or would not have been delayed by any other cause for which the Contractor is not entitled to an extension of the Contract Time under the Contract Documents. It shall be a condition precedent to any adjustment of the Contract Time that the Contractor provides the Owner's Representative with written notice of the cause of delay within seven (7) days from the occurrence of the event or condition which caused the claimed delay. If a Force Majeure is approved by the Owner as the basis for a delay claim, an adjustment in the Contract Time to the extent the Force Majeure impacts the schedule is the only remedy. No increase

in the Contract Sum for any reason shall be allowed due to a Force Majeure.

8.2.3 The Contractor further acknowledges and agrees that adjustments in the Contract Time will be permitted for a delay only to the extent such delay (1) is not caused, or could not have been anticipated, by the Contractor, (2) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay, (3) prevents the Contractor from completing its Work by the Contract Time, and (4) is of a duration not less than one (1) day. Delays attributable to and within the control of a Subcontractor or supplier shall not justify an extension of the Contract Time.

8.2.4 Notwithstanding anything to the contrary in the Contract Documents, except as otherwise noted in these General Conditions, an extension in the Contract Time, to the extent permitted under this Article, shall be the sole remedy of the Contractor for any (1) delay in the commencement, prosecution or completion of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity, or (4) other claims due to or caused by any events beyond the control of both the Owner and the Contractor defined herein as Force Majeure. In no event shall the Contractor be entitled to any compensation or recovery of any damages or any portion of damages resulting from delays caused by or within the control of the Contractor or by acts or omissions of the Contractor or its Subcontractors of any tier or delays beyond the control of both the Owner and the Contractor. If the Contractor contends that delay, hindrance, obstruction or other adverse condition results from acts or omissions of the Owner, the Owner's Representative or the Architect, the Contractor shall provide written notice to the Owner within seven (7) calendar days of the event giving rise to such claim. The Contractor shall only be entitled to an adjustment in the Contract Sum to the extent that such acts or omissions continue after the Contractor's written notice to the Owner of such acts or omissions, but in no case shall Force Majeure be the basis of an increase in the Contract Sum. The Owner's exercise of any of its rights or remedies under the Contract Documents (including, without limitation, ordering changes in the Work, or directing suspension, rescheduling or correction of the Work) regardless of the extent or frequency of the Owner's exercise of such rights or remedies, shall not be the basis of any Claim for an increase in the Contract Sum or Contract Time. In the event Contractor is entitled to an adjustment in the Contract Sum for any delay, hindrance, obstruction or other adverse condition caused by the acts or omissions of the Owner, the Owner's Representative or the Architect, the Contractor shall only be entitled to its actual direct costs caused thereby and the Contractor shall not be entitled to and waives any right to special, indirect, or consequential damages including loss of profits, loss of savings or revenues, loss of anticipated profits, labor inefficiencies, idle equipment, home office overhead, and similar type of damages.

8.2.5 If the Contractor submits a progress report or any construction schedule indicating, or otherwise expressing an intention to achieve completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied. Further, the Contractor acknowledges and agrees that even if the Contractor intends or is able to complete the Work prior to the Contract Time, it shall assert no Claim and the Owner shall not be liable to the Contractor for any failure of the Contractor, regardless of the cause of the failure, to complete the Work prior to the Contract Time.

8.3 Liquidated Damages

8.3.1 If Liquidated Damages are prescribed on the Bid Form and Special Conditions in the Contract Documents, the Owner may deduct from the Contract Sum and retain as Liquidated Damages, and not as penalty or forfeiture, the sum stipulated in the Contract Documents for each calendar day after the date specified for completion of the Work that the entire Work is not substantially complete and/or finally complete.

8.3.2 The Owner's Representative shall establish the date of Substantial Completion and the date of Final Completion of the Work which shall be conclusive and binding on the Owner and the Contractor for the purpose of determining whether or not Liquidated Damages shall be assessed under terms hereof and the sum total amount due.

8.3.3 Liquidated Damages or any matter related thereto shall not relieve the Contractor or the Contractor's surety of any responsibility or obligation under this Contract.

ARTICLE 9
PAYMENTS AND COMPLETION

9.1 Commencement, Prosecution, and Completion

9.1.1 The Contractor shall commence Work within five (5) days upon the date of a "Notice to Proceed" from the Owner or the date fixed in the Notice to Proceed. The Contractor shall prosecute the Work with faithfulness and diligence, and the Contractor shall complete the Work within the Contract Time set forth in the Contract Documents.

9.1.2 The Owner will prepare and forward three (3) copies of the Contract and Performance Bond to the bidder to whom the Contract for the Work is awarded and such bidder shall return two (2) properly executed prescribed copies of the Contract and Bond to the Owner.

9.1.3 The construction period, when specified in consecutive calendar days, shall begin when the Contractor receives notice requesting the instruments listed in below. Before the Owner will issue Notice to Proceed to permit the Contractor to begin Work, the Owner shall have received the following instruments, properly executed as described in the

Contract Documents. The documents below shall have been received by the Owner within fifteen (15) days after receipt of request for documents:

.1 Contract
.2 Bond (See Article 11)
.3 Insurance (See Article 11)
.4 List of Subcontractors of any tier

9.1.4 In the event the Contractor fails to provide the Owner such documents, the Contractor may not enter upon the site of the Work until such documents are provided. The date the Contractor is required to commence and complete the Work shall not be affected by the Owner denying the Contractor access to the site as a result of the Contractor's failure to provide such documents and the Contractor shall not be entitled to an adjustment of the Contract Time or Contract Sum as a result of its failure to provide the Owner the required documents

9.1.5 Contracts executed by partnerships shall be signed by all general partners of the partnership. Contracts signed by corporations shall be signed by the President or Vice President and the Secretary or Assistant Secretary. In case the Assistant Secretary or Vice President signs, it shall be so indicated by writing the word "Asst." or "Vice" in front of the words "Secretary" and "President". The corporate seal of the corporation shall be affixed. For all other types of entities, the Contractor and the person signing the Contract on behalf of the Contractor represent and warrant that the person signing the Contract has the legal authority to bind the Contractor to the Contract.

9.1.6 Any successful bidder which is a corporation organized in a state other than Missouri or any bidder doing business in the State of Missouri under a fictitious name shall furnish, at no cost to the Owner, no later than the time at which the executed Contract for Construction, the Payment Bond, and the Performance Bond are returned, a properly certified copy of its current Certificate of Authority and License to do business in the State of Missouri. No contract will be executed by the Owner until such certificate is furnished by the bidder, unless there already is on file with the Owner a current certificate, in which event, no additional certificate will be required during the period of time for which such current certificate remains in effect.

9.1.7 Within fifteen (15) calendar days of the issuance of a Notice to Proceed, the Contractor shall submit one (1) signed copy of the following instruments. No payment will be processed until all of these instruments are received and approved by the Owner's Representative.

.1 Reproducible progress and payment schedule
.2 Contractor's Schedule of Values
.3 List of material suppliers
.4 Itemized breakdown of all labor rates for each classification. Overhead and profit shall not be included. Payroll cost shall include base rate salaries and wages plus the cost of fringe benefits required by agreement or custom and social security contributions, unemployment, payroll taxes and workers' or workmen's compensation insurance and other customary and legally required taxes paid by the Contractor or Subcontractors. Any item or expense outside of these categories is not allowed. The expense of performing Work after regular working hours, on Saturdays, Sundays or legal holidays shall not be included in the above, unless approved in writing and in advance by the Owner.
.5 Itemized breakdown of anticipated equipment rates (breakout operator rate). Overhead and profit shall not be included. Breakdown for required equipment shall itemize (at a minimum) delivery/ pick-up charge, hourly rate and hours used. Operator hours and rate shall not be included in the equipment breakdown. The Contractor must use the most cost-effective equipment available in the area and should not exceed the rates listed in the Rental Rate Blue Book for Construction Equipment (Blue Book). The Contractor shall submit documentation for the Blue Book to support the rate being requested.

9.1.8 The Contractor shall be paid electronically using the Owner's web-based payment program with a direct electronic transfer from the Owner's account into the Contractor's account. The Contractor must submit the following information to the Owner's Representative:

.1 Bank Transit Number for the Contractor's bank into which the electronic deposit will be made.
.2 Bank Account Number for the Contractor's account into which the electronic deposit will be made.
.3 Contractor's E-Mail address so that formal notification of the deposit by the Owner can be provided.

9.2 Contract Sum

9.2.1 The Owner shall compensate the Contractor for all Work described herein, and in the Contract Documents the Contract Sum set forth in the Contract for Construction, subject to additions and deletions as provided hereunder.

9.3 Schedule of Values

9.3.1 Within fifteen (15) days after receipt of the Notice to Proceed, the Contractor shall submit to the Owner's Representative a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Owner's Representative may require. This schedule, unless objected to by the Owner's Representative, shall be used as a basis for reviewing the Contractor's Applications for Payment. The values set forth in such schedule may, at the Owner's option be used in any manner as fixing a basis for additions to or deletions from the Contract Sum.

9.3.2 The progress and payment schedule of values shall show the following:

.1 Enough detail as necessary to adequately evaluate the actual percent complete of any line item on a monthly basis, as determined by the Owner's Representative.
.2 Line items, when being performed by a Subcontractor or material supplier, shall correlate directly back to the

subcontract or purchase order amount if requested by the Owner's Representative.

9.4 Applications for Payment

9.4.1 The Contractor shall submit monthly to the Owner's Representative and the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be supported by such data substantiating the Contractor's right to payment as the Owner's Representative or the Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage as provided for herein.

9.4.2 Such applications shall not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier

9.4.3 Progress payments shall be made on account of materials and equipment delivered to the site and incorporated in the Work. No payments will be made for materials and equipment stored at the Project site but not yet incorporated into the Work except as provided in Paragraph 9.4.4.

9.4.4 If approved in writing and in advance by the Owner, progress payments may be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. The Owner may in its sole discretion refuse to grant approval for payments for materials and equipment stored at the Project site but not yet incorporated in the Work. Any approval by the Owner for payment for materials and equipment delivered and suitably stored at the site, or stored offsite as noted below, for subsequent incorporation in the Work shall be conditioned upon Contractor's demonstrating that such materials and equipment are adequately protected from weather, damage, vandalism and theft and that such materials and equipment have been inventoried and stored in accordance with procedures established by or approved by the Owner. Nothing in this clause shall imply or create any liability on the part of the Owner for the Contractor's inventory and storage procedures or for any loss or damage to material, equipment or supplies stored on the site, whether incorporated into the Work or not. In the event any such loss or damage occurs, the Contractor remains solely responsible for all costs associated with replacement of the affected materials, supplies and equipment including labor and incidental costs, and shall have no claim against the Owner for such loss.

No allowance shall be made in the project pay requests for materials not delivered to the site of the Work and incorporated into the Work, except as noted below. For the purposes of this Contract, offsite is defined as any location not owned or leased by the Owner. The Contractor shall submit a list of materials that they are requesting payment for offsite storage within sixty (60) days of Notice to Proceed.

.1 Items considered to be major items of considerable magnitude, if suitably stored, may be allowed in project pay requests on the basis of ninety percent (90%) of invoices

.2 Determination of acceptable "major items of considerable magnitude" and "suitably stored" shall be made by the Owner's Representative.

.3 Aggregate quantities of materials not considered unique to this project will not be considered for offsite storage payment.

.4 The Contractor shall submit to the Owner's Representative a list of the material for which application for payment for offsite storage is anticipated no less than forty-five days (45) prior to the submission of the applicable pay request. The list shall include a material description, applicable division, quantity, and discounts offered to the Owner for early payment. The Contractor shall also submit the location the material will be stored and the method of protection

.5 The storage facility shall be subject to approval by the Owner's representative, shall be located within an acceptable distance of the project sites as established by the Owner's Representative and all materials for the Owner's project must be stored separately from all other items within the storage facility and shall be labeled and stored in the name of "The Curators of the University of Missouri."

.6 The Owner's Representative shall be provided a minimum of two weeks' notice to visit the storage facility and inspect the stored material prior to submission of the pay request.

.7 Upon favorable inspection by the Owner's Representative, the Contractor shall, at the Owner's option, submit a Bill of Sale on forms provided by the Owner's Representative, transferring title of the material or equipment to "The Curators of the University of Missouri."

.8 An invoice provided by the supplier shall be included with the applicable pay request.

.9 The Contractor shall remain fully responsible for all items, until acceptance of the project by the Owner.

.10 The Contractor shall reimburse all costs incurred by the Owner in inspecting and verifying all material stored offsite, including mileage, airfare, meals, lodging and time, charged at a reasonable hourly rate.

.11 The Contractor shall furnish and maintain insurance covering the replacement cost of the material stored offsite against all losses and shall furnish proof of coverage with the application for payment for material stored offsite.

.12 The Contractor is responsible for all costs related to storage and handling of material stored offsite unless otherwise directed by the Owner's Representative.

9.4.5 The Application for Payment shall constitute a representation by the Contractor to the Owner that the Work has progressed to the point indicated; the quality of the Work covered by the Application for Payment is in accordance with

the Contract Documents; and the Contractor is entitled to payment in the amount requested.

9.4.6 The Contractor will be reimbursed for ninety-five percent (95%) of the value of all labor furnished and material installed and computed in the same manner, less all previous payments made. On projects where a bond is not required, the Contractor will be reimbursed for ninety percent (90%) of the value of all labor furnished and material installed and computed in the same manner, less all previous payments made. The Owner shall hold the remaining five (5) or ten (10) percent, as applicable, as retainage until Substantial Completion of the work as set forth in 9.9.3 below.

9.5 Approval for Payment

9.5.1 The Owner's Representative will, within fifteen (15) days after receipt of the Contractor's Application for Payment, either approve Contractor's Application for Payment for such amount as the Owner's Representative determines is properly due or notify the Contractor of the Owner's Representative's reasons for withholding certification in whole or in part as provided in Section 9.6.

9.6 Decisions to Withhold Approval

9.6.1 The Owner's Representative may decide not to certify payment and may withhold approval in whole or in part, to the extent reasonably necessary to protect the Owner. If the Owner's Representative is unable to approve payment in the amount of the Application, the Owner's Representative will notify the Contractor as provided in Paragraph 9.5.1. If the Contractor and Owner's Representative cannot agree on a revised amount, the Owner's Representative will promptly issue approval for payment for the amount for which the Owner's Representative is able to determine is due to the Contractor. The Owner's Representative may also decide not to approve payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of approval for payment previously issued, to such extent as may be necessary in the Owner's Representative opinion to protect the Owner from loss because of:

.1 defective or non-compliant Work not remedied, or damage to completed Work;
.2 failure to supply sufficient skilled workers or suitable materials;
.3 third party claims filed or reasonable evidence indicating probable filing of such claims;
.4 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment, the Owner may, at its sole option issue joint checks to Subcontractors who have presented evidence that it has not been paid in accordance with the Contract;
.5 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
.6 damage to the Owner or another contractor;
.7 reasonable evidence that the Work will not be completed within the Contract Time or an unsatisfactory rate of progress made by the Contractor;
.8 The Contractor's failure to comply with applicable laws;
.9 The Contractor's or Subcontractor's failure to comply with applicable wage requirements; or
.10 The Contractor's failure to carry out the Work in strict accordance with the Contract Documents.

9.6.2 When the above reasons for withholding approval are removed, approval will be made for amounts previously withheld.

9.7 Progress Payments

9.7.1 Based upon Applications for Payment submitted to the Owner by the Contractor and approvals issued by the Owner's Representative, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

9.7.2 The period covered by each Application for Payment shall be one (1) calendar month.

9.7.3 The Owner shall make payment to the Contractor for amounts due and approved by the Owner's Representative not later than thirty (30) days after the Owner approves a properly detailed Application for Payment which is in compliance with the Contract Documents. The Owner shall not have the obligation to process or pay such Application for Payment until it receives an Application for Payment satisfying such requirements.

9.7.4 Based on the Schedule of Values submitted by the Contractor, Applications for Payment submitted by the Contractor shall indicate the actual percentage of completion of each portion of the Contractor's Work as of the end of the period covered by the Application for Payment.

9.7.5 Within fifteen (15) days following receipt payment from the Owner, the Contractor shall pay each Subcontractor and supplier out of the amount paid to the Contractor on account of such Subcontractor's or supplier's portion of the Work, the amount to which said Subcontractor or supplier is entitled, reflecting percentages actually retained from payments to the Contractor on account of each Subcontractor's or supplier's portion of the Work, in full compliance with state statute. The Contractor shall, by appropriate agreement with each Subcontractor or supplier, require each Subcontractor or supplier to make payments to Sub-subcontractors in similar manner. If the Owner, the architect or engineer of record, and the Contractor all determine that a particular Subcontractor's portion of the Work has been satisfactorily completed, including corrective work and closeout requirements, payment equal to one hundred percent (100%) of the subcontract amount for that Subcontractor can be made to the Contractor prior to Substantial Completion. The Contractor shall request such adjustment as necessary to enable the Contractor to pay the Subcontractor in full. This does not relieve the Contractor of any responsibilities under the terms of the Contract and any deficiencies subsequently discovered shall be corrected at no cost to the Owner.

9.7.6 Neither the Owner nor the Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor of any tier nor a laborer or employee of the Contractor except to the extent required by law. Retainage provided for by the Contract Documents are to be retained and held for the sole protection of the Owner, and no other person, firm or corporation shall have any claim or right whatsoever thereto.

9.7.7 An approval for payment by the Owner's Representative, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.8 Failure of Payment

9.8.1 If the Owner is entitled to reimbursement or payment from the Contractor under or pursuant to the Contract Documents, such payment by the Contractor shall be made promptly upon demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor fails to promptly make any payment due the Owner, or the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective Work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to: (1) deduct an amount equal to that to which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner, or (2) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that to which the Owner is entitled.

9.9 Substantial Completion

9.9.1 Substantial Completion is the stage in the progress of the Work as defined in Paragraph 1.1.14 as certified by the Owner.

9.9.2 When the Contractor considers the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Owner and the Architect. The Owner's Representative will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Owner's Representative's inspection discloses any item which is not in accordance with the requirements of the Contract Documents, the Contractor shall complete or correct such item upon notification by the Owner's Representative. If the Owner's Representative determines the work is not substantially completed and accepted, then the Owner or the Owner's Representative shall provide a written explanation of why the work is not considered substantially completed and accepted within fourteen calendar days to the Contractor, who shall then provide such notice to the subcontractor or suppliers responsible for such work. The Contractor shall then submit a request for another inspection by the Owner's Representative to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Owner will issue a Certificate of Substantial Completion. Substantial Completion shall transfer from the Contractor to the Owner responsibilities for security, maintenance, heat, utilities, damage to the Work and insurance. In no event shall the Contractor have more than thirty (30) days to complete all items on the Punch List and achieve Final Completion. Warranties required by the Contract Documents shall commence on the date of Substantial Completion or as agreed otherwise.

9.9.3 At the date of Substantial Completion, the Contractor may apply for, and if approved by Owner's Representative, the Owner, subject to the provisions herein, shall release the retainage, increasing the total payments to one hundred percent (100%) of the Contract Sum less one hundred fifty percent (150%) of the value of any incomplete Work and unsettled claims, as determined by the Owner's Representative.

9.10 Partial Occupancy or Use

9.10.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and the Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, security, maintenance, heat, utilities, damage to the Work and insurance. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by the Owner's Representative.

9.10.2 Immediately before such partial occupancy or use, the Owner, and the Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.11 Final Completion and Final Payment

9.11.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Owner's Representative and the Architect will promptly make such inspection and, when the Owner's Representative and the Architect find the Work acceptable under the Contract Documents and the Contract fully performed, the Owner's Representative will promptly issue a final approval for payment; otherwise, the Owner's Representative will return the Contractor's Final Application for Payment to the Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. Submission of a Final Application for Payment shall constitute a further representation that conditions listed in Paragraph 9.11.2 as precedent to the Contractor being entitled to final payment have been fulfilled. All warranties and guarantees required under or pursuant to the Contract Documents shall be assembled and delivered by the Contractor to the Owner's Representative as part of the final Application for Payment. The final approval for payment will not be issued

by the Owner's Representative until all warranties and guarantees have been received and accepted by the Owner.

9.11.2 The Owner will request the Contractor to submit the application for final payment along with a manually signed notarized letter on the Contractor's letterhead certifying that:

.1 Labor costs, prevailing wage rates, fringe benefits and material costs have been paid.

.2 Subcontractors of any tier and manufacturers furnishing materials and labor for the project have fully completed their Work and have been paid in full.

.3 The project has been fully completed in accordance with the Contract Documents as modified by Change Orders.

.4 The acceptance by the Contractor of its final payment, by check or electronic transfer, shall be and operate as a release of all claims of the Contractor against the Owner for all things done or furnished or relating to the Work and for every act or alleged neglect of the Owner arising out of the Work.

9.11.3 Final payment constituting the entire unpaid balance due shall be paid by the Owner to the Contractor within thirty (30) days after the Owner's receipt of Contractor's Final Application for Payment which satisfies all the requirements of the Contract Documents and the Owner's receipt of all information and documents set forth in Section 9.11.

9.11.4 No payment under this Contract, including but not limited to final payment, shall constitute acceptance by the Owner of any Work or act not in accordance with the requirements of the Contract Documents.

9.11.5 No recourse shall be had against any member of the Board of Curators, or officer thereof, for any payment under the Contract or any claim based thereon.

ARTICLE 10
PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

10.1.1 The Contractor shall at all times conduct operations under this Contract in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall promptly take precautions which are necessary and adequate against conditions created during the progress of the Contractor's activities hereunder which involve a risk of bodily harm to persons or a risk of damage to property. The Contractor shall continuously inspect Work, materials, and equipment to discover and determine any such conditions and shall be solely responsible for discovery, determination, and correction of any such conditions. The Contractor shall comply with applicable safety laws, standards, codes, and regulations in the jurisdiction where the Work is being performed, specifically, but without limiting the generality of the foregoing, with rules, regulations, and standards adopted pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970 and applicable amendments.

10.1.2 The Contractor and all Subcontractors to the Contract must require all on-site employees to complete the ten-hour construction safety training program required under Section 292.675, RSMo, unless they have previously completed the program and have documentation of having done so. The Contractor will forfeit a penalty to the Owner of $2,500 plus an additional $100 for each employee employed by the Contractor or Subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training." (Section 292.675, RSMo).

10.1.3 In the event the Contractor encounters on the site, material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), lead, mercury, or other material known to be hazardous, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner's Representative and the Architect in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner's Representative and the Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless by written agreement of the Owner's Representative and the Contractor. "Rendered Harmless" shall mean that levels of such materials are less than any applicable exposure standards, including but limited to OSHA regulations.

10.2 Safety Of Persons and Property

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

.1 students, faculty, staff, the public, construction personnel, and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor or the Contractor's Subcontractors of any tier; and

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

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

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, safeguards for safety and protection, including, but not limited to, posting danger signs and other warnings against hazards,

promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

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

10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property caused in whole or in part by the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, and for which the Contractor is responsible under Article 10, except damage or loss attributable solely to acts or omissions of the Owner or the Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's other obligations stated elsewhere in the Contract.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents, and the maintaining, enforcing and supervising of safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner's Representative and the Architect. The Contractor shall hold regularly scheduled safety meetings to instruct the Contractor's personnel on safety practices, accident avoidance and prevention, and the Project Safety Program. The Contractor shall furnish safety equipment and enforce the use of such equipment by its employees and its Subcontractors of any tier.

10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.2.8 The Contractor shall promptly report in writing to the Owner all accidents arising out of or in connection with the Work which cause death, lost time injury, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately.

10.2.9 The Contractor shall promptly notify in writing to the Owner of any claims for injury or damage to personal property related to the Work, either by or against the Contractor.

ARTICLE 11
INSURANCE AND BONDS

11.1 Insurance

11.1.1 The Contractor shall secure from the date of the Contract for Construction and maintain for such periods of time as set forth below, insurance of such types and in such amounts specified below, to protect the Contractor, the Owner and others against all hazards or risks of loss described below. The form of such insurance together with carriers thereof, in each case, shall be approved by the Owner, but, regardless of such approval, it shall be the responsibility of the Contractor to maintain the insurance coverages set forth herein.

11.1.2 The Contractor shall not be allowed on the Owner's property without proof of the insurance coverages set forth herein

11.2 Commercial General Liability

11.2.1 The Contractor shall secure and maintain from the date of the Contract, and for a period of at least ten (10) years from the date of Final Completion of the entire Work, Commercial General Liability insurance ("CGL") with a combined single limit of not less than $2,000,000 per occurrence, $5,000,000 general aggregate, $5,000,000 products and completed operations aggregate, and $1,000,000 personal injury and advertising injury. General Aggregate must apply per project. An umbrella policy may be used to satisfy these limits.

11.2.2 CGL insurance shall be written on a Commercial form CG 00 01 or an equivalent form providing the same coverages and shall cover claims and liability in connection with or resulting from the Contractor's operations and activities under the Contract, for personal injuries, occupational sickness, disease, death or damage to property of others, including loss of use resulting therefrom, arising out of any operations or activities of the Contractor, its agents, or any Subcontractors of any tier or by anyone directly or indirectly employed by either of them.

11.2.3 CGL insurance shall include premises, operations, independent contractors, products-completed operations, personal injury and advertising injury and liability assumed under an insured contract (including the tort liability of another assumed in a business contract) coverages. In particular, and not by way of any limitation, the CGL insurance shall cover the Contractor's indemnity obligations contained in the Contract Documents.

11.2.4 There shall be no endorsement or modification of the CGL policy limiting the scope of coverage for liability arising from blasting, explosion, collapse, or underground property damage.

11.2.5 The Contractor waives all rights against the Owner and its agents, officers, representatives, and employees for recovery of damages to the extent those damages are covered by the CGL policy required hereunder.

11.3 Licensed for Use Vehicle Liability

11.3.1 The Contractor shall secure and maintain from the date of the Contract for Construction until the date of Final Completion of the entire Work, insurance, to be on comprehensive form, which shall protect the Contractor against any and all claims for all injuries and all damage to property arising from the use of automobiles, trucks and motorized vehicles, in connection with the performance of Work under this Contract, and shall cover the operation on or off the site of the Work of all motor vehicles licensed for highway use whether they are owned, non-owned or hired. Such insurance shall include contractual liability coverage and shall provide coverage on the basis of the date of any accident. The liability limits under such policy shall not be less than $2,000,000 combined single limit for bodily injury and property damage per accident.

11.3.2 The Contractor waives all rights against the Owner and its agents, officers, directors, and employees for recovery of damages to the extent such damages are covered by the automobile liability insurance required hereunder.

11.4 Workers' Compensation Insurance

11.4.1 The Contractor shall purchase and maintain workers' compensation insurance and employers' liability insurance which shall protect the Contractor from claims for injury, sickness, disease or death of the Contractor's employees or statutory employees. The insurance policies required hereunder shall include an "all states" or "other states" endorsement. In case any Work is subcontracted, the Contractor shall require any Subcontractor of any tier to provide the insurance coverages required under this Paragraph.

11.4.2 The Contractor's workers' compensation insurance coverage shall be in compliance with all applicable laws, including the statutes of the State of Missouri. The Contractor's employers' liability coverage limits shall not be less than $1,000,000 each accident for bodily injury by accident or $1,000,000 each employee for bodily injury by disease.

11.5 General Insurance Requirements and Professional Liability

11.5.1 Any Consultant/Contractor providing professional design services as part of the Contract shall be required to provide and maintain, from the date of this Contract and for a period of ten (10) years after the date of Final Completion, Professional Liability insurance, in a claims made form, to cover any claims, including but not limited to errors, omissions, and negligence, which may arise from the design and related services performed by the Consultant. The minimum limits for such policy shall be $1,000,000.00 per claim/$1,000,000.00 aggregate.

11.5.2 "The officers, employees, and agents of The Curators of the University of Missouri" shall be added as Additional Insured with respect to the CGL, umbrella/excess and Automobile Liability polices required herein. A certificate of insurance evidencing all coverage required is to be provided at least ten (10) days prior to the inception date of the Contract between the Contractor and the University. The Contractor is required to maintain coverages as stated and required to notify the University of a carrier change or cancellation within two (2) business days. The Contractor shall provide a copy of the policy to the University upon request. The University reserves the right to require higher limits on any contract provided notice of such requirement is stated in the request for proposals for such contract. The Contractor shall request that its insurer(s) include the following disclaimer in any insurance policy, rider or endorsement issued pursuant to this Additional Insured requirement: "Neither the requirement for Additional Insured status nor any of the Contractor's action in compliance with such requirement, either direct or indirect, is intended to be and neither shall be construed as a waiver of any sovereign immunity, governmental immunity or any other type of immunity enjoyed by The Curators of the University of Missouri, the Board of Curators of the University of Missouri, or any of its officers, employees or agents."

The Additional Insured status must be conveyed by using the ISO CG 20 10 (2004) edition or equivalent and the ISO CG 20 37 (2004) edition. The policy shall be endorsed to be primary coverage and any other insurance carried by the Owner shall be excess only and will not contribute with Contractors' insurance. To confirm, the Endorsement should accompany the insurance certificate.

11.5.3 All insurance coverages procured by the Contractor shall be provided by agencies and insurance companies acceptable to and approved by Owner. All insurance coverage shall be provided by insurance companies that are duly licensed to conduct business in the State of Missouri as an admitted carrier, except that the Professional Liability insurance required herein may be provided by any insurance company legally authorized to do business in the State of Missouri. The form and content of all insurance coverage provided by the Contractor are subject to the approval of the Owner. All required insurance coverages shall be obtained and paid for by the Contractor. Any approval of the form, content or insurance company by the Owner shall not relieve the Contractor from the obligation to provide the coverages required herein. All insurance coverage procured by the Contractor shall be provided by insurance companies having policyholder ratings no lower than "A-" and financial ratings not lower than "XI" in the Best's Insurance Guide, latest edition in effect as of the date of the Contract, and subsequently in effect at the time of renewal of any policies required by the Contract Documents. Insurance coverages required hereunder shall not be subject to a deductible amount on a per-claim basis of more than $10,000.00 and shall not be subject to a per-occurrence deductible of more than $25,000.00. Insurance procured by the Contractor covering the Additional Insureds shall be primary insurance and any insurance maintained by Owner shall be excess insurance.

11.5.4 All insurance required hereunder shall provide that the insurer's cost of providing the insureds a defense and appeal, including attorneys' fees, shall be supplementary and shall not be included as part of the policy limits but shall remain the insurer's separate responsibility. The Contractor shall cause its insurance carriers for all required coverages, except for workers' compensation, to waive all rights of subrogation against the Owner and its officers, employees and agents.

11.5.5 The Contractor shall furnish the Owner with certificates, Additional Insured endorsements, policies, or binders which indicate the Contractor and/or the Owner and other Contractors (where required) are covered by the required insurance showing type, amount, class of operations covered, effective dates and dates of expiration of policies prior to commencement of the Work. The Contractor is required to maintain coverages as stated and required to notify the University of a carrier change or cancellation within two (2) business days. The University reserves the right to request a copy of the policy. The Contractor fails to provide, procure, and deliver acceptable policies of insurance or satisfactory certificates or other evidence thereof, the Owner may obtain such insurance at the cost and expense of the Contractor without notice to the Contractor.

11.5.6 With respect to all insurance coverages required to remain in force and affect after final payment, The Contractor shall provide the Owner additional certificates, policies and binders evidencing continuation of such insurance coverages along with the Contractor's application for final payment and shall provide certificates, policies and binders thereafter as requested by the Owner.

11.5.7 The maintenance in full current force and effect of such forms and amounts of insurance and bonds required by the Contract Documents shall be a condition precedent to the Contractor's exercise or enforcement of any rights under the Contract Documents.

11.5.8 Failure of the Owner to demand certificates, policies and binders evidencing insurance coverages required by the Contract Documents, approval by the Owner of such certificates, policies and binders or failure of the Owner to identify a deficiency from evidence that is provided by the Contractor shall not be construed as a waiver of the Contractor's obligations to maintain the insurance required by the Contract Documents.

11.5.9 The Owner shall have the right to terminate the Contract if the Contractor fails to maintain the insurance required by the Contract Documents.

11.5.10 If the Contractor fails to maintain the insurance required by the Contract Document, the Owner shall have the right, but not the obligation, to purchase said insurance at Contractor's expense. If the Owner is damaged by the Contractor's failure to maintain the insurance required by the Contract Documents, the Contractor shall bear all reasonable costs properly attributable to such failure.

11.5.11 By requiring the insurance set forth herein and in the Contract Documents, the Owner does not represent or warrant that coverage and limits will necessarily be adequate to protect the Contractor, and such coverages and limits shall not be deemed as a limitation on the Contractor's liability under the indemnities granted to the Owner in the Contract Documents. For those policies requiring the Owner to be added as an Additional Insured, as set forth herein, the Owner and all other indemnified parties shall be an Additional Insured for the full limits carried by the Contractor, not just the limits required herein.

11.5.12 If Contractor's liability policies do not contain a standard separation of insureds provision, such policies shall be endorsed to provide cross-liability coverage.

11.5.13 If a part of the Work hereunder is to be subcontracted, the Contractor shall: (1) cover any and all Subcontractors in its insurance policies; (2) require each Subcontractor to secure insurance which will protect said Subcontractor and supplier against all applicable hazards or risks of loss designated in accordance with Article 11; and (3) require each Subcontractor or supplier to assist in every manner possible in the reporting and investigation of any accident, and upon request, to cooperate with any insurance carrier in the handling of any claim by securing and giving evidence and obtaining the attendance of witnesses as required by any claim or suit.

11.5.14 It is understood and agreed that the insurance coverages required by the provisions of this Contract are required in the public interest and that the Owner does not assume any liability for acts of the Contractor or Subcontractors of any tier or their employees in the performance of the Contract or Work.

11.6 Builder's Risk Insurance

11.6.1 The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the State of Missouri, as an admitted carrier, builder's risk insurance on the entire Work. Such insurance shall be written on a completed value form for the entire Work. The insurance shall apply on a replacement cost basis.

11.6.2 The insurance as required herein shall name as insureds the Owner, the Contractor, and all Subcontractors of any tier. The insurance policy shall contain a provision that the insurance will not be canceled, allowed to expire or materially changed until at least thirty (30) days prior written notice has been given to the Owner.

11.6.3 The insurance as required herein shall cover the entire Work, including reasonable compensation for Architect's services and expenses made necessary by an insured loss. Insured property shall include portions of the Work located away from the site (including all offsite stored materials) but intended for use at the site and shall also cover

portions of the Work in transit. The policy shall include as insured property scaffolding, falsework, and temporary buildings located at the site. The policy shall cover the cost of removing debris, including demolition as may be made legally necessary by the operation of any law, ordinance, or regulation.

11.6.4 The insurance required herein shall be on an all risk form and shall be written to cover all risks of physical loss or damage to the insured party and shall insure at least against the perils of fire and extended coverage, theft, vandalism, malicious mischief, collapse, lightening, earthquake, flood, frost, water damage, windstorm and freezing.

11.6.5 If there are any deductibles applicable to the insurance required herein, the Contractor shall pay any part of any loss not covered because of the operation of such deductibles.

11.6.6 The insurance as required herein shall be maintained in effect until the earliest of the following dates:

.1 the date which all persons and organization who are insureds under the policy agree in writing that it shall be terminated;

.2 the date on which final payment of this Contract has been made by the Owner to the Contractor; or

.3 the date on which the insurable interests in the property of all insureds other than the Owner have ceased.

11.6.7 The Owner and the Contractor waive all rights against (1) each other and any of their Subcontractors of any tier, suppliers, agents and employees, each of the other, (2) the Architect and Architect's consultants, and (3) separate contractors described in Article 6, if any, and any of their subcontractors of any tier, suppliers, agents and employees, for damages caused by fire or other perils to the extent covered by property insurance or other insurance applicable to the Work, except such rights as they have to proceeds of such insurance. The Owner or the Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the Subcontractors of any tier, suppliers, agents, and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, was at fault or was negligent in causing the loss and whether or not the person or entity had an interest in the property damaged.

11.6.8 A loss insured under the Contractor's property insurance shall be adjusted by the Owner in good faith and made payable to the Owner for the insureds, subject to requirements of the Contract Documents. The Contractor shall pay Subcontractors of any tier their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors of any tier to make payments to their Sub-subcontractors in similar manner. The Contractor shall waive its rights to subrogation for any loss or damage to the Contractor's property or equipment coverage in favor of the Owner and other indemnified parties.

11.7 Bonds

11.7.1 When the Contract Sum exceeds Fifty Thousand Dollars ($50,000), the Contractor shall procure and furnish a Performance Bond and a Payment Bond in the form prepared by the Owner, each in an amount equal to one hundred percent (100%) of the Contract Sum, as well as adjustments to the Contract Sum. The Performance Bond shall secure and guarantee the Contractor's faithful performance of this Contract, including but not limited to the Contractor's obligation to correct defects after final payment has been made as required by the Contract Documents. The Payment Bond shall secure and guarantee payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract. These Bonds shall be in effect through the duration of the Contract plus the Guaranty Period as required by the Contract Documents.

11.7.2 The bonds required hereunder shall be executed by a responsible surety licensed in the State of Missouri, with a Best's rating of no less than A-/XI. The Contractor shall require the attorney in fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of this power of attorney indicating the monetary limit of such power.

11.7.3 If the surety of any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to conduct business in the State of Missouri is terminated, or it ceases to meet the requirements of this Section, the Contractor shall within ten (10) days substitute another bond and surety, both of which must be acceptable to the Owner. If Contractor fails to make such substitution, the Owner may procure such required bonds on behalf of the Contractor at the Contractor's expense.

11.7.4 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds to such person or entity.

11.7.5 The Contractor shall keep the surety informed of the progress of the Work, and, where necessary, obtain the surety's consent to or waiver of: (1) notice of changes in the Work; (2) request for reduction or release of retention; (3) request for final payment; and (4) any other material required by the surety. The Owner shall be notified by the Contractor, in writing, of all communications with the surety, as it relates to items one through four. The Owner may, in the Owner's sole discretion,

inform surety of the progress of the Work, any defects in the Work, or any defaults of the Contractor under the Contract Documents and obtain consents as necessary to protect the Owner's rights, interest, privileges and benefits under and pursuant to any bond issued in connection with the Work.

11.7.6 The Contractor shall indemnify and hold harmless the Owner and any agents, employees, representative or member of the Board of Curators from and against any claims, expenses, losses, costs, including reasonable attorneys' fees, as a result of any failure of the Contractor to procure the bonds required herein.

ARTICLE 12
UNCOVERING AND CORRECTION OF THE WORK

12.1 Uncovering of the Work

12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it shall, if required in writing by the Architect or the Owner's Representative, be uncovered for the Architect's observation and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered which the Architect or the Owner's Representative has not specifically requested to observe, prior to its being covered, the Architect or the Owner's Representative may request to see such Work, and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner will be responsible for payment of such costs.

12.2 Correction of the Work

12.2.1 The Architect or the Owner's Representative shall have the right to reject Work not in strict compliance with the requirements of the Contract Documents. The Contractor shall promptly correct Work rejected by the Architect or the Owner's Representative for failing to conform to the requirements of the Contract Documents, whether observed before or after final completion and whether or not fabricated, installed, or completed. If Work has been rejected by the Architect or the Owner's Representative, the Architect or the Owner's Representative shall have the right to require the Contractor to remove it from the Project site and replace it with Work that strictly conforms to the requirements of the Contract Documents regardless, if such removal and replacement results in "economic waste." The Contractor shall pay all claims, costs, losses and damages caused by or resulting from the correction, removal or replacement of defective, or non-compliant Work, including but not limited to, all costs of repair or replacement of Work of others. The Contractor shall bear costs of correcting, removing and replacing such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby. If prior to the date of final payment, the Contractor, a Subcontractor, or anyone for whom either is responsible uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

12.2.2 If, within twelve (12) months after the date of Final Completion of the Work or designated portion thereof, or after the date for commencement of warranties, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found not to be in strict accordance with the requirements of the Contract Documents, the Contractor shall correct or remove and replace such defective Work, at the Owner's discretion. Such twelve (12) month period is referred to as the "Guarantee Period." The obligations under this Paragraph shall cover any repairs, removal, and replacement to any part of the Work or other property caused by the defective Work.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct or remove it and replace such nonconforming Work. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Owner, the Owner may take action to correct or remove the nonconforming work at the Contractor's expense.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged Work or property, whether completed or partially completed, of the Owner or of others caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.6 Nothing contained in Article 12 shall be construed to establish a period of limitation with respect to other obligations that the Contractor might have under the Contract Documents. Establishment of the twelve (12) month Guarantee Period as described in Article 12 relates only to the specific obligation of the Contractor to correct, remove or replace the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations under the Contract Documents. The requirements of Article 12 are in addition to and not in limitation of any of the other

requirements of the Contract for warranties or conformance of the Work to the requirements of the Contract Documents.

12.3 Acceptance of Nonconforming Work

12.3.1 The Owner may accept Work which is not in accordance with the Contract Documents, instead of requiring its removal and correction, in its sole discretion. In such case, the Contract Sum will be adjusted as appropriate and equitable. Such adjustment shall be made whether or not final payment has been made. Nothing contained herein shall impose any obligation upon the Owner to accept nonconforming or defective Work.

ARTICLE 13
MISCELLANEOUS PROVISIONS

13.1 Written Notice

13.1.1 All notices required to be given by the Contractor under the terms of this Contract shall be made in writing. Written notice when served by the Owner will be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an office of the corporation for which it was intended, or if delivered at or sent to the last business address known to the party giving notice.

13.2 Rights and Remedies

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

13.2.2 No action or failure to act by the Owner, the Architect, or the Owner's Representative will constitute a waiver of a right or duty afforded to the Owner under the Contract Documents, nor will such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.2.3 The terms of this Contract and all representations, indemnifications, warranties and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Work and shall remain in effect so long as the Owner is entitled to protection of its rights under applicable law.

13.2.4 The Contractor shall carry out the Work and adhere to the current construction schedule during all disputes or disagreements with the Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements except as the Owner and the Contractor may otherwise agree to in writing.

13.3 Tests and Inspections

13.3.1 Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, codes, or regulations shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory, the Owner's Authorized Agent, or entity acceptable to the Owner, and the Contractor shall bear related costs of tests, inspections, and approvals as required in the Contract Documents. The Contractor shall give the Architect, the Owner's Representative, and the Owner's Authorized Agent timely notice of when and where tests and inspections are to be made so the Architect, the Owner's Representative and/or the Owner's Authorized Agent may observe procedures or perform the necessary tests or inspections.

13.3.2 If the Architect, the Owner's Representative, or the Owner's Authorized Agent determine that portions of the Work require additional testing, inspection or approval not included in the Contract Documents, or required by law, the Architect, or the Owner's Representative will instruct the Contractor to make arrangements for such additional testing, inspection, or approval by an entity acceptable to the Owner's Representative and the Contractor shall give timely notice to the Architect, the Owner's Representative or the Owner's Authorized Agent, of when and where tests and inspections are to be made so the Architect, the Owner's Representative and/or the Owner's Authorized Agent , may choose that the tests or inspections can be performed or observed. The Owner will bear such costs except as provided elsewhere in Article 13.

13.3.3 If such procedures for testing, inspection, or approval under Article 13 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's and Owner's Authorized Agent's services and expenses.

13.3.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor, and promptly delivered to the Owner's Representative and the Architect.

13.3.5 The Contractor shall take all necessary actions to ensure that all tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.3.6 The Contractor shall arrange for and pay for all costs of all testing required by the Contract Documents or any applicable laws for materials to be tested or certified at or on the place or premises of the source of the material to be supplied. The Owner shall have the right to require testing of all materials at the place of the source of the material to be supplied if not required by the Contract Documents or any applicable laws. The Owner shall bear the costs of such tests and inspections not

required by the Contract Documents or by applicable laws, unless prior defective Work provides the Architect or the Owner with a reasonable belief that additional defective Work may be found, in which case the Contractor shall be responsible for all costs of tests and inspections ordered by the Owner or the Architect, whether or not such tests or inspection reveals that Work is in compliance with the Contract Documents.

13.4 Non-discrimination and Applicable Federal and State Requirements

13.4.1 In connection with the furnishing of equipment, supplies, and/or services under the Contract, the Contractor and all subcontractors shall not discriminate against any recipients of services or employees or applicants for employment on the basis of race, color, national origin, ancestry, religion, sex, pregnancy, age, disability, protected veteran status, or any other status protected by applicable state or federal law and federal funds, if any, may not be used for programs that discriminate based on any such protected status.

13.4.2 The University serves from time to time as a contractor for and/or receives grant funding from the United States government and/or State of Missouri. Accordingly, the Contractor shall comply with all applicable state and federal laws, rules, regulations, and executive orders applicable to subcontractors of government contractors or to contractors of grant recipients, including those relating to non-discrimination, as each may be amended from time to time. Contract clauses required by the United States government or State of Missouri in such circumstances are incorporated herein by reference.

13.5 SDVE Participation Goal

13.5.1 The Contractor shall provide participation of SDVE Firms in the Project, through self-performance, if a SDVE Firm, or by subcontracting with SDVE Firms as Subcontractors, suppliers or manufacturers, in an amount that is no less than the percent of the Contract Sum that was promised in the Contractor's bid and/or the amount accepted by the Owner.

13.5.2 If the Contractor must remove any SDVE Firm as a Subcontractor, supplier or manufacturer under the Contract, the Contractor shall replace the SDVE Firm with one or more SDVE Firms in an amount equal to the dollar value of the work awarded to the SDVE Firm that was removed. The Contractor shall immediately notify the Owner's Representative in writing of the Contractor's intent to remove any SDVE Firm as a Subcontractor, supplier or manufacturer, and the Contractor's plan to provide the promised amount of SDVE Participation. All changes of a SDVE Firm as a Subcontractor of any tier, supplier or manufacturer under the Contract shall be approved by the Executive Director of Facilities Planning and Development.

13.5.3 If the Contractor fails to meet or to maintain the promised amount of SDVE Participation, the Contractor shall immediately notify the Owner's Representative and the Executive Director of Facilities Planning and Development in writing. Such notice shall include a description of the Contractor's good faith effort to provide the promised SDVE Participation.

13.5.4 If the Executive Director of Facilities Planning and Development finds that the Contractor has failed to comply in good faith with the promised SDVE Participation the Executive Director may take appropriate action, including but not limited to, declaring the Contractor ineligible to participate in any contracts with the Owner for a period not to exceed six (6) months, and/or directing that the Contractor's actions be declared a material breach of the Contract and that the Contract be terminated.

13.5.5 In the enforcement of the non-discrimination and SDVE Participation requirements in Sections 13.4 and 13.5, 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 of any tier. The Contractor shall submit a final Affidavit of SDVE Participation for each SDVE Firm at the end of the project stating the actual amount paid to the SDVE Firm.

13.6 Wage Rates (If the Contract amount is less than $75,000, the requirements of this Section will not apply. Any adjustments that increase the Contract cost above $75,000 will be subject to this Section, per Section 290.230, RSMo.)

13.6.1 The Contractor and its Subcontractors shall pay all workers performing work under the Contract not less than the prevailing hourly rate of wages or the public works contracting minimum wage, whichever is applicable, as set out in the Annual Wage Order that is attached to and made part of the specifications for work under the Contract, in accordance with Sections 290.210 to 290.340, RSMo (Missouri Prevailing Wage Law) and related regulations. The Annual Wage Order(s) published by the Missouri Department of Labor and Industrial Relations (MDLIR) for the location where the Work is performed is incorporated into the Contract by this reference. The Contractor shall use applicable MDLIR regulations, including, but not limited to, 8 CSR 30-3.010-3.060, in determining the appropriate occupational titles and rates for workers used in the execution of this Contract. All determinations and/or interpretations regarding wage rates and classification of workers will be made by the office of the University of Missouri Executive Director of Facilities Planning and Development.

13.6.2 If this Project is financed in whole or in part from Federal funds (as indicated in the bid or Contract Documents), 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." 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.

13.6.3 The Contractor will forfeit a penalty to the Owner of $100 per day (or portion of a day) for each worker that is paid less than the specified rate for any work done under the Contract by the Contractor or by any Subcontractor. The Owner shall deduct from any unpaid amounts then or thereafter due the Contractor under the Contract all sums and amounts due and owing as a result of any violation of Sections 290.210 to 290.340, RSMo. (Section 290.250, RSMo) The Contractor agrees to abide by any decision made by the Owner regarding underpayment of wages to workers and amounts owed them as well as penalties for underpayment of wages.

13.6.4 The prevailing wage rate(s) and public works contracting minimum wage(s) included in the Annual Wage Order(s) include fringe benefits as set forth in Sections 290.219 and 290.257, RSMo. Fringe benefit payments may be made to the worker in cash, or irrevocably made by a Contractor or Subcontractor to a trustee or to a third person pursuant to a fund, plan or program, or pursuant to an enforceable commitment, or any combination thereof, to carry out a financially responsible plan or program which was communicated in writing to the workmen affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the Contractor or Subcontractor is not required by other federal or state law to provide any of the benefits as referenced in Section 290.210(5), RSMo.

13.6.5 The Contractor shall make full payment of the applicable required wages to workers in legal tender. Pay for travel, mileage, meals, bonuses, or other expenses are not fringe benefits and cannot be considered part of the workers wage rate. The Contractor shall not make any deductions for food, sleeping accommodations, transportation, use of small tools, uniforms, or anything of any kind or description, unless the Contractor and employee enter into an agreement in writing at the beginning of the worker's term of employment, and such agreement is approved by the Owner as fair and reasonable in accordance with Section 290.315, RSMo.

13.6.6 The Contractor shall submit to the Owner with the Contractor's periodic pay request, certified payroll records for labor performed by the Contractor and Subcontractors of any tier. The Contractor shall submit all required certified payroll information records electronically in pdf format using the Owner's web-based payment program. The certified payroll forms shall contain the name, address, personal identification number, and occupational title of the workers as well as the hours they work each day. Do not include personal social security numbers in payroll records. The Owner's acceptance of certified payroll records does not in any way relieve the Contractor of any responsibility for the payment of prevailing wages to workers on the project. The Contractor shall also maintain copies of the certified payroll records. The Owner may, at any time, request copies of, and/or inspect all of the Contractor's payroll records for the Work to verify compliance. The Contractor shall furnish the Owner copies of payroll records within ten (10) days of the Owner's written request. The Contractor shall provide copies of workers I-9 forms within twenty-four (24) hours of written notice. Such payroll records shall be maintained in accordance with Article 13.7.1 and shall be available for inspection for two (2) years after final completion of the Work. Falsification of the certified payroll records may result in the debarment of the Contractor or Subcontractor from future work with the University.

13.6.7 If applicable, the Contractor shall comply with the Copeland "Anti-Kick Act, 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

13.6.8 The Contractor shall specifically incorporate the obligations of Section 13.6 into the subcontracts, supply agreements and purchase orders for the Work and require the same of any Subcontractors of any tier.

13.6.9 If Contractor fails to comply with the provisions of Section 13.6 of this Contract or with Sections 290.210 to 290.340, RSMo and related regulations, the Owner may, in its sole discretion, immediately terminate the Contract upon written notice. The rights and remedies of the Owner provided herein shall not be exclusive and are in addition to other rights and remedies provided by law or under this Contract.

13.6.10 The Contractor may pay entry-level workers or federally-registered apprentices fifty percent (50%) of the pay of a journeyman in their same occupational title, in accordance with Section 290.235, RSMo and 8 CSR 30-3.030. Per 8 CSR 30-3.030, an entry-level worker is "[a]ny worker who is not a journeyman and who is not otherwise enrolled in a federally-registered apprenticeship program but is participating in an on-the-job training program provided by the contractor for whom they perform work on a public construction project." The University of Missouri may require documentation showing, to the University's sole satisfaction, that an entry-level worker is participating in an on-the-job training program with the Contractor. The combined total of such entry-level workers and federally registered apprentices shall not exceed a one-to-one ratio with the number of journeyman workers in any occupational title on the project.

13.6.11 The Contractor shall post the wage rates for the Contract in a dry, accessible place at the field office on the

project or, where there is no field office, at the Contractor's local office or batch plant so long as a copy is provided to workers upon request, as required by 8 CSR 30-3.050. The wage rates shall be kept in a clearly legible condition for the duration of the project.

13.6.12 Neither the Contractor, nor any Subcontractor of any tier, nor any person hired by them or acting on their behalf, shall request, demand or receive, either before or after such worker is engaged, that such worker pay back, return, donate, contribute, or give any part or all of said worker's wages, salary, or thing of value, to any person, upon the statement, representation, or understanding that failure to comply with such request or demand will prevent such worker from procuring or retaining employment, and no person shall, directly or indirectly, pay, request or authorize any other person to violate this Section as set forth in Section 290.305, RSMo, the exception being to an agent or representative of a duly constituted labor organization acting in the collection of dues or assessments of such organization. No Contractor or Subcontractor may directly or indirectly receive a wage subsidy, bid supplement, or rebate for employment on this project if such wage subsidy, bid supplement, or rebate has the effect of reducing the wage rate paid by the employer on a given occupational title below the applicable wage rate as provided in the Contract. In the event a wage subsidy, bid supplement, or rebate is provided or received, the entity receiving such subsidy, supplement, or rebate shall report the date and amount of such subsidy, supplement, or rebate to the University within thirty days of receipt of payment. This disclosure report shall be a matter of public record.

13.6.13 The Contractor will pay workers overtime for all hours worked over ten (10) hours per day and forty (40) hours per week in accordance with Section 290.230, RSMo. For all overtime work performed, not less than one and one-half 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. For all work performed on a Sunday or holiday, not less than twice the prevailing hourly rate of pay or public works contracting minimum wage will apply in accordance with Section 290.230, RSMo. For purposes of this Section, holidays are as follows: January first, the last Monday in May, July fourth, the first Monday in September, November 11, the fourth Thursday in November, December twenty-fifth. If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

13.7 Records

13.7.1 The Owner, or any parties it deems necessary, shall have access to and the right to examine any accounting or other records of the Contractor involving transactions and Work related to this Contract for five (5) years after final payment or five (5) years after the final resolution of any on going disputes at the time of final payment. All records shall be maintained in accordance with generally accepted accounting procedures, consistently applied. Subcontractors of any tier shall be required by Contractor to maintain records and to permit audits as required of Contractor herein.

13.8 Codes and Standards

13.8.1 The Work shall be performed to comply with the International Code Council (ICC) Codes, and the codes and standards noted below. The latest editions and supplements of these codes and standards in effect on the date of the execution of the Contract for Construction shall be applicable unless otherwise designated in the Contract Documents. Codes and standards required by accreditation agencies will also be used unless the ICC requirements are more stringent. In the event that special design features and/or construction systems are not covered in the ICC codes, the applicable edition of the National Fire Protection Association (NFPA) family of standards and/or the NFPA 101 Life Safety Code shall be used.

.1 ICC International Building Code and reference standards
.2 ICC International Plumbing Code
.3 ICC International Mechanical Code
.4 ICC International Fire Code
.5 ICC International Fuel Gas Code
.6 NFPA 70 National Electric Code (NEC)
.7 Americans with Disabilities Act – Standards for Accessible Design.
.8 American National Standard Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks as published by the American Society of Mechanical Engineers (ASME), American National Standards Institute (ANSI) A17.1
.9 NFPA 101 Life Safety Code (as noted above)
.10 American Concrete Institute (ACI)
.11 American National Standards Institute (ANSI)
.12 American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
.13 American Refrigeration Institute (ARI)
.14 American Society for Testing and Materials (ASTM)
.15 Missouri Standard Specification for Highway Construction, Missouri State Highway Commission
.16 National Electrical Manufacturers Association (NEMA)
.17 Underwriter's Laboratories, Inc. (UL), Federal Specifications
.18 Williams Steiger Occupational Safety and Health Act of 1970 (OSHA)

13.9 General Provisions

13.9.1 Any specific requirement in this Contract that the responsibilities or obligations of the Contractor also apply to a Subcontractor is added for emphasis and are also hereby deemed to include a Subcontractor of any tier. The omission of a reference to a Subcontractor in connection with any of the Contractor's responsibilities or obligations shall not be construed to diminish, abrogate or limit any responsibilities or obligations of a Subcontractor of any tier under the Contract Documents or the applicable subcontract.

13.9.2 This Contract shall be interpreted, construed, enforced, and regulated under and by the laws of the State of Missouri.

Whenever possible, each provision of this Contract shall be interpreted in a manner as to be effective and valid under applicable law. If, however, any provision of this Contract, or a portion thereof, is prohibited by law or found invalid under any law, only such provision or portion thereof shall be ineffective, without invalidating or affecting the remaining provisions of this Contract or valid portions of such provision, which are hereby deemed severable. The Contractor and the Owner further agree that in the event any provision of this Contract, or a portion thereof, is prohibited by law or found invalid under any law, this Contract shall be reformed to replace such prohibited or invalid provision or portion thereof with a valid and enforceable provision which comes as close as possible to expressing the intention of the prohibited or invalid provision.

13.9.3 The Contractor and the Owner each agree that the State of Missouri Circuit Court for the County where the Project is located shall have exclusive jurisdiction to resolve all Claims and any issue and disputes between the Contractor and the Owner. The Contractor agrees that it shall not file any petition, complaint, lawsuit or legal proceeding against the Owner in any other court other than the State of Missouri Circuit Court for the County where the Project is located.

13.9.4 The Owner's total liability to the Contractor and anyone claiming by, through, or under the Contractor for any Claim, cost, loss, expense, or damage caused in part by the fault of the Owner and in part by the fault of The Contractor or any other entity or individual shall not exceed the percentage share that the Owner's fault bears to the total fault of the Owner, the Contractor and all other entities and individuals as determined on the basis of comparative fault principles.

13.9.5 The Contractor agrees that the Owner shall not be liable to the Contractor for any special, indirect, incidental, or consequential damage whatsoever, whether caused by the Owner's negligence, fault, errors or omissions, strict liability, breach of contract, breach of warranty or other cause or causes whatsoever. Such special, indirect, incidental or consequential damages include, but are not limited to loss of profits, loss of savings or revenue, loss of anticipated profits, labor inefficiencies, idle equipment, home office overhead, and similar types of damages.

13.9.6 Nothing contained in this Contract or the Contract Documents shall create any contractual relationship with or cause of action in favor of a third party against the Owner.

13.9.7 No member or officer of the Board of Curators of the University incurs or assumes any individual or personal liability under the Contract or by reason of the default of the Owner in the performance of any terms thereof. The Contractor releases and discharges all members or officers of the Board of Curators of the University from any liability as a condition of and as consideration for the award of the Contract to the Contractor.

13.9.8 The Contractor hereby binds itself, its partners, successors, assigns and legal representatives to the Owner in respect to covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or proceeds hereof without written consent of the Owner. If the Contractor attempts to make such an assignment without such consent, it shall be void and confer no rights on third parties, and the Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Owner's consent to any assignment is conditioned upon the Contractor entering into a written assignment which contains the following language: "It is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor and to claims and to liens for services rendered or materials supplied for the performance of the Work required in said Contract in favor of all persons, firms, corporations rendering such services or supplying such materials."

13.10 Certifications

13.10.1 Suspension and Debarment

The Contractor certifies to the best of its knowledge and belief that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any department or agency in accordance with Federal Executive Orders 12549 (2/18/86) and 12689 (8/15/89).

13.10.2 Anti-Discrimination Against Israel Act

If this Contract is for $100,000 or more, and if the Contractor is a company with ten (10) or more employees, then Contractor certifies that it, and any company affiliated with it, does not boycott Israel, and will not boycott Israel during the term of this Contract. In this Paragraph, the terms "company" and "boycott Israel" shall have the meanings described in Section 34.600 of the Missouri Revised Statutes.

13.10.3 Byrd Anti-Lobbying Amendment

.1 If this Contract exceeds $100,000 and is funded by Federal funding, Contractor agrees to file the required certification, in compliance with 31 U.S.C. § 1352 (as amended).

.2 Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

.3 Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

13.10.4 Work Authorization

The Contractor and all subcontractors performing work under this Contract shall enroll and participate in a federal work

authorization program operated by the United States Department of Homeland Security, E-Verify or an equivalent federal work authorization program, to verify information of newly hired employees, under the Immigration Reform and Control Act of 1986 (IRCA), P.L.99-603. By executing a contract with The Curators of the University of Missouri, the Contractor shall affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted service and affirm that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. The Contractor shall maintain documentation of its participation in a federal work authorization program and make such documentation available to the University upon request.

ARTICLE 14
TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 Termination by Owner for Cause

14.1.1 In addition to other rights and remedies granted to the Owner under the Contract Documents and by law, the Owner may terminate the Contract if the Contractor:

.1 refuses or fails to supply enough properly skilled workers, superintendents, foremen, or managers;
.2 refuses or fails to supply sufficient or proper materials;
.3 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
.4 disregards laws, ordinances, rules, codes, regulations or orders of an authority having jurisdiction;
.5 disregards the authority of the Owner's Representative, the Architect, or the Owner's Authorized Agent;
.6 breaches any warranty or representations made by the Contractor under or pursuant to the Contract Documents;
.7 fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with all the requirements of the Contract Documents;
.8 fails after commencement of the Work to proceed continuously with the construction and completion of the Work for more than ten (10) days, except as permitted under the Contract Documents;
.9 fails to maintain a satisfactory rate of progress with the Work or fails to comply with approved progress schedules; or
.10 violates in any substantial way any provisions of the Contract Documents.

14.1.2 When any of the above reasons exist, the Owner may, without prejudice to any other rights or remedies of the Owner, terminate this Contract by delivering a written notice of termination to the Contractor and the Contractor's surety, and may:

.1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
.2 accept assignment of subcontracts pursuant to Section 5.3; and
.3 finish the Work by whatever reasonable method the Owner may deem expedient, including turning the Work over to the surety.

14.1.3 The Contractor, in the event of a termination under Section 14.1, shall not be entitled to receive any further payments under the Contract until the Work is completed in its entirety. Then, if the unpaid balance under the Contract shall exceed all expenses of the Owner in finishing the Work, including additional compensation for the Architect's services and expenses made necessary thereby, such excess will be paid to the Contractor; but, if such expenses of the Owner to finish the Work shall exceed the unpaid balance, the Contractor and its surety shall be liable for, and shall pay the difference and any damages to the Owner. The obligation of the Contractor and its surety for payment of said amounts shall survive termination of the Contract.

14.1.4 In exercising the Owner's right to secure completion of the Work under any of the provisions hereof, the Owner shall have the right to exercise the Owner's sole discretion as to the manner, methods, and reasonableness of costs of completing the Work.

14.1.5 The rights of the Owner to terminate pursuant to Article 14.1 will be cumulative and not exclusive and shall be in addition to any other remedy provided by law or the Contract Documents.

14.1.6 Should the Contractor fail to achieve Final Completion of the Work within thirty (30) calendar days following the date of Substantial Completion, the Owner may exercise its rights under Section14.1.

14.2 Suspension by the Owner for Convenience

14.2.1 The Owner may, without cause, order the Contractor in writing to suspend, delay, or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.2.2 An adjustment will be made to the Contract Sum for increases in the cost of performance of the Contract caused by suspension, delay or interruption. However, in the event of a suspension under Section 14.2, Contractor hereby waives and forfeits any claims for payment of any special, indirect, incidental or consequential damages such as lost profits, loss of savings or revenue, loss of anticipated profits, idle labor or equipment, home office overhead, and similar type damages. No adjustment will be made to the extent:

.1 that performance is, was, or would have been so suspended, delayed or interrupted by another cause for which the Contractor in whole or in part is responsible, or
.2 that an equitable adjustment is made or denied under another provision of this Contract.

14.3 Owner's Termination for Convenience

14.3.1 The Owner may, at any time, terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this Paragraph shall be by a notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

14.3.2 Upon receipt of a notice of termination for convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph:

.1 cease operation as specified in the notice;

.2 place no further orders and enter into no further subcontracts for materials, labor, services or facilities except as necessary to complete Work not terminated;

.3 terminate all subcontracts and orders to the extent they relate to the Work terminated;

.4 proceed to complete the performance of Work not terminated; and

.5 take actions that may be necessary, or that the Owner may direct, for the protection and preservation of the terminated Work.

14.3.3 Upon such termination, the Contractor shall recover as its sole remedy payment for Work properly performed in connection with the terminated portion of the Work prior to the effective date of termination and for items properly and timely fabricated off the Project site, delivered and stored in accordance with the Owner's instructions and for all Owner approved claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors and suppliers. The Contractor hereby waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits, consequential damages and other economic losses.

14.3.4 The Owner shall be credited for (1) payments previously made to the Contractor for the terminated portion of the Work, (2) claims which the Owner has against the Contractor under the Contract and (3) the value of the materials, supplies, equipment, or other items that are to be disposed of by the Contractor that are part of the Contract Sum.

14.3.5 Upon determination by a court that termination of Contractor or its successor in interest pursuant to Section 14.1 was wrongful, such termination will be deemed converted to a termination for convenience pursuant to Section 14.3, and Contractor's sole and exclusive remedy for wrongful termination is limited to recovery of the payments permitted for termination for convenience as set forth in 14.3.

SECTION 1.E

SPECIAL CONDITIONS

1. DEFINITIONS

a. "Drawings"

Drawings referred to in and accompany Project Manual consist of Drawings prepared by and bearing the name of the below defined Architect, bearing Date of November 5, 2026, entitled "Clydesdale Hall – Roof Replacement", project number CP260961.

b. Bond Architects, Inc.
222 South Central Avenue
Suite 501
St. Louis, MO 63105
(314)863-4994

c. RMT Roofing and Waterproofing Consultants, Inc.
410 Sovereign Ct, Ste 18
Manchester, MO 63011
636-391-2185

2. SPECIAL SCHEDULING REQUIREMENTS

a. Special scheduling requirements supplemental to the bid form.

b. Contractor shall perform all work in the designated areas during regular working hours, which are **7:00**a.m. to **4:00** p.m., Monday through Friday.

c. Clydesdale Hall will remain operational year round during duration of construction.

d. Contractor may not mobilization before **April 19, 2027.**

3. SCOPE OF WORK

a. The Contractor shall furnish all labor, materials, tools, equipment necessary for, and incidental to, construction of this project as indicated on the Drawings and specified herein.

b. Work shall include everything requisite and necessary to finish work properly, notwithstanding that every item of labor or materials or accessories required to make project complete may not be specifically mentioned.

c. General Description of Work:

(1) Project consists of removal of existing roofing and installation of new roofing system at: Clydesdale Hall as indicated on the Drawings and Specifications.

(2) Demolition shall consist of removal of roofing system down to the steel deck on Clydesdale Hall as indicated on the Drawings and Specifications.

(3) Architectural work shall consist of a new metal roofing assembly installed consisting of 3 inches of polyisocyanurate insulation, a mechanically fastened ½-inch high-density polyisocyanurate cover board, a self-adhered vapor barrier membrane, and a new standing seam Zee-Lock metal roof system. The new work includes all required accessories, including gutters, rake edge and drip fascia, ridge caps, flashings at penetrations and equipment curbs, a complete snow retention system, gutter guards, and replacement metal siding panels at dormers as required to match the new roofing system. The completed installation shall be performed in accordance with the roofing manufacturer's requirements to qualify for a 20-year No Dollar Limit (NDL) Full System Warranty, ensuring long-term weather protection and system performance. Snow guard installation shall be provided in accordance with Section 07 7253, *Snow Guard* as indicated on the Drawings and Specifications.

4. LOCATION

a. Work shall be performed under this Contract on the campus of the University of Missouri at Clydesdale Hall, 900 E. Campus Dr., Columbia, MO 65211.

5. NUMBER OF CONSTRUCTION DOCUMENTS

a. The Owner’s Representative will furnish the Contractor a copy of the executed Contract and a complete set of Drawings and Specifications in PDF format.

b. The contractor may obtain printed sets from the architect at cost of reproduction.

c. The Owner will furnish explanatory and changed Drawings to the Contractor in PDF format as issued during project.

d. The Owner will provide electronic data files to the Contractor for their convenience and use in progressing the Work and the preparation of shop drawings or other submittal requirements required for construction of the reference project. The electronic data files shall reflect Construction Documents and Bid Addenda only. These files will be transmitted subject to the following terms and conditions:

(1) The Owner makes no representation as to the compatibility of these files with the Contractor’s hardware or software.

(2) Data contained on these electronic files shall not be used by the Contractor or anyone else for any purpose other than as a convenience in progressing the Work or in the preparation of shop drawings or other required submittals for the referenced project. Any other use or reuse by the Contractor or by others will be at their own sole risk and without liability or legal exposure to Owner. The Contractor agrees to make no claim and hereby waive, to the fullest extent permitted by law, any claim or cause of action of any nature against the Owner and its consultants, contractors, agents, employees, and representatives that may arise out of or in connection with the use of the electronic files transmitted.

(3) Furthermore, the Contractor shall, to the fullest extent permitted by law, indemnify and hold harmless the Owner and its consultants, contractors, agents, employees, and representatives, against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

(4) These electronic files are not contract documents. Differences may exist between these electronic files and corresponding hard-copy construction documents. The Owner makes no representation regarding the accuracy or completeness of the electronic files you receive. In the event that a conflict arises between the signed or sealed hard-copy construction documents prepared by the Consultant and the electronic files, the signed and sealed hard-copy construction documents shall govern. The Contractor is responsible for determining if any conflict exists. By use of these electronic files, the Contractor is not relieved of their duty to fully comply with the contract documents.

(5) Because information presented on the electronic files can be modified, unintentionally or otherwise, the Owner reserves the right to remove all indications of ownership and/or involvement from each electronic display.

(6) Under no circumstances shall delivery of the electronic files be deemed a sale by the Owner and no warranties are made, either expressed or implied, of merchantability and fitness for any particular purpose. In no event shall the Owner be liable for any loss of profit, or any consequential damages as a result of use or reuse of these electronic files.

6. SUBMITTALS

a. The Contractor shall submit for approval to the Architect, equipment lists and Shop Drawings, as expediently as possible. Failure of the Contractor to submit Shop Drawings in a timely manner will result in the Owner holding back Contractor payments. (See General Conditions)

b. The material and equipment lists shall be submitted and approved before any material or equipment is purchased and shall be corrected to as-built conditions before the completion of the project.

c. The Contractor shall submit electronic versions of all required Shop Drawings, material and equipment lists. The Contractor shall upload all Shop Drawings to a secure information sharing website determined by the Owner notifying the Owner and Consultant that these shop drawings are available for review. Each submittal shall have the General Contractors digital stamp affixed to the first page signifying their review and acceptance. Review comments, approvals, and rejections will be posted on this same site with notification to the contractor. Submittals requiring a professional seal shall be submitted hard copy with a manual seal affixed.

(1) The Contractor shall identify each submittal item with the following:
(a) Project Title and Locations
(b) Project Number
(c) Supplier's Name
(d) Manufacturer's Name
(e) Contract Specification Section and Article Number
(f) Contract Drawing Number
(g) Acrobat File Name: Spec Section_Times Submitted_Spec Title: 033000_01-Cast in Place Concrete.pdf

(2) Reference the accompanying Shop Drawing and Submittal Log at the end of this section (1.E.4) for the required submittal information.

d. The Contractor shall submit to the Architect four (4) bound copies of all required Operating Instructions and Service Manuals for the Architect's and the Owner's sole use prior to completing 50% of the adjusted contract. Payments beyond 50% of the contract amount may be withheld until all Operating Instructions and Service Manuals are received as referenced in the accompanying Operating Instructions and Service Manual Log at the end of this section (1.E.5).

e. The Contractor shall submit to the Owner's Representative all items referenced in the accompanying Closeout Log (1.E.6) within 30 days following substantial completion of the work. The Owner's Representative will maintain the closeout log and include as an agenda item at all coordination meetings.

7. USE OF PREMISES

a. Access: Access to construction site shall be as indicated on the drawings and as directed by the Owner's Representative.
b. Parking:

(1) The Owner will provide Contractor service vehicle parking inside the gated parking area at Clydesdale Hall Large Animal Delivery. Parking will be at no cost to the contractor up to the contract completion date. After the

contract completion date, contractor will not be allowed parking. Parking is to be used for general contractor or subcontractor owned and labeled vehicles only. Personal vehicles are prohibited from use of the parking area. Violation of this requirement may result in ticketing and/or towing at the vehicle owner's expense and suspension of progress payments.

(2) Parking of personal vehicles within project access/lay down/staging areas is prohibited. Violation of this requirement may result in ticketing and/or towing at the vehicle owner's expense and suspension of progress payments.

(3) Parking or driving on sidewalks, landscaped areas, within fire and service lanes or generally in areas not designated for vehicular traffic is prohibited except as allowed in the contract documents. Violation of this requirement may result in ticketing and/or towing at the vehicle owner's expense and suspension of progress payments.

(4) Sidewalk(s) and Hardscape – Parking/driving on hardscapes is strictly prohibited unless specifically directed by the Owner's Representative through the MU sidewalk permitting process. Restricted use permits will be limited to activities that are constrained by an absolute need to access from a sidewalk. Such activities shall be considered the exception and not the norm. Adequate signage, fencing and alternate routes must be provided in the immediate and adjacent areas.

(5) Free parking for contractor employees is available in the Ashland Road Contractor lot on an as available basis. This space is for use by contractor employees for parking their personal vehicles only and is not to be used for staging or storage.

(6) Vendor Permits may be purchased by contractor management personnel on an as available basis by contacting the Parking and Transportation office in the General Services Building. These permits will allow contractor management personnel to park in various University lots while conducting business on University construction projects.

(7) Temporary University parking permits may be purchased by contractor employees for use with their personal vehicles on an as available basis by contacting the Parking and Transportation office in the General Services Building.

(8) Conley Avenue between Missouri Avenue and University Avenue and Hitt Street between University Avenue and the Memorial Union are designated for pedestrian use only during the work week between the hours of 8:15 AM and 3:45 PM. Unless otherwise indicated in the contract documents, this area is strictly off limits to vehicular traffic without authorization from the Owner's Representative.

c. Storage of materials: The Contractor shall store all materials within project limits.

The Contractor shall confine apparatus, materials, and operation of workers to location established by the Owner's Representative. The Contractor shall not unreasonably encumber premises with materials. In addition, storage trailer locations may be available within 1-1/2 miles of project site as directed by the Owner's Representative. Storage trailer locations shall be subject to approval by the Owner's Representative and are available to the Contractor without cost.

d. Utilities: Drinking water, water required to carry on work, and 120-volt electrical power required for small tool operation may be obtained without cost to the Contractor from existing utilities at locations designated by the Owner's Representative. Provisions for obtaining power, including temporary extensions, shall be furnished, and maintained by the Contractor. Upon completion of work such extensions shall be removed and any damage caused by use of such extensions shall be repaired to satisfaction of the Owner's Representative, at no cost to the Owner.

e. Restroom: The Contractor shall provide and maintain, in a sanitary condition, chemical type portable toilet facilities at work site for use by his personnel. Toilets and toilet location shall be subject to approval by the Owner's Representative.

f. Smoking is prohibited at the University of Missouri and all properties owned, operated, leased or controlled by the University of Missouri. Violation of the policy is defined as the use of any tobacco or marijuana products, including e-cigarettes, cigarettes, and vaping.

g. Care of Project Work Site: The contractor shall be responsible for maintaining the construction site in a reasonably neat and orderly condition by regular cleaning and mowing of the premises as determined by the Owner's Representative.

h. Discharge to Sewer Request: The University of Missouri's MS4 permit and NPDES Storm Water Discharge Permits along with the City of Columbia's POTW Operating Permit as well as local ordinances, and state and federal environmental regulations prohibit hazardous materials from being disposed into either the storm water or sanitary sewer systems. Unless specifically approved, all chemical products such as paints, dyes, lawn care products, maintenance products, and oil ~~is~~ prohibited from drain disposal. Any product, including contaminated water, being discarded into the storm water or sanitary sewer systems requires written approval from the Owner through a formal "Discharge to Sewer Request" form obtained at Discharge to Sewer Request Form. The contractor should submit the form to the Owner's Representative, not to the Department of Environmental Health and Safety as the form indicates.

i. All concrete waste material including washout water shall be totally contained and removed from the Owner's property.

j. Artifacts Found During Construction: Contractor shall immediately notify the

Owner's Representative when artifacts are uncovered or found during the demolition or construction process. Artifacts include, but are not limited to, tools, drawings (construction or other), photographs, books and other objects/devices which may hold historical importance/significance. Do not remove or disturb the object(s) in question. Artifacts are not considered part of demolished materials and shall remain the property of the University of Missouri.

k. **"Permit Required Confined Space" Entry Communication and Coordination**

(See OSHA 1926 subpart aa – Construction Confined Space for the definition of "permit required confined spaces" - Note: OSHA does not apply to the University. However, the University will provide a list of all known "permit required confined spaces")

There are no known "permit required confined spaces" within the project limits. Each contractor shall conduct a survey to confirm whether or not any confined spaces exist within the project limits. It is incumbent upon each contractor to list all "permit required spaces".

The Contractor shall notify the Owner's Representative if 1) conditions change resulting in a non-permit required confined space being reclassified to a "permit required confined space" after evaluation of the space by a competent person; 2) a space previously thought to be non-permit required space is classified as a "permit required confined space"; or 3) during the course of construction a "permit required confined space" is created after evaluation by a competent person.

The Contractor shall submit to the Owner's Representative a copy of the cancelled confined space entry permit and a written report summarizing the permit space program followed and all hazards confronted or created during entry operations. This information shall be submitted within one week of cancelling the permit.

8. PROTECTION OF OWNER'S PROPERTY

a. The Contractor shall be responsible for repair of damage to building exterior and interior, drives, curbs, streets, walks, grass, shrubbery and trees, which was caused by workmen or equipment employed during progress of work. All such repairs shall be made to satisfaction of the Owner's Representative, at no cost to the Owner, or reimburse the Owner if the Owner elects to make repairs. For landscape damage, the Owners shall make such repairs. Compensation for these repairs shall be determined by the Owner's Representative using the "Valuation of Landscape Trees, Shrubs, and other Plants" as published by the International Society of Arboriculture, as last revised.

b. Construction Project Fencing:

(1) Fencing requirements, as indicated on Drawings and/or described in

Specifications and where necessary to protect public and Owner's property shall be constructed of woven wire or plastic woven fencing not less than five (5) feet in height and supported by metal tee posts anchored securely in ground at not more than ten (10) foot intervals.

(2) Using existing landmarks, lamp posts, trees or other Owner property for support of fencing is strictly prohibited unless a written waiver is obtained from Owner’s Representative.

(3) Use of ribbon, snow fence, chicken wire, rope, and wooden barricades as fencing is prohibited.

(4) Fencing shall be maintained in an “as-installed” condition throughout the life of the project.

(5) The Contractor may use used fencing provided it is in good condition and is satisfactory to the Owner’s Representative.

c. Preserving and Protecting Existing Vegetation:

(1) Protection and compensation for damages:

(a) Trees and shrubs within work area designated to remain shall be protected from damage during construction by fixed chain link fencing or armoring as indicated on Drawings or specified herein. Plant protection devices shall be installed before work has begun and shall be maintained for duration of work unless otherwise directed by Owner's Representative.

(b) In the event that damage(s) to the Owner's trees, shrubs or vegetation occurs as a result of the Contractor's unauthorized operations, the Contractor shall pay or allow to the Owner compensation for said damage(s). Compensation shall be determined by the Owner's Representative using the "Valuation of Landscape Trees, Shrubs, and other Plants" as published by the International Society of Arboriculture, as last revised.

(2) Plants within work area designated for removal shall be removed by Contractor.

(3) To prevent compaction of soil over tree roots, vehicles or equipment shall not at any time park or travel over, nor shall any materials be stored within drip line of trees designated to remain.

(4) Area within drip line of trees and shrubs shall be protected from work area by use of a standard 60" high woven plastic or woven wire fence mounted

on standard steel posts set not more than 10‘ apart. Tree protection shall be removed during work in area of protection only when necessary to perform grading and other work required by Drawings and only as authorized by Owner's Representative.

(5) Only minimal grading or disturbance will be allowed to area within and adjacent to drip line of trees or shrubs designated to remain. Contractor shall obtain approval from Owner's Representative prior to starting any grading work in these areas. Unnecessary cutting of plant roots shall not be permitted. The Contractor shall stop work immediately and shall notify Owner’s Representative immediately if root system is exposed or if any roots over 1 ½” in diameter are encountered. Roots exposed and/or damaged during construction shall be immediately cut off cleanly behind exposed or damaged area, and cut surface treated in accordance with established horticultural standards and covered with topsoil.

(6) Owner's Representative will stop work immediately when proper measures are not being employed to protect trees and shrubs. Contractor will be notified to resume work after required protection measures are implemented.

(7) - Removal and/or pruning of select landscape materials shall be performed by MU Landscape Services department.

(8) Contractor shall repair tire ruts and other damages to existing lawn areas. Repairs shall match surrounding area.

9. SUBSTITUTIONS AND EQUALS

a. Substitutions and equals are defined in Article 3 of the General Conditions.

b. Substitutions and/or Equals of the item(s) listed below will be allowed only prior to receipt of bids provided that a written request for approval has been received by both the Architect and the Owner at least ten calendar days prior to the date for receipt of Bids. All other substitution and/or Equals items shall follow the procedures set forth in the General Conditions.

Item	Specification Section

To be considered, bidder’s proposal shall include a complete description of the proposed substitution and/or equal and a comparison of significant qualities of the proposed substitution and/or equal with those specified including drawings, performance and test data, and other information necessary for an evaluation. The Architect's decision on the approval or disapproval of a proposed substitution and/or equal shall be final.

10. CODES AND STANDARDS

a. The Contractor shall comply with applicable codes and standards as listed on the drawings.

11. PERMITS (NOT USED)

12. SPECIALTIES (NOT USED)

13. PRE-BID INSPECTION

a. All pre-bid inspections of work areas shall be scheduled with pre-bid inspection guide, telephone: Mark Hoerstkamp, Project Manager (573)-882-6800.

14. ROOF CERTIFICATION AND WARRANTY REQUIREMENT

a. The Contractor shall submit a copy of the University of Missouri Roof System Manufacturer's Certification for each proposed roofing system, within two business days following receipt of bids by the Owner. The Certification shall be submitted to the Owner and the Architect of Record and shall be manually signed by an authorized representative of Manufacturer of each proposed roofing system. Certification shall have original signature.

b. The Contractor shall submit a sample copy of the Roof Manufacturer's Warranty for each proposed roofing system, within two (2) business days following receipt of bids by the Owner, clearly labeled as "SAMPLE". The sample warranty(s) shall be submitted to the Owner and the Architect of Record.

c. The Owner and Architect of Record will review both documents for compliance with the Contract Documents and will notify the Contractor with required modifications.

d. Within two weeks following final inspection and acceptance of the roofing system(s) by the Owner and the roofing system manufacturer(s), the Contractor shall submit a manually signed standard warranty agreement, in the same form as the sample, provided and executed by the roofing system manufacturer for each roofing system provided. Standard warranty agreement(s) shall be of the duration specified in Division 7.

e. University of Missouri three (3) year Contractor's Roofing/Flashing/Sheetmetal Guarantee shall be signed by the roofing contractor after final inspection and acceptance of each roofing system by Manufacturer and by Owner.

15. MODIFICATION TO INFORMATION FOR BIDDERS: BIDDERS STATEMENT OF QUALIFICATIONS

a. Information For Bidders

(1) Reference: Information for Bidders, Article 8.

b. MINIMUM QUALIFICATIONS

(1) The schedule for the project is aggressive and requires a contractor with a successful track record of managing projects with average monthly expenditures of more than $1 million

(2) Successful completion of one project of similar type and scope.

c. QUALIFICATION SUBMITTALS

(1) Submitted qualification packages should include the following information:

- Project and Schedule
  - Management Experience managing project with equal or greater schedule demands.
  - Demonstrated and consistent on-time completion success
- Project Organization / Personnel
  - Key project team members and their resume
  - Project team roles and responsibilities of team members
  - Reporting/accountability procedures
  - Quality control program and procedures
- Organizational Support
  - Home office support
  - Labor and subcontractor relations
  - Submittal processing procedures
  - Material ordering/tracking/delivery procedures
  - Cost accounting support
  - Financial stability/capacity

(2) Packages must include the following items:

- Corporate Organizational Charts
- Project Organizational Charts
- Summary of Similar Projects
- Client References
- Resumes – resumes for each key individual proposed for the project, include position in the firm, project responsibility, education, license or registration and relevant experience over the last five years.
- Financial Statements and/or Evidence of Bonding Capacity
- Sample progress reports and schedules
- Brief narratives indicating how the Contractor intends to manage this project, including subcontractors.

d. QUALIFICATION PROCEDURE

(1) All qualification information and supporting materials must be submitted with your bid. Following the bid date, the Owner reserves the right to request additional information material to evaluate qualifications. Failure of the Contractor to demonstrate their ability to comply with these qualifications may be grounds for the Owner not recommending award of the Contract.

16. MODIFICATIONS TO GENERAL CONDITIONS

a. General Conditions

(1) Reference: General Conditions, Article 3.14.6

DELETE last four sentences of existing article 3.14.6. INSERT the following sentence to read as follows:

"No payments will be made until all submittals have been received and approved by Architect."

(1) The Commercial General Liability policy or policies specified in Article 11 shall provide coverage for special hazards, where they exist, such as, but not limited to, the operation of material hoist, blasting or other use of explosives, and damage to underground property.

17. PROJECT SCHEDULING (NOT USED)

18. PROJECT COORDINATION (NOT USED)

19. PROJECT PARTNERING (NOT USED)

20. VALUE ENGINEERING (NOT USED)

21. BUILDING SYSTEM COMMISSIONING (NOT USED)

22. MECHANICAL, ELECTRICAL, PLUMBING (MEP) PRE-INSTALLATION MEETING(S) (NOT USED)

23. COST BREAKOUT FOR OWNER'S ACCOUNTING PURPOSES / SPEND DOWN PURPOSES (NOT USED)

24. PROJECT MANAGEMENT/COMMUNICATION REQUIREMENTS (NOT USED)

25. SAFETY PRECAUTIONS AND PROGRAMS (NOT USED)

26. HOT WORK PERMITTING AND GENERAL REQUIREMENTS

a. Hot work Requirements: The contractor shall comply with the following hot work requirements and the requirements of the International Fire Code and NFPA 51B.

(1) Hot work shall be defined as any work involving burning, welding, grinding, cutting, or similar operations that are capable of producing sparks, initiating fires or explosions.

(2) The Contractor shall utilize the hot work permit decision tree and procedures as outlined in NFPA 51B for all Hot Work operations.

(3) A University of Missouri Hot Work Permit (see Appendix 1.I) shall be used on all hot work performed outside a designated hot work area. The University of Missouri hot work permit shall be posted and clearly visible within proximity of the hot work area. The hot work permit authorizing individual (PAI) shall be as designated by the Contractor.

(4) Notify the Owner's Representative 24 hours prior to starting hot work in buildings with operational fire alarm or fire suppression systems. The Owner's Representative will coordinate the appropriate system outage with Campus Maintenance personnel.

(5) Unless otherwise instructed by the Owner's Representative, the Contractor shall post a copy of each completed hot work permit to the Owner's project management file system the following business day.

(6) Hot Work personnel shall consist of the following three roles: the Permit Authorizing Individual (PAI), the Hot Work Operator (person doing the work), and the Fire Watch personnel. Hot Work Operators shall not be utilized to perform Fire Watch duties. Fire watch and monitoring duration shall be as required on the University of Missouri hot work permit.

27. GENERAL REQUIREMENTS FOR CRANE AND HOISTING OPERATIONS

a. All crane and hoisting operations shall be performed in compliance with OSHA 29 CFR 1926. All Operators, riggers, and signal persons must have the proper qualifications and training necessary to perform the intended hoisting activities for this project.

b. Only fully certified and evaluated Operators shall perform equipment operations. Operators in an "Operator in Training" status shall not be used.

c. Submittal requirements:

(1) Submit copies of Operator certifications, licenses, and evaluations to the Owners Representative.

(2) Submit Rigger and Signal Person qualifications to the Owners Representative.

(3) Unless otherwise directed by the Owners Representative, submit a lift plan and conduct a lift coordination meeting for hoisting or crane operations for any lift greater than 2,000 pounds, or for any multi pick lift. Include protective measures for existing underground utilities, occupied buildings, pedestrian and vehicle pathways, adjacent buildings and overhead power lines. If the lift is to occur over an occupied building, provide a registered structural engineer's review and verification that the building can resist the impact of a dropped load for the intended lift. If evacuation of an occupied building is necessary to conduct the lift, the decision for building evacuation or scheduling the lift for off-hours will be determined by the Owner.

28. CONSTRUCTION WASTE MANAGEMENT

a. The goal of Construction Waste Management is to divert waste from the sanitary landfill. This shall be accomplished through reuse, recycling and/or salvage of non-hazardous construction and demolition debris to the greatest extent practical. Track and report all efforts related to reuse, recycling and/or salvage materials from the project (including clean fill material). Report all material types and weights, where material was diverted, type of diversion, documentation of diversion (waste or recycling tickets), and applicable dates. In order to calculate the diversion percentage, total wights of all non-hazardous landfill material must be reported. This information shall be updated monthly utilizing the Construction Waste Management Worksheet. Copies of all applicable receipts, tickets and tracking logs shall be uploaded to the Owner's information sharing website or reported as required by the Construction Project Manager.

b. A summary worksheet is required prior to substantial completion.

29. WARRANTY WALKTHROUGH

a. Contractor shall attend a walk-thru with the Owner at eleven (11) months after acceptance to review and document any warranty items to be addressed as part of the twelve (12) month warranty stated in article 3.1 of the General Conditions.

END OF SECTION

SECTION 1.E.1

UNIVERSITY OF MISSOURI
ROOF SYSTEM MANUFACTURER CERTIFICATION
(Revised 06/24)

TO: _____

Title: Clydesdale Hall – Roof Replacement
Project No. CP260961
Location: 900 E. Campus Dr, Columbia, MO 65201

Our technical staff has examined the Architect/Engineer's Drawings, Specifications and required warranty for the roofing work on this project. We do not wholly endorse the building design or any materials or services not part of our advertised roofing system.

CERTIFICATION

We hereby certify that:

1. All materials we will furnish and deliver to the project shall be of good merchantable quality, shall meet or exceed the Specifications required and shall, if properly applied by one of our approved roofing applicator firms in accord with our instructions, provide a sound weather/watertight roofing system.
2. Upon completion of the installation in accord with the Drawings and specifications and our recommended installation procedures, we shall issue a total system warranty specified in the project Specifications.
3. The Drawings and Specifications follow the recommendations of our roofing manual for this type of roofing system with:

   No exceptions.

   The following exceptions: (The roofing system will be approved for this project if the following changes are made to the Contract Documents. The bid provided with this Document includes the required changes).

   NOTE: Exceptions may cause Owner to reject bid.
   Exceptions are as follows:

_____
_____
_____
_____

4. The Warranty will be issued for the following proposed roofing system:

_____
_____
_____

ROOFING SYSTEM MANUFACTURER: _____

Authorized Signature: _____

Title: _____ Date _____

Telephone Number: ( )

SECTION 1.E.2

UNIVERSITY OF MISSOURI
CONTRACTOR'S ROOFING/FLASHING/SHEET METAL GUARANTEE
(Revised 06/24)

WHEREAS (NAME AND ADDRESS OF COMPANY) _____
herein referred to as Roofing Contractor, certify that they have furnished and installed all roofing, flashing, sheet metal and related components in accordance with the Contract Documents and as required by the Roofing System Manufacturer=s installation instructions on the facility described below:

Facility: _____

Owner: University of Missouri-Columbia
Planning, Design, and Construction
General Services Building Room L100
University of Missouri Columbia, MO 65211

Date of Full Completion: _____

Approximate Area of Roof: _____

Type of Roofing Material: _____

Manufacturer's Specification Number: _____

Thickness and Type of Roof Insulation: _____

NOW, THEREFORE, Roofing Contractor guaranties to the Owner, subject only to the exclusions stated hereinafter, that all roofing, flashing and sheet metal work is fully and integrally watertight and is free from faults and defects in material or workmanship, and is guaranteed for a period of three (3) years from date of full completion of work.

EXCLUSIONS: This guarantee does not cover, and Roofing Contractor shall not be liable for the following:

1. Damage to the roofing system caused by fire, lightning, tornado, hurricane or hailstorm.

2. Damage to roofing system caused by significant settlement, distortion or failure of roof deck, walls, or foundations of building, excepting normal building expansion and contraction is not a part of this exclusion.

3. Abuse by the Owner and/or third parties.

REPAIRS: Owner shall promptly notify Roofing Contractor, in writing, of the need for repair of roofing, flashing, or sheet metal:

1. Roofing Contractor, within eight (8) hours after receipt of such notice, shall make emergency repairs at its expense, as required to render the facility watertight.

2. Within five (5) days after receipt of such notice, Roofing Contractor shall at its expense correct any faults or defects in material or workmanship.

3. Should needed repairs not be covered by this guarantee, Roofing Contractor, after having obtained Owner's written consent, shall make such repairs at Owner's expense. Following said repairs, this guarantee shall

thereafter remain in effect for the unexpired portion of the original term. If Owner does not so consent or repairs are made by others than the Roofing Contractor, this guarantee shall terminate for those parts of the roof affected by the repair.

4. In the event that Owner has notified the Roofing Contractor of the need for repairs and (i) Roofing Contractor does not immediately make repairs, or (ii) Roofing Contractor disclaims responsibility for the repairs and Owner disagrees, or (iii) Owner considers Roofing Contractor=s quoted cost for repairs not covered by this guarantee to be unreasonable and, an emergency condition exists which requires prompt repair to avoid substantial damage or loss to Owner, then, Owner may make such temporary repairs as he finds necessary and such action shall not be a breach of the provisions of this guarantee.

ANNUAL INSPECTIONS: Roofing Contractor shall inspect roof installation prior to each of the three anniversary dates from date of full completion of the work.

1. Inspection team to include Roofing Contractor, Roof Manufacturer, and Owner=s Representative.

2. Inspection of total roof system will be included in the annual inspections.

3. All defects in total roof system will be corrected by the Roofing Contractor within 30 days of inspection.

4. Roof manufacturer will certify by a written report that roof inspection has been completed, defects are acknowledged, and will warrant any repairs.

5. All corrective work completed by Roofing Contractor shall be warranted as approved by the Roofing Manufacturer.

ROOF MODIFICATION: Should Owner require work to be done on roof of said facility including modifications, alternations, extensions or additions to roof and including installation of vents, platforms, equipment, bracings or fastenings, Owner shall notify Roofing Contractor and give Roofing Contractor an opportunity to make recommendations as to methods necessary to safeguard against damage to roofing covered by this guarantee. Failure of Owner to give Roofing Contractor such opportunity or failure to follow methods recommended by Roofing Contractor shall render this guarantee null and void to the extent such failure should result in damage to roofing covered by this guarantee.

NOTICES: Notification of Roofing Contractor by Owner, shall be fulfilled by sending notice to Roofing Contractor.

IN WITNESS WHEREOF, we set our hands this _____ day of _____, 20___.

By:_____

Title:_____

For Roofing Contractor

Name:_____

Address:_____

Phone:_____

SECTION 1.E.3

SHOP DRAWING AND SUBMITTAL LOG

Project: Clydesdale Hall – Roof Replacement
Project Number: CP260961
Contractor:

Section	*Description*	*Contractor*	*Date Received*	*Date Returned*	*Comments*
06 1600	Sheathing				
07 6000	Sheet Metal Flashing and Trim				
07 4113	Standing Seam Metal Roof Panels				
07 4113.1	Zee-Lock				
07 07253	Snow Guards				

SECTION 1.E.3

SHOP DRAWING AND SUBMITTAL LOG

Project: Clydesdale Hall – Roof Replacement
Project Number: CP260961
Contractor:

Section	*Description*	*Contractor*	*Discipline Responsible*	*Date Received*	*Date Returned*	*Comments*

SECTION 1.E.4

OPERATING INSTRUCTIONS AND SERVICE MANUAL LOG

Project: Clydesdale Hall – Roof Replacement
Project Number: CP260961
Contractor:

Section	Description	Catalog Data	Wiring Diagrams	Installation Instructions	Service & Maintenance Instructions	Parts List & Availability	Performance Curves	Startup & Operating Instructions
07 4113	Standing Seam Metal Roof Panels							
07 4113.1	Zee-Lock							
07 07253	Snow Guards							

SECTION 1.E.5

CLOSEOUT LOG

Project: Clydesdale Hall – Roof Replacement
Project Number: CP260961
Contractor:

Section	***Description***	***Contractor / Subcontractor***	***Date Rec'd***	***# of Copies***	***CPM Initials***	***Remarks***
GC / 3.11	As-built drawings					
GC/13.5.6	Final Affidavit of SDVE Participation for each SDVE Firm					
SC/20	Executed commissioning plan w/ required documentation					
	List special warranties and guarantees for each section					
	List any required maintenance stock, spare parts, etc.					
	List any special tools, keys, etc.					
07 4113	Standing Seam Metal Roof Panels					
07 4113.1	Zee-Lock					
07 07253	Snow Guards					

SECTION 1.F

INDEX OF DRAWINGS

Drawings referred to in and accompanying this Project Manual consist of the following sheets dated November 5, 2026.

Cover Sheet

A100 Site Plan and Site Coordination Plan

A101 Demolition Roof Plan

A102 Renovation Roof Plan

A103 Renovation Roof Plan

A104 Renovation Roof Plan

A105 Renovation Roof Plan

A201 Roof Details

A202 Roof Details

END OF SECTION

SECTION 1.G

PREVAILING WAGE RATES

1. The prevailing wage rates for Boone County as issued by the Missouri Division of Labor on the following pages.

Missouri
Division of Labor Standards
WAGE AND HOUR SECTION

MIKE KEHOE, Governor

Annual Wage Order No. 33

Section 010
BOONE 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
Logan Hobbs, Director
Division of Labor Standards

Filed With Secretary of State: **March 10, 2026**

Last Date Objections May Be Filed: **April 9, 2026**

Prepared by Missouri Department of Labor and Industrial Relations

BOONE COUNTY

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	$62.86
Boilermaker	$35.49*
Bricklayer - Stone Mason	$58.67
Carpenter	$57.56
Lather	
Linoleum Layers & Cutter	
Millwright	
Pile Driver	
Cement Mason	$58.30
Plasterer	
Communication Technician	$64.11
Electrician (Inside Wireman)	$64.08
Electrician (Outside Lineman)	$68.99
Outside - Groundman	
Outside - Groundman Tree Trimmer	
Outside - Lineman Operator	
Outside - Lineman Tree Trimmer	
Elevator Constructor	$35.49*
Glazier	$35.49*
Iron Worker	$75.78
Laborer	$47.99
Laborer - First Semi-Skilled	
Laborer - General	
Laborer - Second Semi-Skilled	
Laborer - Skilled	
Mason	$61.63
Marble Finisher	
Marble Mason	
Terrazzo Finisher	
Terrazzo Worker	
Tile Finisher	
Tile Setter	
Operating Engineer	$70.98
Operating Engineer - Group I	
Operating Engineer - Group II	
Operating Engineer - Group III	
Operating Engineer - Group III - A	
Operating Engineer - Group IV	
Operating Engineer - Group V	
Painter	$45.72
Plumber	$77.01
Pipe Fitter	
Roofer/WaterProofer	$58.66
Sheet Metal Worker	$60.12
Sprinkler Fitter - Fire Protection	$72.54
Truck Driver	$35.49*
Truck Control Service Driver	
Truck Driver, Teamsters Group I	
Truck Driver, Teamsters Group II	
Truck Driver, Teamsters Group III	
Truck Driver, Teamsters 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 RSMo Section 290.210.**

BOONE COUNTY

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	$64.47
Millwright	
Pile Driver	
Electrician (Outside Lineman)	$87.28
Outside - Groundman	
Outside - Groundman Tree Trimmer	
Outside - Lineman Operator	
Outside - Lineman Tree Trimmer	
Laborer	$55.55
Laborer - General	
Laborer - Skilled	
Operating Engineer	$71.41
Oiler-Driver	
Operating Engineer - Group I	
Operating Engineer - Group II	
Operating Engineer - Group III	
Operating Engineer - Group IV	
Truck Driver	$35.49*
Truck Control Service Driver	
Truck Driver, Teamsters Group I	
Truck Driver, Teamsters Group II	
Truck Driver, Teamsters Group III	
Truck Driver, Teamsters Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance iwth 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 shown on the Building Construction Rate Sheet.

***The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. 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.**

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 1.I

UNIVERSITY OF MISSOURI HOT WORK PERMIT

University of Missouri
HOT WORK PERMIT

Seek an alternative/safer method if possible

Before initiating hot work, ensure precautions are in place as required by NFPA 51B and ANSI Z49.1.
Make sure an appropriate fire extinguisher is readily available.

This Hot Work Permit is required for any operation involving open flame or producing heat and/or sparks. This work includes, but is not limited to, welding, brazing, cutting, grinding, soldering, thawing pipe, torch applied roofing, or chemical welding.

Date	Hot Work by: Employee ☐ Contractor ☐
Location / Building / Floor / Room #:	Name (Print) and Signature of person doing Hot Work
Work to be performed:	I verify that the above location has been examined, the precautions marked on the checklist below have been taken, and permission is granted for this work.
Time Started _____ Time Completed _____	Name (print) and signature of permit-authorizing individual (PAI)
Time Fire Watch Completed _____	Name (print) and signature of person performing Fire Watch
THIS PERMIT IS GOOD FOR ONE DAY ONLY	

Yes	N/A	
☐	☐	Available sprinklers, hose streams, and extinguishers are in service and operable.
☐	☐	Hot Work equipment is in good working condition in accordance with manufacturer's specifications.
☐	☐	Special permission obtained to conduct hot work on metal vessels or piping lined with rubber or plastic.
		Requirements within 35 ft (11 m) of hot work
☐	☐	Flammable liquid, dust, lint and oily deposits removed.
☐	☐	Explosive atmosphere in area eliminated.
☐	☐	Floors swept clean and trash removed.
☐	☐	Combustible floors wet down or covered with damp sand or fire-resistive / noncombustible materials or equivalent.
☐	☐	Personnel protected from electrical shock when floors are wet.
☐	☐	Other combustible storage material removed or covered with listed or approved materials (welding pads, blankets, curtains, fire-resistive tarpaulins), metal shields, or non-combustible material.
☐	☐	All wall and floor openings are covered.
☐	☐	Ducts and conveyors that might carry sparks to distant combustible material are covered, protected, or shut down.
		Requirements for hot work on walls, ceilings or roofs
☐	☐	Construction is noncombustible and without combustible coverings or insulation.
☐	☐	Combustible material on other side of walls, ceilings, or roofs is moved away.

See Page 2

Yes	N/A	

Requirements for hot work on enclosed equipment

☐	☐	Enclosed equipment is cleaned of all combustibles.
☐	☐	Containers are purged of flammable liquid / vapor.
☐	☐	Pressurized vessels, piping, and equipment removed from service, isolated, and vented.

Requirements for hot work fire watch and fire monitoring

☐	☐	Fire watch is provided with suitable extinguishers and, where practical, a charged fire hose.
☐	☐	Fire watch is trained in use of equipment, sounding alarm, and notification of emergency contacts.
☐	☐	Fire watch is required in adjoining areas, or above and below the work area.
☐	☐	Per the PAI / fire watch, monitoring of hot work area is required, per the table below.

Construction Factors

	Noncombustible construction		Combustible construction without concealed cavities		Combustible Construction with unprotected concealed cavities	
Occupancy Factors	Fire Watch	Monitor	Fire Watch	Monitor	Fire Watch	Monitor
Noncombustible with any combustibles contained within closed equipment (e.g., ignitable liquid within piping)	30 minutes	0 hours	1 hour	3 hours	1 hour	5 hours
Office, retail or manufacturing with limited combustible loading	1 hour	1 hour	1 hour	3 hours	1 hour	5 hours

POST A COPY OF THIS PERMIT IN/NEAR THE HOT WORK AREA.

Admin: University employees shall file hot work permits in departmental safety file records.

Contract personnel shall file copies of permits in the University of Missouri Project Management File System.

END OF SECTION

UNIVERSITY *of* MISSOURI

ENVIRONMENTAL HEALTH AND SAFETY

Hazardous Building Material Survey
CP260961
Clydesdale Hall Roof Replacement
8/5/2026

Introduction

At the request of Mark Hoerstkamp, Project Manager for Design Services, MU EHS completed a hazardous building material survey for the roof of Clydesdale Hall (Bldg. C37-379). The survey was made to determine the presence of hazardous materials that will be impacted by the upcoming project**.**

The survey was conducted, in part, to satisfy the requirements of 40 CFR 61, subpart M, which stipulates that all buildings be "thoroughly inspected" for asbestos before the commencement of renovation or demolition activities.

No asbestos-containing material was identified in the metal roof of Clydesdale Hall.

Project Scope

Removal of all metal roofing and replace with new metal roofing

Field Observations

Sloped roofs on Clydesdale are metal. Flat roofs are EPDM or built-up roofing. This project will replace the metal roofing.
A core sample was made on a panel of the metal roof on the west side of 2nd floor. Beneath the metal, there is a sheet of gypsum board, on top of 2 sheets of EPS foam, on top of a metal deck. There is no vapor barrier.
A sample of the sheet rock board was collected and the backing paper was analyzed. It is negative for asbestos. The EPS foam is not suspect material.
Two different caulks were found at the site where the core was made; black and gray. Neither of the types of caulk contains asbestos.

PLEASE NOTE: It is possible that another type of roofing material may be found in the valleys of the metal roof. No sample was collected in the valleys of the roof to avoid causing damage to the roof and, more than likely, starting a leak. When the project begins, if any suspect material, such as tar or asphalt, is found in the valleys, please call MU EHS (573 882-7018) and we will sample the material.

Sample Table

Sample Number	Description	Condition*	Analysis Results
260805-01	Clydesdale Hall roof – backing paper on gypsum board	Good	80% cellulose, 20% non-fibrous
260805-02	Clydesdale Hall roof – black caulk	Good	100% non-fibrous
260805-03	Clydesdale Hall roof – gray caulk	Good	100% non-fibrous

*****Condition legend: Good-no issues; Fair- nothing immediate, maintain regular observations; Poor- needs immediate attention by licensed professionals.

Asbestos Summary

No asbestos-containing material was identified in the scope of the project.

RMT

SECTION 06 1000 – ROUGH CARPENTRY

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Plywood roof decking and sheathing.
   2. Wood blocking and nailers at roof perimeters, curbs, penetrations, and equipment supports.
   3. Wood substrates for sheet metal flashings, copings, and roof edge assemblies.
   4. Fasteners, anchors, and associated accessories.

B. Related Sections:
   1. Section 07 6000 – Sheet Metal Flashing and Trim.

1.02 REFERENCE STANDARDS

A. APA – The Engineered Wood Association.
B. DOC PS 1 – Structural Plywood.
C. DOC PS 2 – Performance Standard for Wood Structural Panels.
D. ASTM D1761 – Mechanical Fasteners in Wood.
E. ASTM F1667 – Driven Fasteners: Nails, Spikes, and Staples.
F. AWPA U1 – Use Category System for Preservative-Treated Wood.
G. ANSI/SPRI ES-1 – Wind Design Standard for Edge Systems Used with Low-Slope Roofing Systems.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer documentation identifying plywood grade, thickness, span rating, bond classification, and applicable standards.
B. Submit proposed fastening methods, fastener types, spacing, and attachment details.
C. Submit documentation for preservative-treated wood, where required.
D. Provide project-specific shop drawings indicating plywood attachment, perimeter blocking, roof transitions, and interfaces with adjacent construction.

1.04 QUALITY ASSURANCE

A. Provide plywood manufactured in accordance with DOC PS 1 or DOC PS 2 and bearing an approved grade trademark.
B. Install plywood in accordance with APA recommendations, applicable building codes, and approved project documents.

C. Roofing Contractor shall verify existing substrate conditions and structural suitability before installation.
D. Do not install plywood over deteriorated, unstable, wet, or otherwise unsuitable substrates.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original bundles with identification markings intact.
B. Store plywood above ground on level supports, protected from moisture and physical damage.
C. Cover materials with weather-resistant coverings while maintaining ventilation.
D. Do not incorporate wet, swollen, delaminated, or damaged plywood into the completed construction.

PART 2 – PRODUCTS

2.01 PLYWOOD ROOF DECKING

A. Plywood shall comply with DOC PS 1, Structural Plywood, and bear the APA trademark or equivalent recognized certification.
B. Material Requirements:

    1. Thickness: Minimum 3/4 inch nominal, unless otherwise indicated on the Drawings.
    2. Grade: APA Rated Sheathing, minimum C-D grade, or better as required by application.
    3. Bond Classification: Exposure 1 for protected construction applications; Exterior where sustained weather exposure is anticipated.
    4. Panel Dimensions: 4 feet by 8 feet, unless otherwise required.
    5. Span Rating: As required for actual support spacing and applicable structural loads.
    6. Panels shall be free of delamination, excessive warping, deterioration, and other defects that could compromise roof system performance.

C. Where plywood supports fully adhered roof assemblies, provide a smooth, sound substrate suitable for the specified roofing system and associated underlayment or cover board.
D. Where plywood is installed over concrete, masonry, or other existing structural substrates, provide a fastening system specifically designed for the substrate and verified for required wind uplift resistance.

2.02 WOOD BLOCKING AND NAILERS

A. Provide dimension lumber of sufficient size and thickness to support roofing, flashings, metal edge assemblies, and associated accessories.
B. Provide preservative-treated lumber where required by applicable codes or exposure conditions.
C. Preservative-treated wood shall be compatible with adjacent roofing materials, fasteners, and sheet metal components.
D. Provide wood blocking of sufficient height to accommodate the complete roof assembly, including insulation, cover board, and membrane.

2.03 FASTENERS AND ANCHORS

A. Provide corrosion-resistant fasteners compatible with plywood, supporting substrates, and preservative treatments.
B. Fasteners shall be suitable for the substrate and provide the required withdrawal and shear resistance.
C. Attachment shall resist applicable project-specific design wind loads, including increased pressures at roof perimeters and corners.
D. Where attachment is made to concrete or masonry, provide approved anchors with appropriate embedment and edge distances.
E. Fastening patterns shall be based on structural requirements and approved engineered attachment details, not solely on a standard prescriptive spacing.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine existing substrates prior to installation.
B. Verify that supporting surfaces are sound, properly aligned, adequately secured, and suitable for attachment.
C. Notify the Owner's Representative of deteriorated materials, inadequate supports, moisture damage, or other conditions requiring correction.
D. Do not proceed until unacceptable conditions have been corrected.

3.02 INSTALLATION OF PLYWOOD

A. Install plywood in accordance with APA recommendations, approved shop drawings, and project specifications.
B. Position panels with the strength axis perpendicular to supporting framing unless otherwise indicated by structural design.
C. Stagger end joints between adjacent rows.
D. Provide minimum 1/8-inch spacing at panel edges and ends unless otherwise required by the panel manufacturer.
E. Support panel edges and ends as required by the structural design, including blocking or approved panel edge supports.

F. Secure plywood using approved fasteners installed at the spacing indicated in engineered attachment documents.
G. Fasteners shall be installed flush with the plywood surface without overdriving or damaging panel veneers.
H. Replace panels damaged during installation.
I. Do not leave plywood exposed to weather beyond the period permitted by the manufacturer and project requirements.

3.03 INSTALLATION OF WOOD BLOCKING

A. Install blocking at roof perimeters, parapets, curbs, penetrations, expansion joints, and other locations indicated.
B. Secure blocking to the structural substrate independently of the roofing insulation and membrane.
C. Provide continuous support for sheet metal flashings, coping systems, and roof edge assemblies.
D. Blocking attachment shall comply with applicable wind uplift requirements and the approved roof edge system design.
E. Install blocking to maintain proper elevation and continuity with the completed roof assembly.

3.04 FIELD QUALITY CONTROL

E. Inspect plywood installation for proper attachment, panel spacing, alignment, and surface condition.
F. Verify that fasteners are properly seated and that panels remain firmly attached.
G. Replace defective or inadequately attached materials.
H. Where required, perform field withdrawal testing of proposed fasteners and anchors to verify attachment capacity.

3.05 PROTECTION

A. Protect installed plywood from moisture intrusion and construction damage.
B. Remove and replace materials exhibiting swelling, delamination, deterioration, or loss of structural integrity.
C. Coordinate installation with roofing operations to minimize exposure of plywood substrates to inclement weather.

END OF SECTION

RMT

SECTION 06 16 00 SHEATHING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Wood roof sheathing.
   2. Plywood roof decking.
   3. Wood structural panels.
   4. Miscellaneous roof sheathing associated with roofing assemblies.

1.02 RELATED SECTIONS

A. Section 06 1000 Sheathing
B. Section 07 4113 – Metal Roof Panels
C. Section 07600 Sheet Metal Flashing and Trim

1.03 REFERENCES

A. APA – The Engineered Wood Association.
B. ASTM D226 – Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
C. PS 1 – Structural Plywood.
D. PS 2 – Performance Standard for Wood-Based Structural-Use Panels.
E. International Building Code (IBC).

1.04 SUBMITTALS

A. Product Data:
   1. Manufacturer's product data for plywood sheathing.
   2. Fastener data.
   3. Preservative treatment information where applicable.

B. Shop Drawings:
   1. Attachment methods and fastening patterns.

1.05 QUALITY ASSURANCE

A. Provide materials from manufacturers regularly engaged in production of wood structural panel products.
B. Materials shall bear APA trademark and span rating.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design:
1. APA rated CDX plywood sheathing.

B. Acceptable Manufacturers:
1. Georgia-Pacific.
2. Weyerhaeuser.
3. Roseburg.
4. Boise Cascade.
5. Approved equal.

2.02 WOOD SHEATHING

A. Roof Sheathing:
1. Thickness: 3/4 inch nominal minimum unless otherwise indicated.
2. Grade: CDX plywood.
3. Exposure Classification: Exposure 1.
4. Span Rating: As required by code and structural design criteria.

B. Panels shall comply with:
1. PS 1.
2. APA requirements.
3. Applicable code requirements.

2.03 FASTENERS

A. Provide corrosion-resistant fasteners compatible with preservative-treated lumber and project conditions.

B. Wood Sheathing Fasteners:
1. 1-5/8-inch screws minimum unless otherwise indicated.

2. Fastener spacing:
   a. 6 inches on center at panel edges.
   b. 6 inches on center in the field unless otherwise indicated.

3. H clips on newly installed plywood as needed.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify substrates and supporting framing are properly installed and ready to receive sheathing.
B. Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install sheathing in accordance with APA recommendations and manufacturer's instructions.
B. Install panels perpendicular to supports where applicable.
C. Stagger panel joints.
D. Provide minimum 1/8-inch spacing at panel edges and ends.
E. Secure sheathing tight to framing/furring members utilizing specified fastening pattern.
F. Install roof sheathing smooth and flush without irregularities that may telegraph through roofing materials.

3.03 FIELD QUALITY CONTROL

A. Replace damaged or delaminated panels.
B. Verify fastening patterns prior to roofing installation.

END OF SECTION

RMT

SECTION 074113.1 - STANDING-SEAM METAL ROOF PANELS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes standing-seam metal roof panels.

SCOPE OF WORK – CLYDESDALE HALL: The scope of work includes the complete removal of the existing standing seam metal roof system and all allied components down to the existing metal deck, including existing vertical wall flashings around all dormers. Installation of (2) two layers of 2" Polyisocyanurate insulation staggered a minimum of 18" followed by the installation of a ½" Gypsum coverboard mechanically fastened with a minimum of 12 fasteners per 4x8 enhanced to meet FM requirements. Installation of self-adhered underlayment membrane to the coverboard throughout. Installation of new standing seam Zee-Lock metal panels to include all accessory items such as gutters and downspouts, rake edges metal drip fascia, new ridge cap, flashing around all penetrations and equipment curbs, snowguard system and gutter guards. Installation of new metal vertical siding panels around all dormers as needed to match new metal system. The completed standing seam metal panel roof system and roofing system manufacturer's supplied accessories shall be installed in such a manner so that the roofing system manufacturer's Full Systems (NDL). Warranty can be issued upon successful completion of the roofing project.

B. Related Sections:
   1. Section 077253 "Snow Guards" for prefabricated devices designed to hold snow on the roof surface, allowing it to melt and drain off slowly.

1.03 PREINSTALLATION MEETINGS

A. Preinstallation Conference:
   1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   2. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
   3. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
   4. Review structural loading limitations of deck during and after roofing.

5. Review flashings, special details, drainage, penetrations, equipment curbs, and condition of other construction that affect metal panels.
6. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
7. Review temporary protection requirements for metal panel systems during and after installation.
8. Review procedures for repair of metal panels damaged after installation.
9. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Sustainable Design Submittals:

1. Product Test Reports: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirements.
2. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.

C. Shop Drawings: **Produced by manufacturer/contractor.**

1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 3 inches per 12 inches.

D. Calculations:

1. Include calculations with registered engineer seal, verifying roof panel and attachment method resist wind pressures imposed on it pursuant to applicable building codes.

E. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.

1. Include similar Samples of trim and accessories involving color selection.

F. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.

1. Metal Panels: 12 inches long by actual panel width. Include clips, fasteners, closures, and other metal panel accessories.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Manufacturer and Installer.

B. Product Test Reports: For each product, for tests performed by a qualified testing agency.

C. Field quality-control reports.

D. Sample Warranties: For special warranties.

1.06 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panels to include in maintenance manuals.

1.07 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in architectural sheet metal products.

B. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Build mockup of typical roof area and eave**, including fascia, and soffit** as shown on Drawings; approximately 48 inches square by full thickness, including attachments**, underlayment,** and accessories.
2. Build mockups for typical roof area only, including accessories.

    a. Size: 48 inches by 48 inches.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Retain strippable protective covering on metal panels until installation. Remove as panels are being installed. Verify film is not left on installed panels.

1.09 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.10 COORDINATION

B. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

C. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.11 WARRANTY

D. Special Galvalume Substrate Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Structural failures including rupturing, or perforating.
    b. Deterioration of metals and other materials beyond normal weathering.

2. Warranty Period: 20 years and 6 months from date of Substantial Completion.

E. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

    a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    c. Cracking, chipping, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

F. Special Watertightness Warranty: Manufacturer's no dollar limit form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain watertight, including leaks, within specified warranty period.

1. Warranty Period: **20** years from date of Substantial Completion.
2. Shop drawings must be provided to, reviewed, and approved by panel manufacturer prior to panel system installation.
3. Inspections by panel system manufacturer technical representative are required. Perform first inspection when underlayment and flashing are in place and second inspection when the roof is complete.

G. Special Installer Warranty: Furnish a written warranty signed by the Panel Applicator guaranteeing materials and workmanship for watertightness of the roofing system, flashings, penetrations, and against all leaks.

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

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 29 percent.

B. Solar Reflectance Index (SRI): Three-year-aged SRI not less than 64 or initial SRI not less than 82 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

C. Energy Performance: Provide roof panels that are listed on the EPA/DOE's ENERGY STAR "Roof Product List" for steep-slope roof products.

D. Energy Performance: Provide roof panels according to one of the following when tested according to CRRC-1:

1. Three-year, aged solar reflectance of not less than 0.55 and emissivity of not less than 0.75
2. Three-year, aged Solar Reflectance Index of not less than **64** when calculated according to ASTM E 1980.

E. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to **ASTM E 1592 UL 580**:

1. Wind Loads: FM 1-90.
2. Other Design Loads: ASCE 7
3. Deflection Limits: For wind loads, no greater than **1/180**
4. Serviceability requirements.

a. Accommodate thermal movement resulting from ambient temperature variations without buckling, opening of seams, fastener failure, undue stress on system components, or other detrimental effects.

b. Maintain watertight performance under design wind conditions.

c. Prevent oil canning, distortion, or visible deformation exceeding the manufacturer's published tolerances.

d. Provide clip and attachment systems capable of transferring design loads to the supporting structure without failure.

F. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 1680 and ASTM E 283 at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft.

G. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 and ASTM E 331 at the following test-pressure difference:

1. Test-Pressure Difference: 15 lbf/sq. ft.

H. Hydrostatic Head Resistance: No water penetration when tested according to ASTM E2140.

I. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

J. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F ambient; 180 deg F material.

2.02 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.
2. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.

B. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels. Formed with vertical ribs at panel edges and a flat pan between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels, engaging opposite edge of adjacent panels, and mechanically seaming panels together.

1. **Basis-of-Design Product:** Subject to compliance with requirements, provide Berridge Manufacturing Company; **Zee-lock (90º seam)** or comparable product by one of the following:

    a. Berridge Manufacturing Co.
    Corporate & Sales Headquarters
    2610 Harry Wurzbach Road
    San Antonio, Texas 78209

    b. Owner approved:

2. Metallic-Coated Steel Sheet: Aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

    a. Nominal Thickness: 0.024 inch
    b. Exterior Finish: Two-coat fluoropolymer
    c. Painted materials shall have a removable plastic film to protect the paint during roll forming, shipping and handling.
    d. Color: Owner approved

3. Aluminum Sheet: Coil-coated sheet, ASTM B 209 3105 alloy, with H14 temper as required to suit forming operations and structural performance required.

    a. Thickness: 0.032 inch
    b. Surface: Smooth, flat finish.
    c. Exterior Finish: Two-coat fluoropolymer
    d. Painted materials shall have a removable plastic film to protect the paint during roll forming, shipping and handling.
    e. Color: Owner approved

4. Clips: Continuous Zee-rib with Vinyl Weather seal insert to accommodate thermal movement.

    a. Material: 0.024-inch nominal thickness, zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet.
    b. Material: 0.064-inch nominal thickness, zinc coated (galvanized) base with 0.033 inch stainless-steel top.

5. Joint Type: Single folded.
6. Panel Coverage: 16 inches
7. Panel Height: 2.0 inches

2.03 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 40 mils thick, consisting of slip-resistant, polyethylene-film top surface laminated to a layer of butyl or SBS-modified asphalt adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F ASTM D 1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F ASTM D 1970.
3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Grace Ultra

    b. Mid-States Asphalt Quick Stick HT Pro
    c. Polyglass Polystick MTS
    d. Soprema Lastobond Shield HT
    e. Grace Ice & Watershield HT

2.04 INSULATION

A. General: Provide preformed roof insulation boards that comply with requirements, selected from roofing system manufacturer's standard sizes and of thickness indicated.

B. Polyisocyanurate Board Insulation: Type II, Class 2 Grade 2 – Closed cell polyisocyanurate foam fiberglass reinforced mat laminated to faces, complying with the following additional characteristic.
1. 2 layers of 2"" polyisocyanurate staggered.

C. Roof Insulation: rigid polyisocyanurate foam insulation composed of a closed cell polyi socyanurate foam core laminated to a felt or glass fiber mat facer on both major surfaces. The insulation shall have the following characteristics:
1. Dimensional Stability (length and width) per ASTM D 2185: <2%.
2. Compressive Strength (10% Deformation) per ASTM D 1621: 20 psi.
3. Product Density per ASTM D 1622: Nominal 2.0 pcf.
4. Flame Spread per ASTM E84 (Full 10 min. Test): 20-50*
5. The insulation board is to have a minimum conditioned thermal value per inch of an LTTR Value of 6.00 as determined by ASTM C 1303 and C 518.
6. The insulation board shall have a minimum compressive strength of 20 psi and a dimensional stability of -2% linear changes, maximum seven (7) days.

2.05 COVER BOARD

1. Thickness: 1/2 inch.
2. Size: 48 inches by 48 inches, nominal.
3. R-Value: 0.45, minimum.
4. Compressive Strength: Minimum 900 psi.
5. Surface: Coated fiberglass mat facer suitable for adhered and mechanically fastened roofing assemblies. Basis of Design: Dens Deck Storm X Prime or approved equal.

6. Ozone Depletion Potential: Zero; contains no CFC or HCFC blowing agents.
7. Recycled Content: Minimum 5 percent pre-consumer, typical.

2.06 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C 645; cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Gutters: Formed from same material as roof panels, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match metal roof panels and roof fascia and rake trim.

E. Downspouts: Formed from same material as roof panels. Fabricate in 10-foot long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Finish downspouts to match gutters.

F. Roof Curbs: Fabricated from same material as roof panels, 0.024 inch nominal thickness; galvalume or stainless steel; supply an integral full-length cricket for curbs wider than 24 inches supported by a structural metal deck. Fabricate curb flashing from 0.024 inch. Maintain a minimum of 1/2 of roofing panel width on each side of roof curb, and start panels a minimum of 9 inches up slope of roof curb, flashing roofing panels to roof curb per roofing manufacturer’s requirements. Fabricate curb and subframing to withstand indicated loads of size and height of roof top equipment. Where required insulate roof curbs with rigid insulation.

G. Panel Fasteners: Zinc-coated steel, corrosion resisting steel, zinc cast head, or nylon capped steel, type and size as approved for the applicable loading requirements.

H. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Joint Sealant: Silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.

2.07 FABRICATION

I. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

J. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using factory set, non-adjustable, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

K. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

L. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Sealed Joints: Form non expansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
3. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.

a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal panel manufacturer for application, but not less than thickness of metal being secured.

2.08 FINISHES

M. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

N. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

O. Steel Panels and Accessories:

1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide a total dry film thickness of 0.95± 0.10 mil. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Mica Fluoropolymer: AAMA 621. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide a total dry film thickness of 0.95± 0.10 mil Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
3. Metallic Fluoropolymer: Factory-applied two-coat fluoropolymer coating conforming to AAMA 621, utilizing a resin system containing a minimum of 70 percent PVDF (Kynar 500®, Hylar 5000®, or approved equal). Finish shall be coil-coated with a minimum 0.2-mil primer and 0.75-mil color coat for a total dry film thickness of 0.95 mil minimum.Two-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide a total dry film thickness of 0.95± 0.10 mil Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.35 mil.

P. Aluminum Panels and Accessories:

1. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide a total dry film thickness of 0.95± 0.10 mil. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Mica Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide

a total dry film thickness of 0.95± 0.10 mil. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

3. Metallic Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.75± 0.05 mil over 0.2± 0.05 mil primer coat, to provide a total dry film thickness of 0.95± 0.10 mil. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.

1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.

    a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

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

3.02 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.03 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply

wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 36 inches. Roll laps with roller. Cover underlayment within 14 days or as directed by the underlayment product manufacturer.

1. Apply over the entire roof surface.

3.04 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels to be level to 1/4 inch in 20 ft.
2. Flash and seal metal panels at perimeter of all openings. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
3. Locate and space fastenings in uniform vertical and horizontal alignment.
4. Install flashing and trim as metal panel work proceeds.
5. Panels should be continuous without end laps.
6. Align bottoms of metal panels and fasten.
7. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:

1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.
2. Aluminum Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use stainless-steel fasteners for surfaces exposed to the interior.

C. Anchor Clips: Anchor metal roof panels and other components of the Work securely in place, using manufacturer's approved fasteners according to manufacturers' written instructions.

D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

E. Standing-Seam Metal Roof Panel Installation: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.

1. Install clips to supports with self-tapping fasteners.
2. Install pressure plates, if required, at locations indicated in manufacturer's written installation instructions.
3. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied vinyl weatherseal are completely engaged.

F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, and similar items. Provide types indicated by metal roof panel manufacturers; or, if not indicated, types recommended by metal roof panel manufacturer.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

H. Gutters: Join sections with riveted and soldered or lapped and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 36 inches o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

I. Downspouts: Join sections with telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

1. Provide elbows at base of downspouts to direct water away from building.
2. Connect downspouts to underground drainage system indicated.

J. Roof Curbs: Install flashing around bases where they meet metal roof panels.

K. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

3.05 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal panel units within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.06 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect metal roof panel installation, including accessories. Report results in writing.

B. Remove and replace applications of metal roof panels where tests and inspections indicate that they do not comply with specified requirements.

C. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.

D. Prepare test and inspection reports.

3.07 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

RMT

SECTION 07 5900 – PREPARATION OF RE-ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fastener Pullout Testing: Provide fastener pullout testing in each roof area for each type of roof deck in accordance with SPRI – Standard Pullout Test Procedure.

B. The removal of the existing roofing system down to the existing roof's substrate, steel decking.

C. The coordination with the electrical / mechanical contractor for the removal of any unused equipment / penetrations or deck accessories prior to initial roof replacement.

D. The coordination with the electrical / mechanical contractor for raising any rooftop appurtenances, i.e., refrigeration piping supports, where it is required to achieve minimum recommended heights and clearances for the new roofing system.

E. Replacement of any deteriorated steel decking.

F. Application of a rust inhibitor coating to rusting steel decking.

G. The coordination with the electrical contractor for the lightning protection system.

H. Temporary roofing tie-ins and water stops.

I. Quality Control

1.02 DEFINITIONS

A. Division 1 – General Requirements

B. Section 06 1500 -Wood Decking and Lumber

C. Section 07 4113.1 – Standing-Seam Metal Roof Panels Zee Lock

D. Section 07 6000 – Flashing and Sheet Metal: Requirements for sheet metal components

1.03 UNIT PRICE – MEASUREMENT AND PAYMENT

A. Replacement of damaged or deteriorated steel decking:
   1. Basis for Measurement: By square foot
   2. Basis of Payment: Replace Metal Deck: Replace any deck which is damaged or has scaling corrosion with new, mechanically attached steel decking of the same type, thickness, and cross section to match existing if damaged or corroded area.

B. The cleaning and coating of the steel decking having rust or corrosion:
   1. Basis for Measurement: By square foot
   2. Basis of Payment: Prime Metal Deck: Power clean the metal decking with rotating steel brush roller or approved means of removing rust from the steel decking. Apply to the metal decking

an approved rust inhibiting primer. Allow the primer to dry prior to proceeding with roofing installation.

1.04 SUBMITTALS

A. Submit under provisions Submittals.

B. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.

C. Product Data: Provide date for each required product indicating characteristics, performance criteria, mixing and preparation requirements, limitations, and Material Safety Data Sheets (MSDS).

D. Fastener Pullout Testing: Provide fastener pullout testing in each roof area for each type of roof deck– Standard Pullout Test Procedure.

E. Demolition and Removal Procedures and Schedule: Outline all work tasks and schedule them, showing clearly when each area is to be performed. Coordinate with Owner and other contractors to avoid impact to Owner's occupancy.

F. Project Record Documents: Indicate extent of work installed, actual locations of appurtenances and items that will be hidden from view at completion of work.

G. Debris Removal Certification: Provide certified documentation indicating all project related debris has been disposal in an approved and legal landfill.

1.05 PRE-INSTALLATION CONFERENCE

A. Convene 10 days prior to commencing work of this Section.

1.06 COORDINATION AND PROTECTION

A. Provide, erect, and maintain temporary barriers and security devices.

B. Roofing contractor is to verify all field measurements for the referenced roof areas.

C. Do not close or obstruct roadways or sidewalks without permits.

D. Conduct demolition to minimize interference with adjacent roofing and siding, roof mounted equipment, and roof deck and structure to remain.

E. When building exceeds one-story or fifteen feet in height, or when debris must be discharged adjacent to windows, pedestrian, or vehicular traffic, or where the conditions dictate extra precautions, provide proper methods to distribute into trash containers.

F. Conduct operations with minimum interference to public or private thoroughfares. Always maintain required egress (exit way) and access.

G. Provide protective measures, including all OSHA and Owner safety requirements, in and around the work area, and in all and around the building prior to beginning the project.

H. At any time, no open flames, torches, or any type of equipment which creates an “open flame” are allowed on Owner’s properties.

I. Roofing contractor shall not refuel any roofing equipment or electrical generators on the roof. All refueling of roofing equipment and generators shall be accomplished on the ground and a minimum of 25 feet from the side of any materials and the side of each building. Provide appropriate fire extinguishers in the designated refueling area. At the end of the workday, all motorized (gasoline, propane, natural gas-, or diesel-powered engines) are to be removed from the roof at the end of the workday.

J. All-terrain vehicles, i.e., “four-wheelers,” or any motorized rideable roofing equipment will not be allowed for facilitating any segment of the Owner roofing project. This includes any type of ATVs, rideable roofing carts, and lawn tractors.

K. Schedule and coordinate all mechanical and electrical service interruptions with Owner’s Representative and designated on-site personnel.

L. Hazardous Materials: It is not expected that hazardous materials such as asbestos-containing materials will be encountered in the Work.
   1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner Representative.

M. Restrictions:
   1. Comply with Owner’s General Requirements on use of site.
   2. Firearms, Smoking, and Tobacco products are prohibited on all roof areas and on the campus grounds.
   3. No food products are allowed on the Owner facility grounds and on the roof at any time.
   4. Water is the only liquid allowed on the roof at any time. Provide approved individual and disposable water drinking cups for employees. After use, the disposable drinking cups are to be disposed in approved trash container. Do not dispose drinking cup debris in the roofing debris trash container. Drinking cups debris is to be removed from the facility each day.
   5. Maintain facility and all utility services in a functional condition.
   6. Provide and maintain sanitary facilities for employees. Provide sanitary soaps for employees.

PART 2 PRODUCTS

2.01 DECK AND SUPPORT MATERIALS

A. Steel Deck: Install new metal decking / panel(s) in areas of deteriorated decking.

B. All New Steel Decks: Align top plane to the existing decking.

C. Curbs and Support Members: Wood or metal curbs and support items as indicated and required for existing conditions.

D. Miscellaneous Metals: Conform to existing Products and installations.

2.02 TESTS

A. Roofing Contractor shall comply with “Standard Pullout Test Procedure” for providing fastener pullout testing as indicated in the provision of Section 07 4113.1. Testing shall be performed by using certified equipment and personnel.

PART 3 EXECUTIONS

A. Contractor shall have a full understanding of the Work and existing Project conditions necessary to complete the Work as outlined in the Contract Documents. Any discrepancies between the Drawings, Specifications, and existing site conditions, including errors, omissions, substrate conditions, roof slopes, or other conditions that may affect installation, shall be reported in writing to the Owner's Representative a minimum of five (5) days prior to bid submission. Failure to identify and report reasonably discoverable discrepancies prior to bidding shall not relieve the Contractor of responsibility for completing the Work in accordance with the Contract Documents.

B. Roofing Contractor shall be responsible for obtaining and submitting project-specific, manufacturer-provided wind-uplift engineering calculations for the specified Zee-Lock standing-seam metal roofing system. Calculations shall be prepared and sealed by a professional engineer registered in the State of Missouri and shall demonstrate that the proposed roof panels, clips, fasteners, and attachment methods are capable of resisting the applicable positive and negative design wind pressures established for the Project.

1. Calculations shall identify applicable field, perimeter, and corner wind-pressure zones and associated attachment requirements.
2. Verify roof panel spans, clip spacing, fastener types, and attachment to the existing structural substrate.
3. Coordinate calculations and attachment requirements with Section 07 4113.1 – Standing-Seam Metal Roofing and the approved manufacturer's installation requirements.
4. Submit engineering calculations and corresponding shop drawings to the Owner's Representative for review prior to fabrication or installation.
5. Any proposed modifications to the existing structural roof deck or supporting members shall be submitted for review and approval prior to implementation.

C. Contractor must communicate the proposed starting date for reroofing the referenced roof areas to Owner. Contractor must allow Owner time to have the inside protection system installed. In the areas where interior protection is required, the interior protection system must be in place prior to starting the roofing in “that” roof area.

D. Contractors shall remove existing securement fasteners from the existing roofing system by mechanically backing out the securement fasteners from the steel decking. Breaking or snapping off the fasteners will not be permitted.

E. Prevent movement or settlement of adjacent structures and paving. Provide bracing and shoring.

F. Emergency Equipment and Materials: Maintain on site equipment and materials necessary to apply emergency temporary edge seal in event of sudden storms or inclement weather. If inclement weather occurs while a temporary water stop is in place, the contractor shall provide the labor and materials necessary to monitor the conditions to maintain a 100% watertight condition.

G. Arrange work sequence to avoid use of newly constructed Roofing for storage, walking surface, and equipment movement. Where such access is absolutely required, the contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A suitable temporary protective surface shall be provided for all Roofing areas which receive traffic during construction. Any damage which occurs to the Roofing membrane and/or system is to be brought to the attention of the Owner’s Representative and membrane manufacturer. All damage is to be repaired or replaced according to the membrane manufacturer’s recommendations. The party responsible for damage shall bear the cost of repairs.

H. Protect existing landscaping materials, appurtenances, structures, paving, roofing and siding, roof mounted equipment, roof deck (new and existing) and structures that are not to be demolished.

I. Examine existing mechanical and electrical items to determine conditions and operability.

J. The roofing contractor is to verify the drainage piping is properly connected, free flowing, and sealed.

K. Prior to the starting any Work, any inoperable items or unsafe conditions found in the referenced work area(s), the roofing contractor must immediately notify Owner Representative verbal and in writing of the inoperable item(s) or of the unsafe conditions.

L. Beginning any Work indicates acceptance of existing conditions, including operability of plumbing, mechanical and electrical items / equipment located in the referenced work area(s).

3.01 EXECUTION

A. Coordinate all aspects of demolition work with Owner’s Representative and with all other Trades.

B. Roofing Contractor is to provide safety protective measures inside, outside, and around the building by following all OSHA and Owner safety requirements. If inside protection measures are being provided by Owner’s employees or by a contracted interior protection company, the roofing contractor shall coordinate all roofing activities which may affect the activities of installing or removal of the interior protection system.

C. Prior to demolition work, verify all roof drains, soil pipes, flutes, roof equipment, steel decking and

associated members, piping, electrical conduit, and other roof top equipment are secured to the building structure. Coordinate removal and securement of all unsecured roof penetrations and equipment with the electrical / mechanical contractor prior to the start of the roofing demolition.

D. Owner will occupy portions of building immediately below roof replacement area. Conduct roof replacement so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
   1. Coordinate with Owner to shut down all air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or could activate smoke detection equipment in the ductwork or equipment.
   2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated prior to proceeding with work over the impaired deck area.

F. Remove and dispose of all designated, obsolete-roof penetrations and mechanical equipment as identified by the Owner's Representative in an orderly and careful manner. Contractor shall verify and coordinate all roof penetrations and mechanical removal with the Owner's Representative. Contractor shall coordinate with Owner's Representative and perform all necessary service disconnects.

G. All piping and electrical supports shall be adjusted to accommodate the new height or thickness of the specified roofing system. All lifting and lowering work required for the refrigeration piping supports shall be completed by an Owner approved, licensed mechanical contractor. All roofing work associated with the refrigeration piping supports shall be closely coordinated by the roofing contractor with the mechanical contractor.

H. Remove and replace any deteriorated metal decking. Any metal deck replacement will match existing metal decking type and gauge. Any steel deck replacement will be based upon per unit cost established in the contractor's bid form and document replacements.

I. Remove and dispose of all existing wood blocking, used for piping and equipment supports.

J. Remove and dispose of existing roof related sheet metal, i.e., metal coping, perimeter metal edging, and metal counterflashing, unless a particular component is identified on the project drawings for reuse of the existing sheet metal.

K. Evenly cut edges of existing materials that are to be expanded, replaced, or modified. Completely remove materials from areas to be replaced or repaired each day.

L. Cease operations and notify Owner immediately if adjacent structures or materials appear to be endangered. Do not resume operations until corrective measures have been taken.

M. Remove materials to be re-installed or retained in a manner to prevent damage. Store and protect.

N. Remove roofing, insulation, flashing, and damaged nailers and deck.

O. Contractor shall provide, where required to match the new insulation and Dens Deck thickness, additional wood blocking at the perimeter metal edge or expansions joints. All Existing and New Wood Nailers shall be anchored to resist a minimum force of 300 pounds per lineal foot (4,500 Newton / lineal meter) in any direction. Individual nailer lengths shall not be less than 3 feet (0.9 meter) long. Nailer fastener spacing shall be at 12 inches (0.3 m) on center or 16 inches (0.4 m) on center if necessary to match the structural framing. Fasteners shall be staggered 1/3 the nailer width and installed within 6 inches (0.15 m) of each end. Two fasteners shall be installed at ends

of nailer lengths. All wood nailer attachments shall meet the current Factory Mutual Loss Prevention Data Sheet 1-49. Refer to Section 06 1000 for acceptable fasteners for wood product attachments.

P. Except when instructed otherwise, immediately remove demolished material from site as work progresses. There shall not be any stockpiling of roof removal materials on any roof section. All roof removal materials shall be removed from the roof each day. All roofing debris is to be disposed of in a state approved landfill. At the end of the reroofing project, documentation of each trash bin disposal shall be submitted to the Owner's Representative for verification of proper disposal.

Q. Remove and properly dispose of contaminated, vermin infested, or dangerous materials encountered.

R. Clean up debris daily, both on the roof and around the facility grounds. Leave the site in clean condition each day.

3.02 STEEL DECK AND SUPPORT REPLACEMENT AND REPAIR

A. In areas of deteriorated steel decking, the roofing contractor shall install new steel deck and accessories.

B. Any steel deck replacement will be based upon per unit cost established in the contractor's bid form and per the required documentation for replacements.

C. Remove deteriorated decking by cutting in straight lines. Coordinate cuts with structural support to ensure proper installation of replacement materials.

D. Where necessary, grind away existing welds and protrusions. Provide smooth and even surface for new deck on existing structural framing.

E. Install new steel decking with all edges properly supported on structural members or adjacent decking. Secure with approved fasteners, spaced per local building code requirements.

3.03 MODIFICATIONS TO EXISTING MECHANICAL AND ELECTRICAL ITEMS

A. When required to achieve recommended clearances, minimum curb heights, or other modifications, disconnect, modify, and reconnect mechanical and electrical services, contractor shall coordinate all work with the and licensed electrical / mechanical contractor.

B. Do not disrupt any services unless specifically approved by the Owner's Representative and on-site personnel.

C. Restore services and verify proper operational conditions to the satisfaction of Owner's Representative.

3.04 TEMPORARY ROOFING TERMINATIONS AND PROTECTION

A. Prior to starting roofing project, the roofing contractor shall inspect the facility existing roof area(s) associated with the contract roofing project for any defects which could cause water or

moisture vapor entries into the building during the roofing application. Any defects or concerns shall be addressed in writing to the Owner representative prior to starting the roofing project. Proceeding with the roofing project indicates the roofing contractor's acceptance of the existing facility conditions.

B. For existing roof areas where access is absolutely required for the installation of the new roofing system on another roof area, the roofing contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent roof areas. A suitable temporary protective surface shall be provided for all roof areas which receive traffic during construction of the new roofing system. During the roofing project, any damage which occurs to the new or existing roofing membrane and/or system shall be removed and replaced at the contractor's expense.

C. The roofing contractor shall provide the labor and materials required to maintain a watertight and impermeable condition at all times on the roof areas as referenced in the project's contract documents. All membrane and metal flashings shall be installed concurrently with the field membrane installation to maintain a 100% watertight condition as the work progresses each day. For applications, all equipment and piping flashings, perimeter flashings, i.e., metal edge and coping, must be 100% completed and must be 100% airtight to prevent any air/water vapor infiltration into the completed roofing system each day.

D. When an interruption or a postponement in the roofing work occurs in the installation of the roofing system, the roofing contractor shall install temporary watertight and hermetic terminations across the installed roofing system. The roofing system shall be 100% impermeable to prevent water and air/water vapor infiltration into or under the new roofing system. When work resumes, any contaminated membrane shall be removed from the work area and disposed off site. None of these materials shall be reused in the new work.

E. During inclement weather or during a postponement in the roofing work occurs while a temporary water stops or terminations are in place, the contractor shall provide the labor and materials to monitor and ensure the temporary water stops and terminations are 100% watertight and impermeable condition.

F. If any weather-related moisture or the result of moisture caused by the condensation of water vapor are allowed to enter the newly completed Roofing System, the affected roof area(s) shall be removed and replaced at the contractor's expense.

3.05 QUALITY CONTROL – PERFORMANCE OF INSTALLATION

A. Roofing Contractor to assign a qualified, full, non-working Quality Control Supervisor to be on Project site at all times during installation of Work. This supervisor is to have good communication skills and be able to communicate with the Owner Representative and with Contractor's Employees.

B. Roofing Contractor to assign a qualified, full, non-working Quality Control Supervisor to inspect all installed Work, particularly roofing tie-ins, at the end of each working day, and as otherwise required ensuring watertightness. Inspection to be verified by signature on the Contractor's Quality Assurance Form signifying installation is in accordance with specified requirements for "that" day of installation.

3.06 CLEANING

A. Contractor will be responsible for all cleaning of occupied or work areas when soiled or polluted by Work or operations of the roofing project.

END OF SECTION

SECTION 07600 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SUMMARY

All sheet metal flashings, perimeter trim, rake edges, eave closures, ridge components, gutters, counterflashing's, and associated accessories interfacing with the standing-seam metal roofing system shall be coordinated with Section 07 4113.1.

Provide components compatible with the specified 24-gauge Zee-Lock standing-seam metal roof system and the manufacturer's approved installation details.

Fabricate and install sheet metal components to accommodate thermal expansion and contraction without restricting the intended movement of the standing-seam roof panels. Do not penetrate, rigidly restrain, or otherwise compromise standing-seam roof panels except where specifically permitted by the roofing system manufacturer and approved construction details. Sheet metal components and their attachment systems shall resist applicable design wind pressures. Provide increased material thickness, attachment capacity, and support spacing as required by approved project-specific engineering and manufacturer requirements.

A. Section Includes:
   1. Gutters, downspouts, metal rake edge and fabricated sheet metal items to be prefinished galvanized steel.
   2. Splash pads
   3. Sheet metal accessories

B. Related Documents: The Contract Documents apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.

1.02 RELATED SECTIONS

A. Section 06100 - Carpentry (for Roofing): Wood blocking, nailers, and grounds.

1.03 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   2. A653 - Steel Sheet, Zinc Coated, (galvanized) by the Hot-Dip process, Structural (Physical) Quality Property.
   3. A924 - Steel Sheet, Zinc Coated, (galvanized) by the Hot-Dip process.

B. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.

C. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.

1.04 SYSTEM DESCRIPTION

A. Work of this Section is to physically protect standing-seam metal roofing, associated flashings, penetrations and transitions.

1.05 SUBMITTALS

A. See General Conditions and Special Conditions for Submittal Procedures: Procedures for submittals.
   1. Product Data: Provide data on prefabricated components.
   2. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
   3. Samples: Provide full sized sample of metal flashing illustrating typical seam, external corner, internal corner, material and finish. MU will return samples upon completion of the roof.
   4. Submit color chart or physical samples for selection of prefinished metal color by the Owner.
   5. Assurance/Control Submittals:
      a. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
      b. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

1.06 QUALITY ASSURANCE

A. Standards: Comply with the latest edition of standards specified in this section and as referenced below:
   1. Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors
   2. The NRCA Roofing and Waterproofing Manual, Latest Edition - National Roofing Contractors Association
   3. Published installation from manufacturer’s of selected products.
   4. Annual Book of ASTM Standard, Latest Edition - ASTM International

B. Qualifications:
   1. Fabricator: Company specializing in manufacturing Products specified with minimum 3 years documented experience.
   2. Installer: Company specializing in performing the Work of this Section with minimum 3 years documented experience. Use adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

B. Prevent contact with materials during storage and installation that may cause discoloration, staining, or damage.

1.08 WARRANTY

A. All new materials and workmanship provided under this section of the specifications shall be guaranteed in writing by the Contractor to maintain all sheet metal flashing in a watertight condition without cost to the Owner for a period of three (3) years after date of substantial completion.

PART 2 PRODUCTS

2.01 MATERIALS

A**. Prefinished Galvanized Steel:** ASTM A653/A653M, G90 zinc-coated steel sheet, factory prefinished in accordance with ASTM A755/A755M. Provide minimum 24-gauge base metal thickness for exposed copings, counterflashing's, rake trim, perimeter fascia, gutters, downspouts, and associated sheet metal accessories, unless otherwise indicated or required by approved engineering.

1. Color and finish shall be selected by Owner from manufacturer's standard color selections.
2. Provide factory-applied finishes suitable for exterior exposure.
3. Sheet metal flashings and trim adjoining the specified Zee-Lock standing-seam metal roofing system shall be compatible with the roof panels and installed in accordance with the roofing manufacturer's approved details.
4. Roof panels, panel clips, and proprietary standing-seam components shall comply with Section 07 4113.1 – Standing-Seam Metal Roofing.

B**. Material Thickness:** Where sheet metal material or gauge is indicated on the Drawings, provide the specified material and minimum thickness. Increase material thickness where required by component dimensions, SMACNA recommendations, approved shop drawings, or applicable design wind pressures.

C**. Continuous Cleats and Hook Cleats:** Fabricate from ASTM A653/A653M G90 galvanized steel, minimum 22-gauge base metal thickness, or heavier as required by approved attachment details and wind-uplift engineering.

1. Provide continuous cleats and attachment systems capable of resisting applicable design wind pressures.
2. Coordinate cleat configuration, attachment, and spacing with the specified Zee-Lock standing-seam roofing system.
3. Provide allowances for thermal expansion and contraction without restricting the intended movement of standing-seam roof panels.
4. Do not substitute field-fabricated cleats for proprietary Zee-Lock roof panel clips or attachment components.

D. Fabrication and Compatibility: Fabricate sheet metal components in accordance with SMACNA recommendations and the approved roofing manufacturer's details. Provide compatible fasteners, sealants, closures, and accessories. Do not penetrate or rigidly restrain standing-seam roof panels except where specifically permitted by the roofing manufacturer and approved construction details.

2.02 COMPONENTS

A. Counter and Slip Flashings, Base and Cover Plates, End Caps, Joint Fasteners, and Gravel Stop: Profiled as indicated and to suit existing conditions.

B. Downspouts: Rectangular profile; fabricated from Pre-Finished Galvanized Steel.

C. Counter and Slip Flashings, Base and Cover Plates, End Caps, Joint Fasteners, and Gravel Stops, Scupper Sleeves and Boxes: Profiled as indicated and to suit existing conditions.

D. End Caps, Downspout Outlets, Gutter and Downspout Support Brackets and Straps, Joint Fasteners, Gutters, Downspout Strainers, Downspout Header, and Scupper Boxes: Profiled to suit gutters and downspouts.

2.03 FASTENERS

A. Manufacturers:
   1. Construction Fasteners, Inc.
   2. Hilti
   3. OMG
   4. Powers
   5. Simplex

B. Fasteners and Anchorage Devices: Comply with SMACNA requirements, unless otherwise indicated.
   1. Appropriate for purpose intended, approved by Factory Mutual where required.
   2. Rust-resistant and compatible with materials to be joined.
      a. Ferrous Metals: Corrosion-resistant coated steel fasteners, compatible with flashing metal; finish of exposed fasteners to match flashing metal.
      b. Rivets: Corrosion-resistant coated steel or aluminum rivets, compatible with adjoining metals and approved for the application.
   3. Length: As required for thickness of material to penetrate substrate ½-inch minimum.
   4. Exposed Fasteners: Provide metal-jacketed neoprene washers, jacket color to match pre-finished sheet metal.

C. Mechanical Fasteners for Sheet Metal to Substrate Anchorage:
   1. Masonry: One-step, screw-type drive anchor (nailing); heat-treated, stress relieved, prefinished galvanized steel pin; zinc jacketed; sized for intended application; minimum 1-1/4-inch length x ¼-inch diameter; compatible anchors with adequate documented capacity for applicable wind loads.
   2. Wood Blocking: Hexagonal head screws, prefinished galvanized steel, with neoprene rubber washers with jacket color to match pre-finished sheet metal.
   3. Concrete: Same as masonry or other power actuated fasteners, suitable for application.

D. Roofing Nails: Hot-dipped galvanized or non-ferrous type, with annular rings, size as required to suit application, minimum 11-gage with 3/8-inch diameter head.

E. Mechanical Fasteners for Sheet Metal to Metal Fabrications (Support Framing) Anchorage: Appropriate for purpose intended, size as required to suit application and achieve positive anchorage to substrate material.

2.04 ACCESSORIES

A. Reglets/Receivers: Surface mounted or recessed pre-finished steel, face and ends covered with plastic tape.

B. Downspout Supports: Brackets; galvanized or prefinished steel compatible with downspouts.

C. Sealant: Urethane.
   1. Metal Contact: Type I.
   2. Pitch Pan Filler: Type II.

D. Vent Pipe, Piping, and Electrical Conduit Flashings: Pre-formed pipe flashings, minimum height above roof: 8 inches.

2.05 FABRICATION

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
   1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
   2. Obtain field measurements for accurate fit before shop fabrication.
   3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
   4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.

B. Form all sheet metal sections and components (except corners) in longest practical length up to 10-feet maximum, true to shape, accurate in size, square, and free from distortion or defects detrimental to appearance or performance.

C. Fabricate 22 ga. continuous cleats and starter strips of same material as sheet, interlocking with sheet.

D. Form pieces in longest possible lengths.

E. Hem exposed edges on underside ½-inch, miter and seam corners.

F. Form all sheet metal material to provide watertight joints. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
   1. Unprotected Horizontal Surface (expansion joint covers, etc.) Standing seam or drive cleat joints.
   2. Vertical Surfaces (copings, cap flashings, etc.): Flat lock or cover and backer plate seams.

G. Fabricate corners on all sheet metal components (copings, cap flashings, etc.) to form one piece with minimum 18-inch and maximum 36-inch long legs.

H. Prefabricate all sheet metal accessory components (pitch pans, utility sleeves, umbrellas, etc.) as much as practical.

I. Gutter, Rake Edge and Downspouts: Form in sections from minimum 24-gage prefinished galvanized steel with all required special pieces and accessories. Gutter and downspouts shall be form to the profiles and sizes accord to SMACNA requirements.

J. Fabricate downspout accessories; mechanically fastened, sealed or manufacturer-approved joints..

K. Miter all sheet metals corners and mechanically fasten and seal all joints watertight or manufacturer approved:
   1. prefinished galvanized steel: Apply minimum ¼-inch bead of sealant between connecting metal flanges and drill and fasten with rivets at 2-inches on center.
   2. Install sealant so it will not be visible on outside of joints.

L. Fabricate elements complete with required connection pieces.

M. Fabricate all components with allowance for expansion at joints. Provide enlarged or oval holes at all piercing fasteners.

N. Fabricate all components, i.e. coping cap, with horizontal (flat) surfaces with built-in slope for drainage toward roof unless indicated otherwise.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
   1. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
   2. Verify roofing termination and base flashings are in place, sealed, and secure.

B. Report in writing to Owner's Representative prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.

C. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

3.02 PREPARATION

A. Field measure site conditions prior to fabricating Work. Contractor shall be responsible for all dimensions for all sheet metal applications and installations.

B. Apply manufacturer's approved protective backing paint, to a minimum dry film thickness of 15-mil, on surfaces in contact with dissimilar materials.

3.03 INSTALLATION - VARIOUS SHEET METAL COMPOTENTS

A. Install starter and edge strips, and cleats before starting installation.

B. Install reglets and / or receivers on vertical surfaces to receive counterflashing's.
   1. Sawcut new reglets where required.
      a. Install receiver component and anchor with lead wedges at 12-inches on center.
      b. Provide bayonet style lap joints, minimum 4-inch overlap.
      c. Fill voids between wedges with backer rod.
      d. Seal receiver to vertical face of wall.
   2. Install surface mounted reglets true to lines and levels.
      a. Fasten to substrate with neoprene head screws at 12-inhes on center maximum.
      b. Seal top of reglets with sealant.

C. Insert flashings into reglets or receivers to form tight fit. Apply ¼-inch bead of sealant and lap sheet metal minimum 4-inches.
   1. Reglets: Secure in place with plastic wedges at maximum 6-inches on center.
   2. Receivers: Secure in place with neoprene head screws at maximum 12-inches on center.
   3. Seal flashings into reglets with sealant.

D. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations approved by Owner's Representative.

E. Fit flashings tight in place. Make corners square surfaces true and straight in planes and lines accurate to profiles.

F. Provide minimum 6-inch wide backer and corner plates at copings. Fit to ensure complete and permanent watertight seal of joints.
   1. Apply ¼-inch bead of sealant between each layer of metal at each edge.
   2. Corner and Backer Plates: Secure with the Backer Plates by using appropriate fasteners, and securing to the parapet wall.
   3. Cover Plates: Hook front or exposed face of cover plate over drip edge; and enclosing or clamping interior seam to the metal coping drip edge.
   4. Do not use mastic between sheet metal components.

H. Lock and seal all sheet metal joints watertight.

I. Pre-fabricated vent pipe flashing.

J. Provide prefinished galvanized steel Rain Hoods and Umbrellas at all hot stacks, hot pipe penetrations, and at insulated pipe penetrations.

K. Protect all penetrations as indicated and as recommended in SMACNA and NRCA manuals.

3.04 SCHEDULE - MATERIALS

A. Exposed to View Components:
   1. 24 ga. prefinished G90 steel with color selected by owner.

B. Concealed Components, (Counterflashing's, Etc.): G90 Steel.

C. Drip Pans Accessories: prefinished galvanized steel

D. Rain Hoods and Umbrellas: 24 ga. prefinished.

3.05 SCHEDULE - MINIMUM STEEL THICKNESS

A. Metal Copings, Metal Coping Caps and Counterflashing: ASTM A 653, Grade A, G90, 24 gage minimum core steel prefinished where exposed to view.

B. Perimeter Metal Fascia: ASTM A 653, Grade A, G90, 24 gage minimum core stee prefinished selected by owner.

C. Rain Hoods and Umbrellas: Prefinished galvanized steel, 24-gage minimum.

D. Hook Cleats: 22-gage minimum or heavier as required by applicable wind-uplift requirements.

3.06 TESTING AND ADJUSTING

A. Test all modified, relocated, and new systems and equipment.

B. Correct all deficiencies identified, including replacement of parts and components when required.

C. Adjust all Products and equipment to ensure proper operation and function.

3.07 CLEANING

A. Clean work.

B. Clean Owner occupied areas when soiled by Work or operations of this Division.

END OF SECTION

RMT

SECTION 07 7253 – SNOW GUARDS

PART 1 GENERAL

1.01 SUMMARY (BASIS OF DESIGN)

A. WORK INCLUDES

1. Snow Guard standing seam attachment bracket that does not penetrate the roof using stainless steel set screws to clamp to the seam.
2. Coordinate with the installation of the roof to assure proper placement of the snow guards.
3. Provide appropriate snow guard and fasteners for the roof system

B. RELATED SECTIONS

1. Section 07600: Flashing and Sheet Metal.
2. Division 7: Thermal and Moisture Protection.

1.02 SYSTEM DESCRIPTION

A. COMPONENTS:

1. Snow Guard standing seam attachment bracket consists of aluminum block
2. 2 stainless steel set screws
3. 1 stainless steel flat head bolt
4. 1 stainless steel lock washer

B. DESIGN REQUIREMENTS:

1. Spacing to be recommended by manufacturer or building engineer.
2. Install a minimum of 2 set screws per bracket.
3. It is important to design new structures or assess existing structures to make sure that they can withstand retained loads.

1.03 SUBMITTAL

A. Submit manufacturer's specifications, standard detail drawings, installation instructions, and recommended layout.

1.04 QUALITY ASSURANCE

A. Installer to be experienced in the installation of specified roofing material and snow guards for not less than 5 years in the area of the project.

1.05 DELIVERY / STORAGE / HANDLING

A. Inspect material upon delivery and order replacements for any missing or defective items. Keep the material dry, covered and off the ground until installed.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Alpine SnowGuards. A division of Vermont Slate & Copper Services Inc. 289 Harrel St. Morrisville, VT 05661, (888) 766-4273 www.alpinesnowguards.com.
B. Owner approved.

2.02 MATERIALS

A. Standing seam attachment bracket - 6000 Series Aluminum.
B. Set Screws- 304 stainless steel 18.8 alloy
C. Stainless Steel Flat Head Bolt – 304 stainless steel 18.8 alloy
D. Stainless Steel Lock Washer – 18.8 stainless steel

2.03 FINISH

A. Mill Finish – standard

PART 3 EXECUTION

3.01 EXAMINATION

A. Substrate
1. Inspect structure on which snow guard system is to be installed and verify that it will withstand any additional loading that it may incur. Notify general contractor of any deficiencies before installing Alpine SnowGuards.
2. Verify that roofing material has been installed correctly prior to installing snow guards.

3.02 INSTALLATION

A. When attaching blocks (clamps) to machine folded seams, (regardless of panel profile and geometry), the block (clamp) is designed to engage seams by pinching the seams with 2 stainless steel set screws. For horizontal seam applications (inverted “L”), set screws must be accessible from the top of the block for tightening. On snap together type seams, orient the block (clamp) so that the set screws are opposite the open, or overlap side of the seam. On some types of panel seams, the aspect of block (clamp) orientation is not critical.

B. NOTE: Some horizontal seams may require additional hand crimping at the block (clamp) location.

C. Two set screws are used in any given block (clamp) installation.

D. Position the blocks (clamps) appropriately on the panel seam. Using a 3/16" Allen wrench attachment tip for a 1/4" drive screw gun, tighten and retighten set screws as the seam material compresses. On low seam profiles, a 4” bit extension on the screw gun may help to access the set screw. Tighten set screws to a torque value of 140-180 inch-pounds.

E. Note: Battery-operated screw guns may not deliver consistent screw tension. Drywall guns may not deliver adequate tension.

F. Place the bar on top of the block (clamp) so that the slotted face of the bar is facing down slope. When properly installed, the face of the bar will help to hide the block (clamp).

G. Place lock washer on flat head bolt. Insert bolt in the top of block (clamps) and tighten until the lock washer engages the top of the block (clamp). Once this interface has been achieved, torque the bolt to a minimum of 100 inch-pounds.

H. The bars are provided in 8' lengths. Each bar comes with a coupling/splice device (rectangular shape) that slides into the slot at the end of the bar. Join successive bars by sliding slotted end over the coupling/splice device.

3.03 OPTICAL ITEMS

A. Color Insert: The face of the bar is designed to accept a 2" wide color insert using the color metal that the roof was made with. This Color Insert is available in a limited color selection from Alpine SnowGuards. Many installers will provide this part themselves using material they have on hand.

B. Ice Flags are optional but recommended at least on the bottom tier of guards (assuming the project needs more than one tier). These IF's are cut to length so that the flag does not rest on the panel. Therefore, manufacturer will need to know the seam height to precut the IF's to the proper length. To install the IF's on panel widths 24" wide or less, center the IF on the bar between seams and fasten with one Tek screw (provided). For panels 25" wide or wider, install 2 IF's per panel (example 42" wide/ 3 = 14" spacing between seam and IF) spaced evenly.
NOTE: Once the point of the TEK screw is through the metal, only tighten enough to engage the TEK screw. Do not over-tighten or over-torque with a drill. Tighten by hand only to securely engage the flag.

3.04 ASSEMBLY

An assembly detail for the System is available from Alpine SnowGuards, www.alpinesnowguards.com

A. Loads imposed on the System will be transferred to the panels. Panels must be properly attached to building structure to resist these loads. B. This system is not approved as a fall arrest system.

3.05 COMMON INSTALLATION HINTS AND TRICKS

A. When a SnowMax-U2 block is installed slightly up or down-slope of the previous block, the gap may be too close to install the lock washer (gap shown in Figure IV.a). Due to tight manufacturing tolerance, this issue is a common occurrence but has a fast and easy solution.

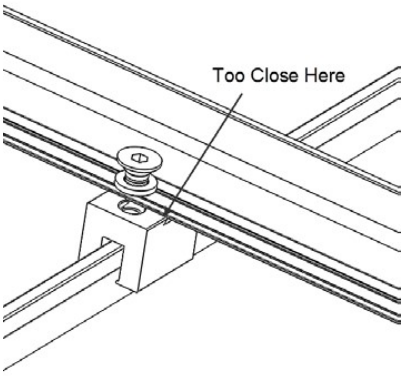


Figure IV. Looking Down-Slope during Install

B. Lift slightly or apply down-slope pressure on the free (unfastened) side of the bar and insert a small flat head screwdriver as shown in figure IV.b. If lifting does not create enough of a gap, use a hammer to tap the screwdriver into where the gap should be. This will gouge the aluminum dovetail, on the upslope edge of the block where the bar engages the block and will not affect the integrity of the system.

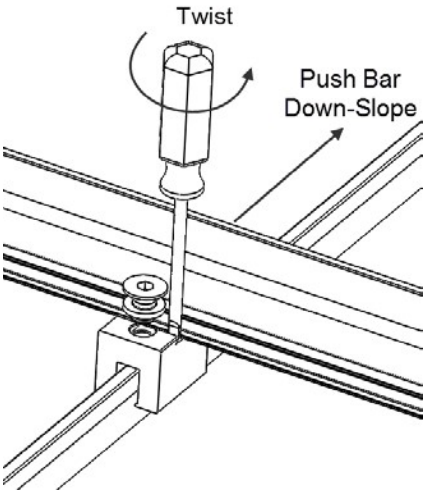


Figure IV.b Inserting the Screwdriver

C. Raise the handle of the screwdriver until it is plumb to the roof surface. Twist the screwdriver to create a lever that will force the bar to properly seat in the dovetail (See Figure IV.B). Once the bar is properly seated and aligned, insert the flat head bolt and lock washer and thread into the attachment hole. Once the bolt has been started, it is easiest to use an impact driver or screw gun with a socket to secure it the rest of the way in.

D. It is also helpful to apply pressure downward on the top of the bar to assure that it is properly seated in the dovetail. This downward pressure allows the head of the flat head bolt to slide easier past the back of the bar.

NOTES:

1. Do not install runs of snow retention bar more than 100 feet long without a break to allow for thermal expansion.

2. The first row of snow guards is installed above the outermost wall or support of the building.

END OF SECTION

RMT

SECTION 26 4113 LIGHTNING PROTECTION FOR STRUCTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Strike (air) terminals and interconnecting conductors.

B. Grounding and bonding for lightning protection.

1.02 RELATED REQUIREMENTS

A. Section 26 0526 - Grounding and Bonding for Electrical Systems: Electrical system grounds.

B. Surge Protection for Wiring Systems: Specified in individual system requirements.

1.03 REFERENCE STANDARDS

A. NFPA 780 - Standard for the Installation of Lightning Protection Systems.

B. UL 96 - Lightning Protection Components.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination with Roofing Work: Ensure adequate attachment of strike terminals and conductors without damage to roofing.

B. Preinstallation Meeting: Convene a meeting at least at least two weeks prior to commencement of any work affected by lightning protection system requirements to discuss prerequisites and coordination required by other installers; require attendance by representatives of installers whose work will be affected.

1.05 SUBMITTALS

A. Contractor to perform like kind re installation with of lighting protection with applicable manufactured components.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: Capable of providing the specified certification of the installed system.

B. Field Quality Control Testing Agency Qualifications: Firm capable of and experienced in grounding and bonding testing with documented experience and minimum of three project references.

PART 2 PRODUCTS

2.01 LIGHTNING PROTECTION SYSTEM

A. Lightning Protection System: Reuse and reinstallation of existing components that remain serviceable.

B. Remove and Re use complying with NFPA 780, including air terminals, bonding, interconnecting conductors and grounding electrodes.

1. Contractor to reuse of any/all system components (which is desired) to achieve compliance with NFPA 780 and UL96 standards.

2. Determine ground resistance by field measurement.
3. Provide copper, bronze, or stainless steel components, as applicable; no aluminum.

2.02 COMPONENTS

(Verify compatible with manufacturer)

A. All Components: Complying with applicable requirements of UL 96 but do not require replacement of serviceable existing components solely because their material differs from the listed products.

B. Strike (Air) Terminals: Copper, solid, with manufacturer approved components.

C. Grounding Rods: Solid copper.

D. Ground Plate: Copper.

E. Conductors: Copper cable.

F. Connectors and Splicers: Bronze.

PART 3 EXECUTION

3.01 EXAMINATION

A. Coordinate work with installation of roofing and exterior and interior finishes.

3.02 INSTALLATION

A. Require manufacturer-approved compatible with Zee-Lock , nonpenetrating standing-seam clamps where suitable, without compromising panel movement or finish.

3.03 FIELD QUALITY CONTROL

A. Perform inspection and verification of electrical continuity, grounding connections, and proper attachment after reinstallation.

END OF SECTION